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Effects of bullying victimization on internalizing and externalizing symptoms: the mediating role of alexithymia.

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Abstract

Objectives. Bullying victimization increases the risk of displaying internalized and externalized symptoms and alexithymia traits among adolescents. The aim of this study is to examine the mediating role of Alexithymia in the relationships between bullying victimization and internalized and externalized symptoms. **Methods.** A total of 1092 4th to 6th grade students and their teachers (N = 67) anonymously completed a series of measures about experiences of bullying victimization, internalizing and externalizing symptoms, and alexithymia. **Results.** Our data suggest that three types of bullying victimization (verbal, physical and social) predicted internalized, externalized and alexithimic symptoms. Furthermore, alexithymia partially mediated the positive effect of all the three types of bullying victimization on both internalizing and externalizing symptoms. **Conclusions.** In conclusion, this is the first study providing empirical data about the mediating role of alexithimia in exacerbation of internalized and externalized symptoms among adolescents and pre-adolescents exposed to three types of bullying victimization.

Keywords: alexithymia, victimization, internalized symptoms, externalized symptoms, pre-adolescent

Effects of bullying victimization on internalizing and externalizing symptoms: the mediating role of alexithymia.

Violence in the schools is a phenomenon that has been recognized as urgent all over the world (Longobardi, Prino, Fabris, & Settanni, 2017, 2019). Among the various forms of violence in the school setting, bullying has surely received the most attention in social and psychological research. Bullying involves a pattern of repeated aggression, with deliberate intent to harm or disturb a victim despite the victim's apparent distress, and a real or perceived imbalance of power (Olweus, 1994; Olweus, Limber, & Breivik, 2019). This definition is well accepted among researchers and practitioners but, as recognized by Olweus (2013), it is important to extend it and adapt the criteria defining bullying when considering the electronic form of bullying, namely, cyberbullying. Bullying, also called "traditional bullying," is twice as common as cyberbullying (Modecki, Minchin, Harbaugh, Guerra, & Runions, 2014). The literature reports a great variability in bullying involvement around the world, and a recent meta-analytic review found mean prevalence rates of 35% for traditional bullying involvement (Modecki et al., 2014). It is estimated that a percentage between 20% and 40% of children has been a victim, at some point of their scholastic career, of bullying in its various forms (Longobardi, Iotti, Jungert, & Settanni, 2018; Shetgiri, Lin, & Flores, 2013). Much like in other nations, in Italy bullying is also an emergency, and prevalence rates vary across studies due to the different samples recruited, the methods and instruments used, and, furthermore, the time period and cutoff criteria adopted to measure students' involvement in bullying (Baldry, Sorrentino, & Farrington, 2018). Nocentini and Menesini (2016), in a wide sample of Italian students, acknowledged that 44% of primary school students and 13% of middle school students reported school victimization, whilst Baldry et al. (Baldry, Farrington, & Sorrentino, 2017; Baldry et al., 2018) reported that 59% of Italian students, with an age between 11 and 17 years, reported forms of school victimization.

The types of bullying are defined depending on the manner in which the violence is perpetrated against the victim. There are no univocal classifications of the types of bullying in the literature, and studies are dependent upon the instruments they use to measure them. Generally, direct bullying includes anything requiring direct interaction between the bully and victim, such as physical acts of aggression and name calling. Indirect bullying comprises spreading rumors, attempts at social exclusion, and talking behind the victim's back (Baldry, 2004). Other scholars distinguish between overt victimization, such as physical or verbal victimization, and relational victimization, which is the damage of social relations or status within the peer group (Casper & Card, 2017). Additionally, other authors highlight the importance of including psychological aggression and victimization as a distinct form of bullying, in both traditional and cyber bullying (Ortega-Ruiz, Del Rey, &

Casas, 2016). More frequently, bullying has been divided into physical, verbal, and social, and we shall base ourselves on this distinction during the analyses (Longobardi, Borello, Thornberg, & Settanni, 2019; Marengo, Settanni, Prino, Parada, & Longobardi; Marsh et al., 2011)

Bullying has a negative impact on the mental health of child and adolescent victims, including self-harm, violent behavior and psychotic symptoms (Arseneault, Bowes, & Shakoor, 2010). The negative effects of bullying on the development of minors can extend themselves well into late adolescence and adulthood (Gilmartin, 1987; Olweus, 1994; Schoeler, Duncan, Cecil, Ploubidis, & Pingault, 2018). The literature concerning bullying in children and adolescents has taken into examination the relationship between bullying victimization and internalizing and externalizing symptoms (Casper & Card, 2017; Eastman et al., 2018; Schoeler et al., 2018). Experiences of bullying victimization can increase the risk of internalizing symptoms, such as anxiety and depression, which could be the expression of a feeling of faithlessness toward the future, low self-esteem, solitude and social isolation, emotional dysregulation and a stress response relevant to the experience of victimization (Hamilton, Newman, Delville, & Delville, 2008; Longobardi, Prino, Fabris, & Settanni, 2017; Schoeler et al., 2018).

Furthermore, experiences of bullying victimization have been associated with externalizing symptoms (Eastman et al., 2018; Marengo et al., 2018), such as conduct disorders, delinquency and substance use. The adoption of aggressive behaviors could be the victims' answer to the stress of victimization, an adaptation strategy to a hostile environment, and could derive from feelings of frustration, hostility and rage toward the victimization experienced (Schoeler et al., 2018).

Therefore, bullying victimization can be associated with externalizing or internalizing symptoms or, for some individuals, to both symptomatic areas (Arseneault et al., 2010; Eastman et al., 2018). According to Casper and Card's (2017) meta-analysis, forms of indirect victimization are correlated with internalizing symptoms, whilst forms of direct victimization are mostly associated with externalizing symptoms, highlighting a significant role of the various forms of victimization. However, the conclusions of said meta-analysis have been disputed by Eastman et al. (2018) who observed that adolescents who reported any type of bullying victimization (direct, indirect or dual) manifested elevated levels of both internalizing and externalizing symptoms.

Alexithymia is a cognitive-affective disturbance characterized by a reduced ability to identify and describe feelings, diminished imaginative capabilities, and a concrete and externally-oriented way of thinking (Sifneos, 1973; Taylor, 1984). The prevalence of alexithymic traits in adolescents is estimated between 7.3%

and 20.9% (Hébert, Boisjoli, Blais, & Oussaïd, 2018; Honkalampi et al., 2009), with higher levels in younger teenagers and mixed results concerning gender distribution (Hébert et al., 2018; Parker, Eastabrook, Keefer, & Wood, 2010).

Higher levels of alexithymia have been detected in adolescents that have had traumatic experiences (Hébert et al., 2018; Schimmenti et al., 2017). However, among the different traumatic experiences that pre-adolescent and adolescent may encounter, scarce attention has been paid to bullying at the present time. Several scholars have detected higher levels of alexithymic symptoms in adolescents and pre-adolescents that have been victims of bullying, both in its traditional form (Guzzo, Pace, Lo Cascio, Craparo, & Schimmenti, 2014; Wachs & Wright, 2018) and in its cyber form (Arıcak & Ozbay, 2016; Wachs & Wright, 2018), compared to their non-victimized peers.

It is possible that alexithymic traits might develop in children and adolescents who have experienced chronic stress such as the hyper-arousal derived from experiences of victimization, such as bullying (Guzzo et al., 2014). Victimized adolescents can experience an emotional breakdown, and alexithymic traits complicate the identification and modulation of disturbing emotional traits which, therefore, are not integrated and elaborated, and increase the individual's distress. In children, alexithymia was found to be a predictor of both internalized and externalized symptoms (Di Trani et al., 2013; Mannarini, Balottin, Toldo, & Gatta, 2016; Manninen et al., 2011; Rieffe & De Rooij, 2012; Rieffe et al., 2010), and several studies examined its role as a mediator between negative experiences and both internalizing and externalizing symptoms (Gaher, Arens, & Shishido, 2015; Hahn, Simons, & Simons, 2016; Paivio & McCulloch, 2004).

Although the direct effects of bullying victimization on internalizing and externalizing symptoms for students during adolescence and pre-adolescence have been established (Casper & Card, 2017; Eastman et al., 2018), less is known about the effect of alexithymia on internalizing and externalizing symptoms for said population. The aim of this study is to examine the association between bullying victimization, alexithymia, and internalizing and externalizing symptoms among 4th to 6th grade students. Furthermore, we will examine the possible mediating role of alexithymia in the relation between bullying victimization and internalizing and externalizing symptoms. We hypothesized that higher levels of both bullying victimization (Arseneault et al., 2010; Casper & Card, 2017; Eastman et al., 2018) and alexithymia (Mannarini et al., 2016; Manninen et al., 2011) would be independently and positively associated with a higher frequency of internalizing and externalizing symptoms. Additionally, we also hypothesized a significant interplay between bullying

victimization and alexithymia: bullying victimization would exert an indirect positive effect on internalizing and externalizing symptoms, via its relationship with alexithymia.

Method

Participants

This is a cross-sectional study. We recruited the sample during the 2017-2018 school year, in January, from 13 Italian public schools located in the northwest of Italy. In particular, seven schools were located in rural areas, and six were located in urban areas. No information about individual socioeconomic status (SES) were acquired, but the schools were selected based on the SES level of the neighborhood in which the schools are located. Four of the schools were located in areas with low SES, five in areas with middle SES, and four in areas with high SES. All of the 4th-to-6th grade students (N = 1129) were invited to take part in the research. Thirty-seven students and/or their parents refused to participate.

A total of 1092 4th to 6th grade students and their teachers (N= 67) took part in the research. Students were recruited from eight Primary (n = 807, Females = 46.3%) and five Middle schools (n = 285, Females = 47.0%). Students' age ranged from 8 to 14 years (M = 10.2; SD = 0.91). As regards teachers, they were selected among those spending at least 6 hours per week with the students.

Procedure

Before administering the questionnaires, active parental consent for the students, and teacher's consent for participation were obtained. Participants (students and teachers) and the students' parents were informed about characteristics and aims of the study and about data confidentiality. The participation in the study was voluntary. The research was approved by the Ethics Committee of the University of Turin (IRB protocol no. 118643) and had been conducted in accordance with the ethical code of the Italian Association for Psychology (AIP). Data were collected in the first term of the school year, during school hours, using paper and pencil questionnaires. Teachers were asked to fill in the SDQ scale at the same time. Administration time was longer for primary school students and they received a Given that questionnaires were filled out in the presence of researchers, all of them were returned after completion (the response rate being 100%).

Measures

Bullying Victimization

Students' involvement in bullying victimization was assessed by using an adaptation to the Italian context of the victimization subscales of the Adolescent Peer Relations Instrument (APRI, (Marsh et al., 2011). The APRI is a psychometrically validated instrument that can be used to assess involvement in bullying

behaviors as both bullies and victims. For the purpose of this study, we administered the victimization section of the APRI instrument, which consists of 18 items assessing three types of bullying victimization, namely physical (6 items), verbal (6 items), and social victimization (6 items). The items are measured using a six-point Likert response scale (1 = *Never*, 2 = *Sometimes*, 3 = *Once or twice a month*, 4 = *Once a week*, 5 = *Several times a week*, 6 = *Every day*). Responses closer to 1 represented infrequent involvement in bullying victimization, whereas scores closer to 6 represented frequent amounts of involvement in bullying victimization. The original 3-factor structure fit the data well: $\chi^2(132) = 469.95$; RMSEA = .04; CFI = .98. Scales presented a good reliability, as tested using both Cronbach's alpha and McDonald's omega: social victimization: $\alpha = .75$; $\omega = .81$; physical victimization: $\alpha = .80$; $\omega = .80$; verbal victimization $\alpha = .86$; $\omega = .86$).

Alexithymia Questionnaire for Children

The Alexithymia Questionnaire for Children (Rieffe et al., 2010; Rieffe, Oosterveld, & Terwogt, 2006) is based on the original Toronto Alexithymia Scale 20 (TAS-20, (Bagby, Parker, & Taylor, 1994), which assesses alexithymia in adults and consists of 20 items. We used the Italian adaptation of the questionnaire (Di Trani et al., 2009). The item response format is: (0) not true, (1) a bit true, (2) true. The questionnaire does not have any norms or cutoff scores. The total alexithymia score is computed as a sum of the items. The factor structure of the scale was tested by running a CFA. Our data fit the theoretical model adequately, $\chi^2(170) = 512.57$; RMSEA = .05; CFI = .92. Scale reliability was adequate too: $\alpha = .70$; $\omega = .67$.

Students' Strength and Difficulties Questionnaire

To investigate children's emotional and behavioral characteristics, each teacher was asked to fill out the Italian version of the Strength and Difficulties Questionnaire (SDQ; Goodman, 1997; Tobia, Gabriele, & Marzocchi, 2011), which is composed of 25 items that refer to the positive or negative traits of the child's behavior in class. The items are evaluated on a three-point Likert scale (i.e., 0 = *Not True*, 1 = *Partially True*, 2 = *Absolutely True*), and assess five measures of children's emotional and behavior characteristics: Conduct Problems, Emotional Symptoms, Hyperactivity and Inattention, Prosocial Behaviors, and Problematic Relationships with peers. As suggested by Goodman, Lamping & Ploubidis (2010), for the purpose of this study, items were combined to create two scores reflecting students' internalizing (sum of emotional symptoms and problematic relationships with peers, $\alpha = .76$; $\omega = .78$), and externalizing symptoms (sum of conduct problems and hyperactivity/inattention symptoms, $\alpha = .85$; $\omega = .88$). In order to test the two-dimension model, we conducted a CFA obtaining adequate fit measures, $\chi^2(169) = 1185.29$; $p < .01$; RMSEA = .07; CFI = .97.

Data Analyses

Data analyses were performed using SPSS 25.0 and Mplus 7.2. Descriptive statistics (M, SD, Skewness, and kurtosis) were examined on all study variables. Bivariate correlations were computed between predictors, covariates, and mediating variables to test for multicollinearity. Bivariate correlations between the control variables and the outcomes were considered in order to select the ones to include in the tested models.

We employed the Ordinary least squares regression technique in order to study the direct effects of bullying victimization and alexithymia on internalizing and externalizing symptoms, while controlling for age and gender. Next, a path analysis was run to determine whether the relations between the three different types of bullying victimization and internalizing and externalizing symptoms were mediated by alexithymia. Age and gender were included in the model as covariates. The tested theoretical model is showed in Figure 1.

This analysis allowed us to estimate the indirect effects of different types victimization and, therefore, test their significance via bootstrap analysis. Effect estimates, and their 95% Cis, were computed using 5,000 random samples. Effects were considered statistically significant if the bootstrap confidence intervals (CI) did not include 0.

Given that gender could affect the studied relationships, we ran a multi-group mediation model with gender as a grouping variable, with the aim to test whether the hypothesized mediation model was gender invariant. Gender invariance is supported if 1. the model fits well for both males and females, and 2. The fit of the unconstrained model (i.e., with paths free to vary for males and females) is not significantly better than the fit of the constrained model (i.e., a model with all of the paths forced to be equal for males and females). The difference in fit between the two models is evaluated using the chi-square difference test: a non-significant chi-square difference indicates that the parameters are not significantly different for males and females.

Results

As the first step in the analyses, we verified the normality of the distribution of TAS-20 and APRI variables, by looking at their skewness and kurtosis values. Descriptive statistics for the study variables are reported in Table 1. In the same table we reported correlations among study variables: as expected, significant positive correlations were found between: 1. APRI subscales and TAS-20 scores; 2. APRI subscales and externalizing and internalizing symptoms, and 3. between TAS-20 scores and internalizing and externalizing symptoms.

INSERT TABLE 1 HERE

Next, OLS regression models were run to examine the effects of bullying victimization (APRI scales) on internalizing and externalizing symptoms (SDQ scores) and on Alexithymia (TAS-20 score). Results of the

regression analyses showed that verbal bullying victimization positively influenced externalizing ($\beta = 0.56, p < .001$), internalizing symptoms ($\beta = 0.32, p = .002$), and alexithymia ($\beta = 1.35, p < .001$). The same holds for physical bullying victimization, which positively affected externalizing ($\beta = 0.77, p < .001$), internalizing symptoms ($\beta = 0.48, p < .001$), and alexithymia ($\beta = 1.22, p < .001$). Furthermore, social bullying victimization was found to have a positive effect on externalizing ($\beta = 0.80, p < .001$), internalizing symptoms ($\beta = 0.61, p < .001$), and alexithymia ($\beta = 1.37, p < .001$). Concerning alexithymia, controlling for age and gender it was found to affect positively both externalizing ($\beta = 0.15, p < .001$) and internalizing symptoms ($\beta = 0.11, p < .001$).

Finally, using Mplus we performed a path analysis in order to identify possible interplay processes between different types of victimization (i.e., verbal, physical, and social) and alexithymia in influencing externalizing and internalizing symptoms. The tested model is presented in Figure 1. The fit of the model was adequate, $\chi^2(7) = 33.85$; RMSEA = .06; CFI = .96; SRMR = .03. We found that both verbal and social victimization exert an indirect effect on internalizing and externalizing symptoms, mediated by alexithymia. We found that alexithymia mediates the effect of all verbal and social bullying victimization on both SDQ externalizing and internalizing symptoms, while physical victimization does not exert an indirect effect on either of them. In particular, the indirect effects, and their bootstrapped CIs, are reported in table 2. By testing the significance of the direct effects of the victimization scales on SDQ-I and SDQ-E scores we also determined if the effects of social and verbal victimization on internalizing and externalizing symptoms are fully or partially mediated by alexithymia. The presence of a significant direct effect of the APRI-S scores on both SDQ-I (standardized effect: 0.587, SE = 0.173, CIs = 0.317 – 0.896) and SDQ-E (standardized effect: 0.581, SE = 0.207, CIs = 0.268 – 0.979) scores indicate that the effect of social victimization is partially mediated by alexithymia. Instead, the paths between the APRI-V and SDQ-I (standardized effect: -0.218, SE = 0.145, CIs = -0.465 – 0.017) and SDQ-E (standardized effect: -0.115, SE = 0.207, CIs = -0.453 – 0.233) are non-significant, supporting the presence of a fully mediated effect.

INSERT HERE FIG. 1 AND TABLE 2

We then tested the gender invariance of the model by conducting a multi-group path model. We found that the model fit was adequate in both of the groups (Males: $\chi^2(3) = 25.77, p < .01$, RMSEA = 0.08, CFI = 0.92, SRMR = 0.03; Females: $\chi^2(3) = 7.26, p = .06$, RMSEA = 0.05, CFI = 0.99, SRMR = 0.03) and the chi-square difference between the unconstrained (i.e., paths can be different for males and females) and the constrained model (i.e., paths are constrained to be equal for males and females) was non-significant, $\chi^2(1) = 0.82, p = 0.37$, supporting the gender invariance of the model.

Discussion

Bullying is recognized as a form of school violence that significantly affects adolescents and pre-adolescents in several nations, with a negative impact on the individual's mental health both in the short – and long- term (Arseneault et al., 2010; Baldry et al., 2017, 2018; Longobardi et al., 2017, 2019). Our data seem to confirm a correlation between experiences of bullying and both internalizing and externalizing symptoms (Arseneault et al., 2010; Eastman et al., 2018).

In agreement with Eastman et al. (2018), the various forms of bullying under investigation (i.e., physical, verbal, and social) are correlated to both internalizing and externalizing symptoms, highlighting how, for adolescents and pre-adolescents, being victims of bullying is associated with lower levels of psychological well-being, regardless of the single forms of victimization experienced. This datum is in disagreement with the meta-analysis by Caspar and Card (2017), which suggests that some forms of bullying are more associated with internalizing symptoms compared to externalizing symptoms and vice-versa. This discrepancy is difficult to interpret; however, we can observe how the different forms of bullying that we have examined are only partially superimposable with the classification used by Caspar and Card (2017). Furthermore, as suggested by the authors themselves (Caspar & Card, 2017), methodological factors such as sample size, the type of informant, as well as the age of the participants involved in the study can be a potential source of influence in determining the associations between the investigated constructs. Therefore, future research should investigate said discrepancy further.

In line with previous studies (Guzzo et al., 2014; Wachs & Wright, 2018), our data confirm a correlation between the experience of bullying and alexithymia which, in turn, is correlated with internalizing and externalizing symptoms. The correlation between alexithymic symptoms and internalizing and externalizing symptoms has already been highlighted in the literature (Mannarini et al., 2016; Manninen et al., 2011), and it is probable that alexithymia plays a mediating role between previous experiences of victimization and the insurgence of internalizing and externalizing symptoms (Teten, Miller, Bailey, Dunn, & Kent, 2008; Thomas, DiLillo, Walsh, & Polusny, 2011; Velotti et al., 2016). Nevertheless, to our knowledge, no study had investigated the interplay of alexithymia, internalizing and externalizing symptoms, and bullying victimization in a sample of adolescents and pre-adolescents. Even if cross-sectional data cannot be used to make inferences about causal relationships between the study variables, our findings are compatible with the existence of a relationship between bullying victimization and internalizing and externalizing symptoms, mediated by alexithymia. In particular, our data support the theoretically-driven hypothesis that being victimized increases

individual alexithymia levels that, in turn, heighten the probability of developing externalizing and/or internalizing symptoms. We found that this indirect effect exists for both verbal and social bullying victimization, and that for verbal bullying the effect is fully mediated by alexithymia. Adolescents and pre-adolescents with elevated levels of alexithymia may have difficulties in accessing the painful emotional states linked to the experience of bullying, and in mentalizing and regularizing the emotional and cognitive aspect connected with the experience of victimization, thus incrementing distress. In such circumstances of emotional exhaustion, the painful emotional experiences might not be adequately integrated and elaborated and could convey into the expression of internalizing and externalizing symptoms.

Limitations and Future Research Directions

This study is not without limitations. First, the cross-sectional approach adopted does not allow us to formulate hypotheses in terms of causality between the variables under examination; longitudinal studies could better investigate this aspect. Second, our study is based on a non-clinical population of adolescents and pre-adolescents, and uses self-report measures: therefore, it is advisable that future studies taking to consideration a clinical population, employing diagnostic instruments for the evaluation of alexithymia and internalizing and externalizing symptoms. Lastly, due to the limited age range of our sample, we did not analyze the effect of age on the hypothesized model: further studies with different age samples are needed to examine how age affects the investigated constructs and their relationships.

Compliance with Ethical Standards

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

Ethical approval: All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

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

Author Contributions

LEP. and CL: designed and executed the study, assisted with the data analyses, and wrote the paper. MS and RHP: analyzed the data and wrote the results, collaborated with the design and writing of the study. MAF.: collaborated in data collection, and in writing and editing the final manuscript.

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Table 1. Correlation Matrix and descriptive statistics for study variables

	1	2	3	4	5	6	7	8
1. Sex (F= 1)	1	0.018	.063*	-.060*	-.160**	0.038	-.095**	-.272**
2. Age		1	-.072*	-.103**	-.168**	-.105**	-.074*	-.122**
3. TAS			1	.224**	.153**	.215**	.112**	.137**
4. APRI - V				1	.670**	.649**	.106**	.154**
5. APRI - P					1	.505**	.131**	.193**
6. APRI - S						1	.163**	.164**
7. SDQ-I							1	.574**
8. SDQ-E								1
M		10.23	16.83	1.72	1.48	1.59	2.75	3.39
SD		0.91	5.33	0.88	0.69	0.80	3.03	3.94

Note: APRI-V: Verbal bullying victimization scale, APRI-P: Physical bullying victimization scale, APRI-S: Social bullying victimization scale, TAS-20 Toronto Alexithymia scale; SDQ-I Strengths and Difficulties Questionnaire – Internalizing symptoms; SDQ-E Strengths and Difficulties Questionnaire – Externalizing symptoms

* $p < .05$; ** $p < .01$

Table 2. Results of mediation analyses, including verbal, physical, and social victimization as predictors, internalizing and externalizing symptoms as outcomes, and alexithymia as a mediating variable.

Predictor	SDQ - I		SDQ - E	
	Indirect effect (SE)	95% CI (bootstrap estimates)	Indirect effect (SE)	95% CI (bootstrap estimates)
APRI-V	0.014 (0.006)	0.003 – 0.024	0.078 (0.032)	0.035 – 0.139
APRI-P	-0.001 (0.017)	-0.027 – 0.029	-0.001 (0.028)	-0.045 – 0.047
APRI-S	0.036 (0.019)	0.011 – 0.075	0.061 (0.029)	0.022 – 0.118

Note: SDQ-I: Strength and Difficulties Questionnaire – Internalizing symptoms; SDQ-E: Strength and Difficulties Questionnaire – Externalizing symptoms; APRI-V: Verbal bullying victimization scale, APRI-P: Physical bullying victimization scale, APRI-S: Social bullying victimization scale.

* $p < .05$; ** $p < .01$; *** $p < .001$

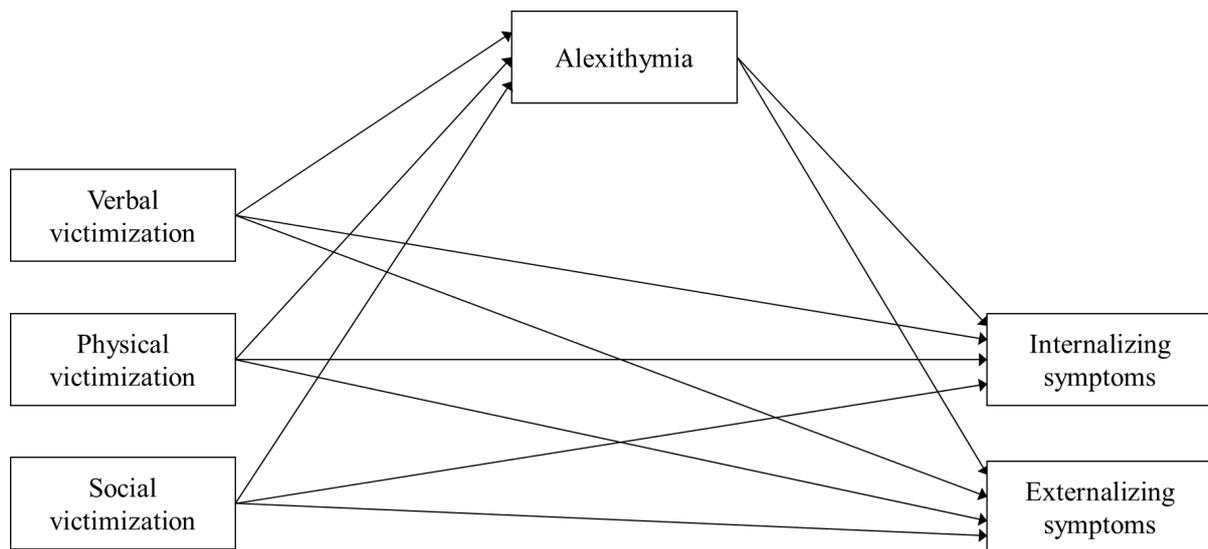


Figure 1. Theoretical path model for the relationships between verbal, physical, and social victimization, alexithymia, and internalizing and externalizing symptoms. Sex and gender covariates are not showed.