



Brief report

Traditional bullying and cyberbullying: Differences in emotional problems, and personality. Are cyberbullies more Machiavellians?

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ABSTRACT

Few studies have examined differences in emotional problems and personality of traditional bullies and cyberbullies. The present study aimed to determine whether those engaged in cyberbullying differ in emotional problems, and personality from those engage in traditional bullying perpetration. An Argentinean sample of 898 high school students was recruited (56% female; mean age = 15.2 SD = 1.6). Adolescents completed measures of traditional bullying, cyberbullying, self-esteem, anxiety, depression, and personality. A 6% were traditional bullies; 8%, cyberbullies; and 4% were involved in both forms; the remainders were non involved. Results indicated that cyberbullies showed less depression and anxiety than traditional bullies. Also, cyberbullies scored low in neuroticism and high in agreeableness compared to traditional bullies. The results suggest that cyberbullies are characterized by an emotional and personality profile different from traditional bullies. In the discussion we analyze the implications of these results.

1. Traditional bullying, cyberbullying, and mental health

The vast majority of researchers agreed that cyberbullying is an intentional, aggressive, and harmful behavior that occurs through electronic media (Kowalski, Giumetti, Schroeder, & Lattanner, 2014; Slonje & Smith, 2008; Sontag, Clemans, Graber, & Lyndon., 2011). Cybervictimization has been related to a plethora of psychological problems, such as anxiety, depression, among others (Mehari, Farrell, & Le, 2014). Thus, much is known about the effects on cyberbullying on victims compared to cyberbullies (e.g., Slonje, Smith, & Frisé, 2013). Cyberbullies do not present more mental problems, with the sole exception of being engaged in antisocial behavior. However, recent investigations found that being a cyberbully was linked to a poor psychological functioning (Fletcher et al., 2014; Wong, Chan, & Cheng, 2014).

2. Comparison between traditional bullying and cyberbullying

Researchers have presented diverse views about cyberbullying (Kowalski & Limber, 2013). Some of them suggested that cyberbullying is merely an extension of traditional bullying perform through electrical devices (Hinduja & Patchin, 2010; Juvonen & Gross, 2008). Raskauskas and Stoltz (2007) found that students involved in cyberbullying were a subset of those involved in traditional bullying. Considering this assertion, one might anticipate that the core characteristics of cyberbullies were no different from traditional bullying.

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Others authors suggested that cyberbullying differs from traditional bullying in some important aspects (e.g., anonymity, massive audience) and they pointed out that cyberbullying is perpetrated by different groups of individuals and its psychosocial correlates are different from traditional bullying (Dehue, Bolman, & Völlink, 2008; Kubiszewski, Fontaine, Potard, & Auzoult, 2015). Kubiszewski et al. (2015) detected little overlap (22%) between those who perpetrated traditional bullying and those involved in cyberbullying.

Thus, previous researches have been inconsistent in its conclusions regarding the relationship between traditional bullying and cyberbullying.

3. The present study

Previous research providing information in this topic has been somewhat limited, mainly in Latinamerican countries, such as Argentina. Therefore, the aims of this study were:

1) Measure the degree of overlap between traditional bullying and cyberbullying; 2) Examine correlates of emotional problems and personality in those involve in traditional bullying and compare with those involve in cyberbullying.

4. Method

4.1. Participants

The sample comprised 898 students (56% females; mean age = 15.2 SD = 1.6; range = 12–19) from three state high schools in Paraná, Entre Ríos, Argentina. Argentina is a developed Latin American country. It ranks 46th among 169 nations of the world on the Human Development Index. Parana, with a population of 250,000, is the capital of Entre Rios, a province with over 1.2 million inhabitants. Of the sample, a 15% attended 7° grade; 16%, 8° grade; 17%, 9° grade; 19%, 10° grade; 21%, 11° grade, and the remaining attended 12° grade of high school.

4.2. Measures

Olweus Bully/Victim Questionnaire (OBVQ, Olweus, 1993). The OBVQ is a 39-item self-report for students in 3–12 grade (Olweus, 1993). Of the 39 items, 10 comprise a victimization subscale and 10 comprise the bullying subscale (i.e., calling someone mean names, among others). Items are rated on a 5-point scale (0 = *It hasn't happened to me in the past couple of months*, 1 = *Only once or twice*, 2 = *2 or 3 times a month*, 3 = *About once a week*, and 4 = *About several times a week*). The responses for questions regarding victimization and bullying can be mean or sum to construct an index (Olweus, 2013).

Cyberbullying Questionnaire (CBQ, Calvete, Orue, Estévez, Villardón, & Padilla, 2010). It is composed of two different subscales, one for measuring cyberbullying (14 items) and one for measuring cybervictimization (14 items). The adolescent must indicate how often he or she had performed these behaviors, such as sending threatening or insulting messages to other people, among others. The original response format is: 0 (*Never*), 1 (*1 or 2 times*), 2 (*3 or 4 times*), or 3 (*5 or more times*). However, in the present study we use a 5-point scale, similar to the Olweus questionnaire (0 = *It hasn't happened to me in the past couple of months* to 4 = *About several times a week*).

Rosenberg Psychosomatic Scale (RPS, Rosenberg, 1965). The 10 items of the RPS measures anxiety by an autonomous activation system (Rosenberg, 1965). The responses are coded on a 4-point scale ranging from 1 (*Never*) to 4 (*Many times*).

Kovacs Child Depression Inventory (CDI, Kovacs, 1992). CDI includes 27 items. Each item consists of three statements graded in order of increasing severity from 0 to 2, participants select the one that characterize them best during the last two weeks.

Rosenberg Self-esteem Scale (RSES, Rosenberg, 1965). The 10 items of the RSES assess a person's overall evaluation of his or her worthiness (Rosenberg, 1965) and responses are coded on a 4-point scale ranging from 1 (*Strongly disagree*) to 4 (*Strongly agree*).

The GSOEP Big Five Inventory Scale (BIF-S, Gerlitz & Schupp, 2005). BIF-S assesses the Big Five Personality (Conscientiousness, Agreeableness, Extraversion, Openness to Experience, and Neuroticism) by means of three items per dimension. In the present study we use a 5-point Likert scale (1 = *Does not apply to me at all* to 5 = *Applies to me perfectly*). The responses are summed. BIF-S has showed good psychometric properties (Hahn, Gottschling, & Spinath, 2012).

4.3. Procedure and data analysis

After granting the permission schools' principals and parents, participants were informed of the anonymous and voluntary nature of the questionnaire. Data analyses were performing using Statistical Package for the Social Sciences (SPSS) 22.

5. Results

Participants were categorized as non involved, traditional bullies, cyberbullies, and traditional/cyberbullies by combining students with the sum of the eight dichotomized forms of traditional bullying and the 14 dichotomized forms of cyberbullying (0 = non involved and 1 = bullies). We used a conservative criterion of two or three times a month (Kowalski & Limber, 2013; Olweus, 2012). Results for females and males are displayed in Table 1. We found that 82% ($n = 713$) of participants were non involved; 6% ($n = 65$), traditional bullies; 8% ($n = 76$), cyberbullies; and 4% ($n = 44$), traditional/cyberbullies. As Table 1 shows, more males than females belonged to cyberbully groups and traditional/cyberbully status: 11% versus 5%, 6% versus 2% $\chi^2(3) = 27.55 p < 0.001$.

Table 1
Bullying and cyberbullying involvement total and according to gender.

Group/status	Gender		
	Males	Females	Total
Non involved	281 (75%)	432 (88%)	713 (82%)
Traditional bullies	35 (8%)	30 (5%)	65% (6%)
Cyberbullies	47 (11%)	29 (5%)	76 (8%)
Traditional/cyberbullies	28 (6%)	16 (2%)	44 (4%)
Total	391	507	898 (100%)

In order to explore psychosocial correlates of traditional bullying and cyberbullying, we considered the three groups involved in two types of bullying: traditional bullies, cyberbullies, and traditional/cyberbullies and eliminated non involved from analysis. That was done by keeping the same size of subgroup. So the percentages were 36%, 43%, and 21%, respectively. We performed a Multivariate Analysis of Covariance (MANCOVA) with belonging to a group as between-factor, emotional problems as outcome variables, and gender as covariate. The same analysis was conducted for personality. Significant effect of belonging to a group was found in both emotional problems and personality Wilks Lambda = 0.92 $F(6) = 1.93$ $\eta^2 = 4\%$ $p < 0.06$ and Wilks Lambda = 0.82 $F(10) = 2.87$ $\eta^2 = 10\%$ $p < 0.002$, respectively. However, for emotional problem effect was marginally significant. Also, gender presented main effects for emotional problems Wilks Lambda = 0.78 $F(3) = 14.50$ $\eta^2 = 24\%$ $p < 0.001$ and for personality Wilks Lambda = 0.82 $F(5) = 4.05$ $\eta^2 = 13\%$ $p < 0.002$. Scheffé post-hoc tests were applied to determine where the difference lay. Cyberbullies scored low in depression and anxiety compared to traditional bullies and traditional/cyberbullies (see Table 2).

Regarding personality, belonging to group introduced differences in agreeableness, and neuroticism (see Table 2). Scheffé post-hoc tests were applied to determine that cyberbullies scored high in agreeableness compared to traditional bullies. The former group and traditional/cyberbullies showed low neuroticism compared to traditional bullies.

6. Discussion

The purpose of this study was to provide data about correlates of emotional problems and personality of traditional bullying and cyberbullying. A vast majority of adolescents (82%) was non involved; 6% was traditional bullies; 8%, cyberbullies; and 4% was involved in both forms. These results are very similar to those reported by Kowalski and Limber (2013) with a similar criterion. They detected 77% of non involved and 6% of cyberbullies. Also, this study suggested that similar percentages of adolescents were involved exclusively in traditional bullying (6%) or cyberbullying (8%), whereas a lower percentage perpetrated both (4%). Taking into account adolescents exclusively involved in traditional bullying and cyberbullying, percentages were 36%, 43%, and 21%. Kubiszewski et al. (2015) found similar results suggesting little overlap (22%). Other studies detected more overlap (for example, Raskauskas & Stoltz, 2007). In the present research some overlap was also found (21% considering student involved in both types of bullying). As Kowalski and Limber (2013) suggested, there is overlap but is not perfect. These results suggested that there are adolescents who are involved exclusively in traditional bullying or cyberbullying. Inconsistency in the different studies as regarding overlap could be due to different cultural context, methodology, and criterion. Regarding cultural context, in Argentina, the

Table 2
Means and standar desviations in emotional problems and personality according to bullying and cyberbullying involvement.

Outcome Variable	Traditional bullies	Cyber- bullies	Traditional/cyber- bullies	Univariate	Scheffé Post hoc
Depression	17.00	13.26	17.81	$F(2) = 3.80$ $\eta^2 = 5\%^{**}$	CB < TB TCB
	9.13	6.96	11.17		
Anxiety	11.88	8.70	11.53	$F(2) = 3.41$ $\eta^2 = 5\%^{**}$	CB < TB TCB
	6.50	6.34	8.39		
Self-esteem	28.01	29.54	28.56	$F(2) = 0.57$ $\eta^2 = 1\%$	ns
	6.47	6.25	6.03		
Consciousness	9.67	9.18	8.63	$F(2) = 1.75$ $\eta^2 = 2\%$	ns
	2.62	2.14	2.45		
Agreeableness	10.00	11.22	10.53	$F(2) = 5.77$ $\eta^2 = 8\%^{***}$	CB > TB
	1.91	2.03	2.251		
Extraversion	10.60	11.24	10.56	$F(2) = 0.1.37$ 2%	ns
	1.93	2.48	2.67		
Openess to experience	10.79	10.96	10.50	$F(2) = 0.26$ $\eta^2 = 1\%$	ns
	2.49	2.85	3.58		
Neuroticism	10.22	9.04	8.26	$F(2) = 4.67$ $\eta^2 = 7\%^{**}$	CB TCA < TA
	2.91	2.74	2.31		
N	65	76	44		

Note. *** $p < 0.005$ ** $p < 0.05$ ns = non significant NI = non involved TB = traditional bullies CB = cyberbullies TCB = traditional/cyberbullies.

availability of and attraction to information and communication electronic devices make Argentinean adolescents the vanguard of the “interactive generation” in Latin America (Facio & Resett, 2012). The high use that Argentinean adolescents make of their electronic devices can lead them to cyberbully but also to know more about new technologies and related issues: how to defend against the aggressions or having a more refined knowledge of the advantages to bully online. With respect to methodology, Juvonen and Gross (2008) detected more overlap, but participants were recruited on the Internet. Something that should be evaluated is whether recruitment on the Internet versus in school introduces a strong response bias. On the other hand, researchers use more conservative or lax criterion to identify students involved in bullying or cyberbullying. Another problem is to identify unique effects of traditional bullying versus cyberbullying when measuring them. For example, when we ask: “Have you call someone mean names?” We are supposed to measure traditional bullying. Yet may it be in those questions adolescents include cyberbullying, as well. This measurement problem could indicate more overlap than there is.

We found differences in emotional problems between traditional bullies or cyberbullies, cyberbullies presented lower depression and anxiety than traditional bullies. These findings are in line with Juvonen, Graham, and Schuster (2003) and Volk, Craig, Boyce, and King (2006). Some authors suggested that bullying could be adaptive because it promotes access to resources (Book, Volk, & Hosker, 2012). Advantages of cyberbullying (anonymity, among others) could explain this result as well.

Few studies have been carried out regarding traditional bullying, cyberbullying, and personality. The scarce available research found a negative correlation with agreeableness and conscientiousness (Bollmer, Harris, & Milich, 2006; Scholte, van Lieshout, de Wit, & van Aken, 2005). In the present research, traditional bullies presented high level of neuroticism in comparison to the other two groups. Moreover, cyberbullies showed higher levels of agreeableness compared to traditional bullies. This finding suggested that the personality profile of a cyberbully was somewhat different to the traditional bully. A possible explanation to lower neuroticism and being a graduate for this group is to be involved in hostile behavior with anonymity and lack of inhibition, as Livingstone, Haddon, Görzig, and Ólafsson (2011) pointed out. Something interesting –but not reported here– is that cyberbullies showed lower level of conscientiousness than non involved, but levels of agreeableness were similar to non involved. Hence, the results regarding correlates of emotional problems and personality indicate that cyberbullying is not merely an extension of traditional bullying. In the present study, results could indicate that cyberbullies are Machiavellians or (internet)social integrated. These findings are different from those reported by Kowalski and Limber (2013) who detected that psychosocial correlates of two types of bullying resembled one another. On the other hand, the identification of cyberbullies for adult people it could not be so easy due to their high agreeableness, low neuroticism, and the way they carry out bullying (e.g., anonymity). Thus, identification and prevention of cyberbullying is a challenge for research.

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