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Resilience in the face of peer victimization and perceived discrimination: the role of individual and familial factors

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Abstract

Background: Peer victimization and discrimination are two forms of social victimization that are related. However, the majority of studies only focus on one form or the other. This study investigates resilience in victims of both these forms of violence. **Objective:** To identify individual and family level factors that foster, or hinder, resilience in the face of both peer victimization and perceived discrimination. **Participants:** In a sample of 2975 high-school students, 22% (n = 644) met the criteria for significant social victimization. The sample's mean age was 16.5 years, 57% were girls, 19% were in vocational courses, 12% were from an ethnic minority background, and 5% were lesbian, gay, or bisexual. **Method:** A measure of resilience was created by regressing the mean levels of current mental health, self-esteem, and life satisfaction on the frequency of lifetime peer victimization and past year perceived discrimination. Regression analyses were conducted to identify correlates of resilience considering protective and vulnerability factors, including sociodemographic information, anxious personality, empathy, coping strategies, familial optimism, and the relationship with their mother and father. **Results:** Resilience was associated with low anxious personality, four coping strategies (active, use of humor, low self-blame, low substance use), and satisfaction with the relationship with the mother. **Conclusions:** Resilience is related to both behavioral and meaning-making coping strategies, personality traits, and satisfaction in relationships. This study's findings can be used to tailor interventions aimed at fostering resilience of adolescents exposed to social victimization.

Keywords: bullying, unfair treatment, resiliency, coping, family relationships

Introduction

Peer victimization and perceived discrimination are both forms of social violence and exclusion with a long-term impact on its victims' mental and physical health (Freitas et al., 2018; Schmitt et al., 2014; Wolke & Lereya, 2015). Only during the past decade has there been a greater study of how these two forms of interpersonal violence are related. Regarding resilience, studies have focused on identifying individual, familiar, or community-level factors that can buffer the negative impact of bullying in students or discrimination among stigmatized populations (Freitas, Coimbra, & Fontaine, 2017; Schmitt et al., 2014; Ttofi et al., 2014). In contrast, we are not aware of studies investigating protective factors that could buffer the negative impact of both forms of interpersonal violence. In this study, we investigate whether common factors associated with positive adjustment (non-anxious personality, empathy, coping strategies, familial optimism, and the quality of family relationships) are associated with resilience to both peer victimization and perceived discrimination.

Social victimization and its negative impact

Social victimization is used here to refer to the experience of both peer victimization and acts of daily discrimination. Peer victimization has been described as a form of abuse by which a children or adolescents are the frequent target of aggression by their peers (Kochenderfer & Ladd, 1996). Discrimination can be defined as being the target of differential and negative (i.e., worse) treatment due to inclusion in social groups that are affected by prejudice and negative stereotypes (Dovidio et al., 2000). Both peer victimization and discrimination are forms of social exclusion that threaten our need to belong (Richman & Leary, 2009) and seem to have a similar impact on mental and physical health. Peer victimization or bullying is associated with an increase in internalizing (e.g. depression, anxiety, self-harm, suicide ideation, and feelings of

isolation and loneliness), externalized behaviors (e.g., aggression, school truancy, drug use), well-being (low self-esteem and decreased life satisfaction) and also with changes of the physiological response to stress and increased bodily inflammation (Arseneault, 2018; Copeland et al., 2014; McDougall & Vaillancourt, 2015; Moore et al., 2017; Ouellet-Morin et al., 2011; Reijntjes et al., 2010, 2011; Takizawa et al., 2014; van Geel et al., 2018; Wolke & Lereya, 2015). Similar health outcomes are also observed in cases of discrimination faced by populations that are the target of prejudice, such as ethnic and sexual minorities, namely worse mental health (e.g., depression), physical health (e.g., blood pressure), health behaviors (e.g., substance use), other measures of well-being (e.g., self-esteem, and life satisfaction) and disruption of cortisol release patterns (Berger & Sarnyai, 2015; Pascoe & Richman, 2009; Schmitt et al., 2014).

Studies also suggest a relationship between peer victimization and discrimination. For instance, peer aggression has been associated with the endorsement of social prejudices, namely sexism, racism, religious intolerance and homophobia (Carrera-Fernández et al., 2013; Goodboy et al., 2016). In one study, African American and Latino students' self-reported level of racial discrimination was associated with their European American counterparts' reports of them having been victims of overt and relational peer victimization (Seaton et al., 2013). Moreover, there is evidence that gay, lesbian, bisexual, transgender, intersex or queer (LGBTIQ) youth, people with disabilities, and overweight students are more likely to be victims of peer victimization, (Bucchianeri et al., 2016; Freitas, Coimbra, Marturano, et al., 2017; Menesini & Salmivalli, 2017; Mitchell et al., 2020). This suggests that peer victimization, social stigma, and discrimination are related. Contemporary theories of peer victimization are therefore emphasizing the cultural nature of bullying (Elamé, 2013). The associations between discriminatory bullying and depressive symptoms, substance use, self-harm, and school

outcomes seem to be even stronger than the associations observed for non-discriminatory bullying (Bucchianeri et al., 2014; Hunter et al., 2010; Mitchell et al., 2020; Russell et al., 2012).

Resilience, protective and vulnerability factors

Resilience has been broadly defined as a positive adjustment in the face of significant adversity, and studies have focused on identifying factors that can promote a positive adjustment after its exposure or that buffer its negative impact (Fergus & Zimmerman, 2005; Luthar et al., 2000; Masten & Tellegen, 2012; Rutter, 2013; Ungar, 2019). These are called protective factors. There are also factors which combined with adversity can increase the chances of a poorer adjustment; they are known as vulnerability factors (Luthar et al., 2000). Most investigated factors that help people bounce back in the face of peer victimization or perceived discrimination have focused on individual skills (e.g., coping, academic performance), relationships (e.g., social support and family relationships) and community-related factors (e.g., school characteristics, positive neighborhood features) (Freitas et al., 2018; Freitas, Coimbra, & Fontaine, 2017; Schmitt et al., 2014; Ttofi et al., 2014).

In what concerns individual-level factors, it has been observed that the use of active coping (actions that aim to reduce the stressor or its consequences involving problem-focused planning) is related to fewer depressive symptoms in victims of bullying (Hemphill et al., 2014; Yin et al., 2017). Among discriminated populations, it has also been observed that active coping strategies are related to better adjustment, while avoidance or emotion-focused coping has been observed to exacerbate the impact of discrimination, although literature shows mixed evidence regarding these effects (Pascoe & Richman, 2009; Schmitt et al., 2014). Other individual skills that reveal a protective effect in situations of peer victimization include good academic performance (Hemphill et al., 2014; Vassallo et al., 2014) and high intrapersonal emotional

competence, defined as the ability to identify and regulate own emotions (Urano et al., 2020).

The personality types have also been investigated but revealed no protective effect in the face of peer victimization (Overbeek et al., 2010). At the relational level, in one study, high social skills were observed to be more prevalent in non-depressed victims of bullying (Vassallo et al., 2014). However, in another study (Urano et al., 2020), it has also been observed that interpersonal emotional competence (defined as the ability to identify and deal with other people's emotions), interacted with victimization to increase psychological distress. Thus, in those who had greater interpersonal emotional competence the impact of victimization in psychological distress was higher; interpersonal emotional competence acted as a vulnerability factor (Urano et al., 2020).

Many studies have focused on the protective role of relationships, including support and quality of relationships with peers, teachers and family members. There are mixed-evidence regarding potential protection. In a couple of studies, peer and family support have been shown to buffer the negative impact of peer victimization (Klomek et al., 2016), and non-family support has also been observed to protect from the negative effects of homophobic bullying (António & Moleiro, 2015). However, a study has observed that the number of close friends did not predict emotional resilience in the face of bullying, and it was negatively related to behavioral resilience (Sapouna & Wolke, 2013). Having a good relationship with teachers does not seem to protect victims of bullying from developing internalizing problems (Averdijk et al., 2014; Gloppen et al., 2018; Vassallo et al., 2014). In samples of LGBTIQ youth mixed findings have been observed. Teachers support was observed to buffer the impact of prejudice and victimization in physical health and academic performance, but not its impact in mental health (Poteat et al., 2021; Woodford et al., 2015). Concerning family relationships, maternal warm and a positive family environment have shown to be associated with emotional resilience to bullying in one study

(Bowes et al., 2010), and family cohesion and support has been observed to buffer the impact of discrimination among Chinese Americans (Juang & Alvarez, 2010). However, there have been mixed findings on protective effects support from family and friends in the face of social victimization, as many studies report no buffering effects (António & Moleiro, 2015; Averdijk et al., 2014; Burke et al., 2017; Hemphill et al., 2014; Ttofi et al., 2014; van Harmelen et al., 2016; Vassallo et al., 2014). Mixed findings have been observed regarding the effect of conflict with parents, in some studies the level of global conflict in the family and parent-child conflict had no relation to later mental health (Hemphill et al., 2014; McVie, 2014). However, in other studies, conflicts with parents have been found to negatively predict resilience in the face of bullying in (Sapouna & Wolke, 2013) and increase the negative impact of perceived discrimination in mental health in ethnic and sexual minorities (Freitas et al., 2016; Juang & Alvarez, 2010).

The impact of some community-related factors on the well-being, as protective or promotive factors, of victimized youth has also been investigated. Among victims of bullying studies have investigated participation in school activities, school safety, and neighborhood characteristics. Studies focused on the well-being of ethnic and sexual minority students have also addressed in-group filiation and pride. In what concerns ethnic identity, although a positive ethnic identity seems to promote well-being, there is no strong evidence to suggest it can buffer the negative impact of victimization (Cassidy et al., 2004; Hunter et al., 2010; Schmitt et al., 2014; Seaton et al., 2011). Regarding factors at the school level, one study investigated opportunities for prosocial involvement at school among victimized children and results showed this conferred no protection from depression (Hemphill et al., 2014). Perceptions of feeling safe at school have been associated with reduced odds of internalizing symptoms and suicidal attempts in ethnic minority victims of bullying (Gloppen et al., 2018). Evidence suggests that

attending school with a Gay-Straight Alliance (GSA), an inclusive student-led club focused on promoting a safe environment for LGBTIQ students, may promote school belongingness and the well-being of LGBTIQ youth and reduce homophobic violence. However, the presence or participation in a GSA does not seem to buffer the negative impact of victimization (Ioverno et al., 2016; Poteat et al., 2013; Toomey & Russell, 2013). Perception of neighborhood quality has been observed to buffer the impact of discrimination on levels of psychological distress (Tran, 2015) and neighborhood economic deprivation was associated with higher risks of psychological distress in victims of bullying (McVie, 2014). However, neighborhood organization, population stability and level of crime have not been related to the onset of internalizing symptoms (Hemphill et al., 2014; McVie, 2014). At a political level, there is evidence that egalitarian legislation concerning to the rights of people in stigmatized groups has an important effect. The introduction of bans on same-sex couple marriage (with the Defense of Marriage Act; DOMA), was associated with increased psychiatric disorders in LGB adults (Hatzenbuehler et al., 2010). Also, children of lesbian and gay parents experienced less victimization in countries with egalitarian legislation than children living in countries without equal rights for families led by LGB people (Bos et al., 2008). Furthermore, a meta-analysis indicated that the magnitude of the associations between the perception of discrimination among minoritized ethnic groups and depression and self-esteem is of lower magnitude in countries with multicultural policies than the observed associations in countries without such policies (countries that value cultural assimilation) (Freitas et al., 2018).

In the study of resilience, a common method to investigate buffering effects is using moderation analyses (interaction between the risk and protective factors) (Ttofi et al., 2014). However, a limitation of testing the interaction (the moderating) effect of one factor at a time is

that we are not adjusting for other possible protective or vulnerability factors (e.g., Hemphill et al., 2014; Hunter et al., 2010; Tran, 2015; Vassallo et al., 2014). A couple of studies have addressed this limitation by creating a variable of resilience adjusted to the level of adversity and then conducting regression analyses to test the effect of several protective factors simultaneously (Bowes et al., 2010; Sapouna & Wolke, 2013). Using this approach, the present study investigates factors associated with resilience in the face of both peer victimization and perceived discrimination in youth.

This study

Context

The Portuguese legal framework states that all people, and students, respectively, must be treated with respect and protected from discrimination based on several personal attributes, such as gender, gender identity, ethnicity, religion, sexual orientation, or economic condition. School staff is responsible for identifying and preventing any problematic situations, including events of violence. Data shows that between 9%-31% of Portuguese children have been victims of bullying (Carvalhosa et al., 2009). There is some evidence that non-Portuguese and Black youth have been more victimized than Portuguese and White students (Elamé, 2013; Freitas et al., 2015). Studies also show bullying against sexual minorities is common (António & Moleiro, 2015) and LGB adolescents perceive to be treated worse and unfairly more frequently than in heterosexual adolescents (Freitas et al., 2015). At the time of data collection, there was no tradition of countrywide initiatives of raising awareness and celebrating the contribution of different ethnic groups in Portuguese society (such as Black history month). Also, student-led organizations groups focused on the well-being of sexual minority groups (such as Gay-Straight Alliances) were also not common in Portugal.

Aims

This study aims to investigate if resilience is related to possible protective and vulnerability factors at the individual and familiar level. Psychological resilience was derived from levels of mental health, self-esteem, and life's satisfaction considering the frequency of experiences of social victimization. Based on the mentioned literature, the protective factors investigated comprise empathy levels, use of adaptive coping skills (such as active coping or positive reframing), familial optimism, and having positive relations with parents. The vulnerability factors comprise having an anxious personality, the use of maladaptive coping strategies (such as self-blame), and having conflicting relationships with parents.

Method

Procedure and Participants

The study sample comprises youngsters who experienced substantial social victimization and were studying in public high schools across five cities in the two biggest urban regions of Portugal, Lisbon and Oporto, in 2013/2014. Approvals were sought from the Ethics Committee of the Faculty of Psychology and Education Sciences of the University of Porto, by the National Data Protection Commission (protocol 355/2013) and by the Ministry of Education (process 0352400001). Schools in the metropolitan regions of Lisbon and Oporto were randomly selected and school directors were contacted to enable data collection. Two-thirds of the schools contacted agreed to collaborate ($n = 24$). The first author administrated the survey during classes for 10th, 11th and 12th years of education. The classes' selection was made by teachers considering the social diversity of students and the type of course they were attending. Parental and students' consent was sought before the administration of the survey. They were given an information sheet covering the study's main goal – to understand how teenagers deal with negative social

experiences. Confidentiality was granted for students who chose to leave a contact (e.g., e-mail) for participation in a follow-up. The participation rate was 94.7%. The average time for completing the survey was 35 minutes.

A total of 2975 high school students participated in the study (with 56 surveys being excluded during data cleaning). This sample's mean age was 16.6 years ($SD = 1.28$), and 54% were girls ($n = 1594$). A detailed description of the sample sociodemographic information is presented in Table 1. To investigate factors that could promote resilience, only the subsample of substantially victimized students was included in this study. The criteria to assess substantial social victimization was: (1) participants who had experienced social victimization with a frequency higher than the total sample's mean (z -scores > 0) on both (a) peer victimization and (b) perceived discrimination; (2) in the scale of peer victimization, participants states the age when victimization was more frequent, (3) in the perceived discrimination scale, participants mentioned a potential perceived reason (the instruments to assess peer victimization and perceived discrimination are described in the measures section). The reply to these additional questions ensured that participants recognized that they had been victims of peer victimization and probably engaged in a search for meaning. Of the total 2975 students, 644 (22%) met the inclusion criteria for substantial victimization. On this socially victimized subsample, 57.1% ($n = 365$) are girls and the mean age was 16.5 years ($SD = 1.24$). Further information is presented on Table 1.

[Insert Table 1 here]

Measures

Social victimization

In the appraisal of social victimization, we considered, separately, perceived discrimination experiences in the previous year, and lifetime peer victimization. *Perceived discrimination* was assessed by the Everyday Discrimination Scale adapted to this study (Freitas et al., 2015; Williams et al., 1997). The adapted scale is composed of two factors, Unfair Treatment (e.g., “You are threatened or harassed”) and Personal Rejection (e.g., “People act as if they think you are dishonest”), with 4 items each. Items were rated on a six-point scale ranging from 0 (*never*) to 5 (*almost always*). Participants who stated that negative behaviors occurred more than a few times within the previous year, would reply to the scale extra question: ‘What do you think is the main reason for these experiences?’. Gender/sex, ethnicity/race, weight, sexual orientation, economic/education level, and other reasons were possible answers (Freitas et al., 2015). The scale presents satisfactory indices of reliability; see Table 2 for results of the Confirmatory Factor Analyses (CFA), and Cronbach’s alpha.

The Portuguese adaptation of the *Peer-Victimization Scale* (Mynard & Joseph, 2000; Veiga, 2011) was used to assess experiences of violent acts at the hand of peers, which could have taken place any time before. The scale focuses on four types of violent behavior: Physical (3 items; e.g., “Punched me”), Verbal (4 items; e.g., “Made fun of me”), Social (4 items; e.g., “Tried to make my friends turn against me”), and Attacks of property (4 items; e.g., “Stole something from me”). Items were rated on a five-point scale ranging from 1 (*never*) to 5 (*often*). After completing the scale, the participants who reported being frequent victims of peer victimization acts were invited to state their age when the aggressions had been more frequent (Freitas et al., 2015). We assessed lifetime experiences of peer victimization (instead of the recent past months) because the impact of bullying victimization is known to be long term and potentially more severe when victimization occurs in childhood than in adolescence (Moore et

al., 2017). Given the aim of investigating resilience in the face of social violence, we considered being important to assess experiences of peer victimization across the entire school period.

Resilience to social victimization

A measure of resilience was developed based on the evaluation of the psychological adjustment, which comprised three psychological dimensions: mental health, self-esteem, and satisfaction with life. For mental health, we used the Portuguese adaptation of the *Mental Health Inventory-5* (Rand Health Insurance Experiment in Ribeiro, 2001), measuring well-being and the absence of psychological distress. The five items (e.g., “How much of the time, during the past month, have you been a very nervous person?”, reverse coded) were rated on a scale ranging from 1 (*never*) to 5 (*almost always*). *Self-esteem* was assessed by eight items (two items were dropped on the CFA) of the *Rosenberg Self-esteem Scale* (Azevedo & Faria, 2004; Rosenberg, 1965). The scale items (e.g., “I am able to do things as well as most other people”) were rated on a five-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). The Portuguese adaptation of the *Satisfaction with Life Scale* (Diener et al., 1985; Neto, 1999) was used. The 5 items of the scale (e.g., “In most ways my life is close to my ideals”) were rated on a Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). On the confirmatory factor analysis, the second-order factor model integrating the three dimensions of the psychological adjustment revealed an acceptable fit to the sample (Table 2). The composite measures had a good internal consistency and the average mean of the scales of mental health, satisfaction with life and self-esteem was computed.

Protective and vulnerability factors

Anxious personality, a potential vulnerability factor, was assessed through the Portuguese adaptation of the Anxiety subscale of NEO Personality Inventory Revised (Costa & McCrae,

1992; Lima & Simões, 2000). The seven items of the scale (e.g., “I often worry about things that might go wrong”) were rated on a Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*).

For assessing empathy levels, we used the Portuguese adaptation of the Interpersonal Reactivity Index (Davis, 1983; Limpo et al., 2010). Two subscales were used: Perspective Taking (e.g., “Generally, when I’m upset at someone, I usually try to “put myself in his shoes” for a while”) and Empathic Concern (e.g., “When I see someone being taken advantage of, I feel kind of protective towards them”). The 10 items (five in each subscale) were rated on a Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*).

Coping strategies were measured using the Portuguese adaptation of the Brief COPE scale (Carver, 1997; Ribeiro & Rodrigues, 2004). The items were rated on a Likert scale ranging from 1 (*never/rarely*) to 5 (*always*). The analysis of its structure revealed an organization of 24 items in 10 factors: active coping, use of support, positive reframing, venting, humor, religion, behavioral disengagement, denial, self-blame, and substance use.

The quality of the relations with parents was investigated using the Portuguese adaptation of *Network of Relationships Inventory* (Coimbra & Mendonça, 2013; Furman & Buhrmester, 1985; Mendonça & Fontaine, 2013). Four subscales of the instrument were selected: Satisfaction (e.g., “I’m happy with the way things are between him/her and me”), Intimacy (e.g., “I talk to him/her about things that you don’t want others to know”), Admiration (e.g., “Likes or approves of the things I do”), and Conflict (e.g., “We argue”). Participants were invited to rate each of the 12 items (four of each subscale) considering relationships they have with their mother and their father. The items were rated on a scale ranging from 1 (*never/rarely*) to 5 (*always*). In the

absence of a close relationship with the biological mother or father, participants could consider their relationship with other adult carers.

To assess positive beliefs in the family system, the Portuguese adaptation of the *Life Orientation Test-Revised* was used (Laranjeira, 2008; Scheier & Carver, 1985). Items were modified by replacing the pronoun “I” to “in my family”; for example, “Overall, *in my family*, we expect more good than bad things to happen”. Five items were rated on a Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*).

[Insert Table 2 here]

Data analysis

Preliminary analyses of the associations between social victimization and psychological adjustment measures were calculated via pairwise Pearson correlations. To assess resilience, the first step was to develop a specific measure of resilience in the face of peer victimization and discrimination. We followed the approach used by Bowes and colleagues (2010) and Sapouna and Wolke (2013), according to which the adjustment measure score was regressed on the level of exposure to the risk, and the residuals from this regression model were used as a metric of resilience (or lack of thereof). In the present study, the measure of resilience was developed by regressing the scores of the variable of psychological adjustment (comprising the mean individual level of mental health, self-esteem, and life’s satisfaction) on the levels of the subscales of perceived discrimination and peer victimization. The residual scores of this regression were used as an index of resilience. Higher (positive) values indicated an adaptation better than expected, considering the frequency of acts of peer victimization and perceived discrimination suffered; lower (negative values) indicating an adaptation worse than expected.

The second step was to investigate which of the protective and vulnerability factors considered for the study are related to this measure of resilience. Linear regression analyses were conducted; simple regression models were used to investigate each factor's relation with resilience. A multiple regression model was used to investigate which factors continued to be associated with resilience while controlling for all the other possible predictors outlined. We checked the assumptions of the regression analyses, namely the normality and homoscedasticity of residuals, presence of outliers and multicollinearity. Listwise deletion was used to handle missing data.

Results

The results of the correlations support the assumptions that peer victimization and perceived discrimination are negatively correlated with mental health, self-esteem and life satisfaction (Table 3). As expected, the index of resilience is not associated with the measures of social victimization, which reinforces that the index of resilience in the face of social victimization is independent of the level of exposure to this risk and grants validity to this measure.

[Insert Table 3 here]

Protective and vulnerability factors and resilience

On the regression analyses to investigate protective factors, no major violations of the statistical assumptions were observed. One outlier case was detected. We decided not to exclude this case from the analyses because no errors on the data of this case were observed and its removal did not alter the findings. Results are presented in Table 4. The fully adjusted model explained 43% of the variance of resilience. The consistent (significant in both the simple and multiple linear models) protective factors predicting of higher levels of psychological adjustment

in the face of social victimization identified were: having a satisfactory relationship with the mother, the use of active and humorous coping strategies. Negatively associated with resilience (thus, vulnerability factors) were: having an anxious personality, the use of self-blame coping, and substance use coping. Behavioral disengagement coping was related to resilience but with a neglectable magnitude. Socio-demographic characteristics, empathy, familial optimism, perceived admiration from parents, intimacy and conflict in the relationships with parents were not significantly related to resilience. Thus, they confer no protection or vulnerability in the face of social victimization.

[Insert Table 4 here]

Discussion

This study aimed to investigate individual and familial level protective and vulnerability factors associated with resilience when exposed to peer victimization and perceived discrimination in a sample of school students. We present a model that explains 43% of resilience in the face of peer victimization and perceived discrimination, with several protective and vulnerability factors being identified.

Individual-level protective factors

No sociodemographic variables significantly predicted psychological resilience when considering individual and familiar protection mechanisms. However, in the unadjusted models, boys showed higher levels of resilience. Previous literature shows mixed evidence regarding gender differences in psychological adjustment following peer victimization and perceived discrimination. For instance, in studies using a similar methodology, Bowes and colleagues (2010) report no gender differences in the level of emotional resilience, but Sapouna and Wolke (2013) report boys show a higher level of emotional resilience. In studies using other methods mixed

evidence is also observed. Some studies show no gender differences in the strength of associations between being victimized and bias-harassment with internalizing and externalizing behaviors and self-esteem (Bucchianeri et al., 2014; Forbes et al., 2020). Other studies have shown stronger effects of victimisation on depressive symptoms in boys than in girls (Rothman et al., 2011; Yin et al., 2017), but the opposite has also been observed (Takizawa et al., 2014). In our study, the effect of gender was of small magnitude and no longer significant when accounting for the protection mechanisms. Thus, a possible fully mediated effect of gender can be present, as gender could be related to the different levels of anxious personality, use of different coping strategies, and the quality of relationships with parents (De Goede et al., 2009; Rose & Rudolph, 2006; Smetana et al., 2006; van Harmelen et al., 2016; Yin et al., 2017). Future studies should investigate this hypothesis.

Active coping and the use of humor (e.g., making jokes about the stressful situation) were predictors of greater resilience. But the associations were of smaller magnitude than the associations of the maladaptive coping strategies with resilience. In previous studies, the use of active coping strategies had been shown to be associated with lower levels of depression among young people who suffered peer victimization (Hemphill et al., 2014; Yin et al., 2017). To our knowledge, this is the first study to show the use of humor as a coping strategy is related to resilience in the face of peer victimization. However, previous studies had shown that victims think the use of humor is one of the most effective actions in stopping bullying (Sulkowski et al., 2014), and also that humor styles (affiliate or aggressive) are affected by victimization (Fox et al., 2015).

Social support, including both instrumental and emotional support, and venting coping strategies, which are commonly investigated in studies of resilience, were not significant predictors of the levels of resilience in the face of social victimization. Other studies have also suggested the

limited power of social support, provided by family and peers, to buffer peer victimization's negative impact (Burke et al., 2017; Sapouna & Wolke, 2013; van Harmelen et al., 2016). To our knowledge, only one study has shown that having peer support has been observed to moderate the association between victimization and lifetime self-harm (Klomek et al., 2016), and this study may suffer from the bias of reverse causality, given that the periods for assessing support (current) and self-harm (lifetime). Furthermore, some studies suggest that relationships with parents and friends are negatively affected by peer victimization experiences and discrimination (Burke et al., 2017; Fullchange & Furlong, 2016; Riina & McHale, 2012; van Harmelen et al., 2016). Thus, the absence of a significant association with resilience may indicate that even if support is available, it may not be enough to buffer the impact of social victimization.

Individual-level vulnerability factors

Having an anxious personality was negatively associated with resilience. Although scarcely investigated in the literature of peer victimization and discrimination, studies on resilience using person-centered analyses revealed lower levels of negative emotionality among adolescents who showed resilience to several adversities (Masten & Tellegen, 2012) and another study showed that resilient adults who were survivors of childhood maltreatment also presented lower levels of neuroticism (Collishaw et al., 2007). These findings suggest that anxious people may be more vulnerable to the pervasive effects of victimization (Luthar et al., 2000; Ungar, 2013). Considering the cross-sectional nature of the study and the retrospective assessment of exposure to peer violence, victimization at this developmental stage may also negatively affect the dispositional anxiety levels, and consequently, restrict the expression of a resilience adjustment.

Concerning coping strategies, self-blame coping was the strongest predictor of lack of psychological resilience in the face of social victimization. Self-blaming had already been

associated with greater depression, anxiety, loneliness, and lower self-esteem (Graham & Juvonen, 1998), and some studies show that peer victimization is associated with an increase in self-blaming and a decrease in self-compassion (Catterson & Hunter, 2010; Guy et al., 2017; Játiva & Cerezo, 2014; Schacter et al., 2015). Thus, it may happen that being the target of victimization may increase the likelihood of self-blame coping, and consequently decrease the probability of a resilient response.

Substance use as a way to deal with stress was associated with lower resilience. Increasing levels of substance use have been observed to be a consequence of peer victimization and discrimination (Gilbert & Zmore, 2016; Moore et al., 2017; Pascoe & Richman, 2009), and the present study suggest that this way of coping signals the lack of resilience in the face of social victimization.

Family-level protective and vulnerability factors

Of an assessment of familial optimism and several qualities of the relationships with parents – satisfaction, intimacy, valorization, and conflict with both mother and father – only having a satisfactory relationship with the mother revealed to be positively associated with resilience. A previous study has shown maternal warmth was associated with higher emotional resilience levels to peer victimization (Bowes et al., 2010). Levels of intimacy (e.g., sharing personal matters, which implies good communication and confidence in relationships) and perceived to be valued by parents did not reveal to be associated with adjustment, which is in line with what has been observed regarding social support coping. Other studies have observed that parental support did not moderate the associations between victimization and depression (Burke et al., 2017) and self-harm (Klomek et al., 2016). The fact that a significant association is only observed regarding the relationship with the mother may be related to adolescents spending more

time with mothers and also having relationships whose balance between perceived power and support is more complex when compared to the relationship established with fathers (De Goede et al., 2009; Laursen & Collins, 2009; Smetana et al., 2006).

Having frequent conflicts/arguments with parents was not observed to be a vulnerability factor for resilience in the face of social victimization. This finding is in line with some studies of peer victimization with adolescents (Hemphill et al., 2014; McVie, 2014), but contrasts with another study regarding resilience to bullying (Sapouna & Wolke, 2013) and with a couple of studies with ethnic and sexual minority adolescents (Freitas et al., 2016; Juang & Alvarez, 2010). Possible reasons for the discrepancies in findings may relate with the age of the sample – in Sapouna and Wolke (2013) study the bullied children were younger (10-12 years) – or the nature of the type of violence, discrimination version bullying, for instance, peer victimization is a more transient phenomenon, while experiences of discrimination are reported to be chronic.

Some disparities observed in the results between this study and previous literature can lie in the outcome of interest. Most of the literature on peer victimization and discrimination has focused on internalizing or externalizing symptoms, while we analysed self-esteem and satisfaction with life (in addition to mental health). Our outcome was thus more focused on psychological well-being and positive measures of adjustment, and it is possible that the observed protection factors identified here may not be generable to internalizing behaviors.

Strengths and limitations

One of the strengths of this study is the effort employed to obtain, as possible, a random sample of the socially diverse high school students, and also the effort employed to ensure the instruments presented good internal reliability. This ensures the research has a satisfactory degree of internal and external validity. Moreover, we developed a comprehensive measure of

resilience conferring robustness to the findings. One limitation is related to the use of self-report instruments and the collection of information only from the participants. Recall bias is thus an inherent limitation of this study. This bias will probably be more present in the reports of peer victimization, which could have taken place at any point in school life. The limitation of having only one informant is particularly relevant when assessing the relationships with parents or carers, and thus the impact of family interactions may not have been estimated to full extent (Bowes et al., 2010). Additionally, the investigation on family relations has not considered interactions with other family or household members, namely with siblings, which previous research has revealed to affect resilience in the face of bullying (Sapouna & Wolke, 2013). Another limitation of the study is its cross-sectional nature, not allowing us to make inferences about causality; these findings need to be replicated in longitudinal studies. Also, the measure of coping strategies is not focused on social victimization situations, which would allow for a more accurate estimation of the impact of coping strategies on resilience. These two limitations combined may suggest that the results regarding the general selection of coping strategies may indicate an already (un)successful attempt to achieve resilience in the face of peer victimization and perceived discrimination.

Implications for research

Future research is needed to investigate further the novel findings of this study, employing longitudinal designs. Additionally, we focused on protective and vulnerability factors for the victim's psychological adjustment considering internal outcomes and measured via self-report. Further research can investigate if the observed protective factors are relevant for resilience manifested in other internal outcomes (suicidal ideation, self-harm) and external outcomes (e.g., school performance, addictive substance use). There is growing evidence that peer victimization

and discrimination have pernicious effects on the patterns of stress response and consequential inflammation, which in turn contribute to premature ageing and mortality (Beckie, 2012; Berger & Sarnyai, 2015; Copeland et al., 2014; McEwen, 2007; Moore et al., 2017), and future research should investigate the protective factors for biological outcomes. Additionally, it is important to investigate the protective effects of resources in the communities and the wider social systems (Ungar & Theron, 2020). These could include school-wide interventions to decrease bullying and promote well-being in the face of violence, availability and engagement in extra-curricular activities, which can foster a sense of mastery, and availability and free access to psychological therapies.

Implications for practice

In what concerns implications for practice, previous research has shown that the deleterious effects of peer victimization and perceived discrimination is never completely buffered (Armitage et al., 2021; Freitas, Coimbra, Marturano, et al., 2017); in that context, resilience can only be acknowledged as the least of worse outcomes. Thus, the utmost priority is to decrease levels of social victimization. We know victimization does not affect all students equally, as it is imbedded in prejudice and cultural standards (Bucchianeri et al., 2014; Freitas, Coimbra, Marturano, et al., 2017; Menesini & Salmivalli, 2017; Mitchell et al., 2020; Thornberg, 2015), and this also needs to be addressed in primary prevention. Given the associations between peer aggression and social prejudices (Carrera-Fernández et al., 2013; Goodboy et al., 2016), it is crucial that anti-bullying programs are designed to target sexism, homophobia, racism, religious bias, and bias regarding body appearance (specially in relation to weight concerns (Freitas, Coimbra, Marturano, et al., 2017)).

Intervention with victims should focus on the protective and vulnerability factors identified

in this study. It is crucial to address anxiety and feelings of helplessness and challenge any evidence of self-blaming. The frequency of substance use as a way to deal with stress must be assessed and presented as an unproductive way to ease the pain. It would be important to foster the person's sense of agency, active coping, and encourage positive meaning-making (as denoted in the use of humor coping). The research's correlational nature allows to suggest that students who have been victimized and lack the observed protective factors, or show the use of negative coping strategies (self-blame or substance use), should receive care to prevent further psychological deterioration and prevent negative chain reactions.

Family interventions should also be provided, given the importance of having a good relationship with parents. Having a positive relationship with parents, and having established a secure attachment, is recognized to have beneficial effects in multiple dimensions of development and confer protection against several life adversities (Masten et al., 2021). In addition, evidence suggests that positive parenting behavior is protective of peer victimization (Lereya et al., 2013). Therefore, interventions that target parent-child relationship will both act on the level of exposure to risk but also on the response to peer victimization and discrimination.

Conclusions

This study investigated individual and family level factors related to resilience in the face of peer victimization and perceived discrimination. Given the pervasive, long-term impact of victimization and the absence of a complete resilient response, the primary focus of interventions must be on an efficient implementation of anti-bullying policies, which should also cover bias-based victimization. In the presence of victimization, this study findings suggest that the critical areas for individual interventions to promote resilience are fostering active coping and humor, and decreasing self-blame or substance use coping. Moreover, it is crucial to work on the relationships

with the parents (or other caregivers), as evidence suggests that positive parenting practices are related to reduced risk of victimization for children. This study shows that a having good relationship with the mother may foster resilience. Furthermore, especially among youth minorities frequently exposed to discrimination, resilient trajectories depend heavily on other specific protection mechanisms that should be available in their contexts.

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Table 1.

Samples' descriptive information

	<i>Total sample (N = 2975)</i>	<i>Victimized sample (n = 644)</i>
<i>Gender</i>		
Female	1594 (54.0%)	365 (57.1%)
Male	1360 (45.7%)	274 (42.9%)
<i>Age [M (SD)]</i>	16.59 (1.27)	16.52 (1.24)
<i>Type of course</i>		
Scientific	2380 (81.0%)	514 (80.7%)
Vocational	557 (19.0%)	123 (19.3%)
<i>Parental level of education</i>		
Elementary	912 (31.4%)	211 (33.4%)
Secondary	1101 (37.9%)	240 (38.0%)
University degree	893 (30.7%)	181 (28.6%)
<i>Nationally</i>		
Portuguese	2680 (91.7%)	576 (91.0%)
Non-Portuguese	243 (8.3%)	57 (9.0%)
<i>Ethnicity</i>		
White/Caucasian	2547 (88.9%)	549 (87.7%)
Black	245 (8.6%)	57 (9.1%)
Mixed White and Black	44 (1.5%)	13 (2.1%)
Other	29 (1.0%)	7 (1.1%)
<i>Religion</i>		
Catholic	1863 (81.9%)	393 (77.7%)
Other Christian religion	92 (4.0%)	26 (5.1%)
Other religions	28 (1.2%)	8 (15.6%)
Atheist or agnostic	291 (12.8%)	79 (15.6%)
<i>Sexual orientation</i>		
Heterosexual	2820 (97.1%)	597 (94.8%)
Lesbian, gay or bisexual	84 (2.9%)	33 (5.2%)

Table 2.

Instruments' goodness of fit indices observed in the Confirmatory Factor Analyses and Cronbach's alpha measure of internal consistency

	Instrument	χ^2/df	CFI	RMSEA	p_{rmsea}	SRMR	$ \lambda >$	AVE >	CR >	Cronbach's $\alpha >$
Social victimization	Perceived discrimination	3.424	.980	.049	.519	.0317	.463	.325	.654	.723
	Peer victimization	5.931	.973	.054	.120	.0337	.484	.470	.789	.784
Psychological adjustment indices	Mental Health	3.908	.999	.031	.936	.0074	.543	.491	.823	.832
	Life satisfaction	1.188	1.000	.008	1.000	.0071	.439	.361	.734	.737
	Self-esteem	3.597	.995	.030	1.000	.0129	.481	.385	.829	.841
Psychological adjustment - second order factor		6.822	.963	.045	.999	$\lambda_{\text{Mental health}} = .451, \lambda_{\text{Self-esteem}} = .713, \lambda_{\text{Life satisfaction}} = .534$.781
Individual protective and vulnerability factors	Anxious personality	3.702	.990	.030	.999	.0167	.472	.248	.697	.706
	Empathy	3.655	.983	.030	1.000	.0210	.454	.265	.641	.635
	Coping strategies	3.246	.963	.039	1.000	.0336	.617	.485	.677	.642
Familial protective and vulnerability factors	Familial optimism	2.512	.998	.023	.996	.0102	.430	.364	.736	.759
	Mother - qualities of relationship	4.899	.992	.037	1.000	.0238	.654	.551	.782	.827
	Father - qualities of relationship	4.204	.993	.033	1.000	.0180	.655	.587	.808	.853

Table 3.

Relationships between social victimization, psychological indices of adjustment and resilience

	1.	2.	3.	4.	5.	6.	7.	8.	9.	Mean	(SD)
1. Resilience										0.00	(0.59)
2. Mental health	.74***									3.04	(0.85)
3. Life satisfaction	.77***	.48***								2.85	(0.76)
4. Self-esteem	.76***	.54***	.53***							3.13	(0.75)
5. Unfair treatment	.00	-.27***	-.20***	-.15***						1.83	(0.92)
6. Personal rejection	.00	-.30***	-.22***	-.31***	.38***					2.05	(0.95)
7. Physical violence	.00	-.03	-.07	-.05	.27***	.09*				1.76	(0.84)
8. Social violence	.00	-.25***	-.13**	-.18***	.18***	.25***	.14***			2.81	(0.87)
9. Verbal violence	.00	-.26***	-.11**	-.23***	.36***	.21***	.32***	.40***		3.28	(0.88)
10. Attacks of property	.00	-.12**	-.08*	-.07	.28***	.15***	.48***	.28***	.36***	2.22	(0.82)

Notes: 638 < N < 641, * $p < .05$, ** $p < .01$, *** $p < .001$

Table 4.

Predictors of resilience in the face of peer victimization and perceived discrimination

	Unadjusted models					Fully adjusted model		
	B	95% CI	β	F	R _a ²	B	95% CI	β
Male gender	.27	[-.18, .36]	.23***	(1, 636) = 34.68	.05	.09	[-.02, .20]	.07
Age	.02	[-.02, .06]	.04	(1, 633) = 1.11	.00	.02	[-.02, .06]	.04
Non-Portuguese	.05	[-.11, .21]	.03	(1, 630) = 0.35	.00	-.03	[-.23, .18]	-.01
Ethnic minority	.07	[-.08, .21]	.04	(1, 622) = 0.82	.00	.02	[-.16, .20]	.01
Not catholic	-.07	[-.20, .05]	-.05	(1, 501) = 1.31	.00	.02	[-.09, .13]	.02
Lesbian, gay or bisexual	-.13	[-.35, .07]	-.05	(1, 627) = 1.66	.00	-.01	[-.21, .19]	.00
Vocational course	.09	[-.03, .20]	.06	(1, 633) = 2.01	.00	.00	[-.13, .13]	.00
Parental education - university	.02	[-.09, .12]	.01	(1, 629) = 0.05	.00	.05	[-.05, .15]	.04
Anxious personality	-.33	[-.40, -.26]	-.34***	(1, 639) = 82.51	.11	-.19	[-.28, -.09]	-.18***
Perspective taking	.05	[-.02, .12]	.06	(1, 637) = 1.97	.00	-.01	[-.09, .08]	-.01
Empathic concern	-.06	[-.14, .01]	-.07	(1, 639) = 2.72	.00	.10	[.01, .19]	.10*
Active coping	.27	[.21, .32]	.37***	(1, 635) = 98.05	.13	.12	[.05, .19]	.16**
Support	.08	[.04, .12]	.14***	(1, 635) = 13.43	.02	.01	[-.04, .07]	.02
Positive reframing	.20	[.16, .24]	.36***	(1, 635) = 92.47	.13	.04	[-.02, .10]	.07
Venting	.16	[.12, .20]	.31***	(1, 636) = 65.02	.09	.02	[-.03, .07]	.04
Humor	.16	[.12, .20]	.30***	(1, 636) = 65.02	.09	.08	[.03, .13]	.15**
Religion	.02	[-.02, .06]	.03	(1, 635) = 0.75	.00	.02	[-.03, .06]	.03
Behavioral disengagement	-.20	[-.24, -.15]	-.33***	(1, 635) = 76.49	.11	-.06	[-.11, -.00]	-.09*
Denial	-.02	[-.06, .03]	-.03	(1, 635) = 0.39	.00	.00	[-.05, .05]	.00
Self-blame	-.20	[-.24, -.17]	-.39***	(1, 635) = 111.70	.15	-.13	[-.17, -.08]	-.23***
Substance use	-.07	[-.13, -.02]	-.11**	(1, 635) = 8.18	.01	-.10	[-.15, -.04]	-.14***
Familial optimism	.25	[.20, .31]	.34***	(1, 634) = 80.21	.11	.05	[-.02, .11]	.06
Satisfaction w/ mother	.17	[.12, .21]	.29***	(1, 620) = 58.62	.09	.12	[.03, .20]	.20**
Satisfaction w/ father	.13	[.09, .17]	.25***	(1, 588) = 38.45	.06	-.03	[-.10, .05]	-.05
Intimacy w/ mother	.09	[.05, .13]	.19***	(1, 615) = 22.46	.03	.02	[-.03, .07]	.04
Intimacy w/ father	.11	[-.07, .16]	.20***	(1, 585) = 24.76	.04	.02	[-.04, .08]	.04
Admiration by mother	.15	[.11, .19]	.26***	(1, 616) = 43.06	.06	.00	[-.09, .09]	.00
Admiration by father	.14	[.09, .18]	.25***	(1, 585) = 39.33	.06	.05	[-.03, .14]	.09
Conflicts w/ mother	-.08	[-.13, -.03]	-.12**	(1, 619) = 9.30	.01	.05	[-.01, .11]	.07
Conflicts w/ father	-.04	[-.09, .01]	-.07	(1, 590) = 2.93	.00	-.03	[-.08, .03]	-.04
						<i>F</i> (30, 441) = 12.17***		
						<i>R_a</i> ² = .43		

Note: 95% CI = Confidence intervals of the unstandardized regression coefficients, * $p < .05$, ** $p < .01$, *** $p < .001$, β = standardized regression coefficients, R_a^2 = Adjusted R square