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Bullying and victimization in schools in India

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CHAPTER THREE

Bullying and Psychopathic Traits: A Longitudinal Study with Adolescents in India

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ABSTRACT

The goal of this three-wave longitudinal study was to examine if youth psychopathic traits, namely narcissism, callous-unemotionality (CU), and impulsivity predicted the likelihood of a student being a bully, victim, or bully-victim among adolescents in India. The sample consisted of 1,238 students from nine schools in Indore, India. We used self- as well as peer-reports to measure bullying and victimization behavior in the classroom, at three time-points in one school year. Psychopathic traits were measured at the first time point. Using multinomial logistic regression (MLR) analyses, we first examined if the covariates caste, religion, age, gender, and socio-economic status predicted bullying and victimization behavior in the classroom. At step 2, in addition to the covariates, we included narcissism, callous-unemotionality, and impulsivity as independent variables, to test the predictive strength of psychopathic traits on the classification as bullies, victims, or bully-victims. In MLR analyses we found that the three psychopathic traits together, along with socio-demographic covariates, were a better fit in predicting bully, victim, and bully-victim categories, as compared to the covariate only model. However, we found no relations between the psychopathic traits of narcissism, CU traits, and impulsivity, with classifications as bullies, victims, or bully-victims at either of the time points on the self- or the peer-reported measures. Psychopathic traits, when considered together, predicted bullying behavior in urban, school-going youth in India. Narcissism, CU traits, and impulsivity independently did not predict bullying or victimization roles.

Keywords: Psychopathy; Bullying; Adolescents; India; Extended replication

INTRODUCTION

Bullying can be defined as a repetitive and intentional act of psychological and/or physical aggression by a more powerful person or group against a less powerful person or group (Olweus, 1993). Experiences of bullying and victimization in adolescents may cause anxiety, depression, suicidal ideation, and substance use, with even worse consequences observed among bully-victims, i.e., adolescents who both bully and are bullied (Moore et al., 2017). Bullying is likely driven by a desire for dominance and popularity within the classroom (Salmivalli & Peets, 2009), and together with other characteristics of bullies, like low empathy (Pöyhönen & Salmivalli, 2008) and careless behavior (Liang, Flisher, & Lombard, 2007), this collates to form the definition of psychopathy (Salekin, 2016). The central aim of the current study is to examine the relation between psychopathy and bullying in adolescents, through a three-wave longitudinal design in an Indian sample of school going early adolescents.

A widely accepted perspective on psychopathy in the study of behavioral problems is the three-dimensional approach that is characterized by traits of narcissism, callous-unemotionality (CU), and impulsivity (Van Baardewijk et al., 2010). Narcissism, which is also called the interpersonal dimension, refers to a grandiose sense of self-worth, dishonest or superficial charm and manipulation for personal gain. Callous-unemotionality (CU), the affective dimension, comprises of traits of callousness, unemotionality, and lack of remorse and empathy. Impulsivity, the behavioral dimension, concerns impulsivity, irresponsibility, and thrill-seeking behavior (Colins, Noom, & Vanderplasschen, 2012; Van Baardewijk et al., 2010).

Several studies have found cross-sectional associations between bullying behavior in youth and narcissism, CU traits, and impulsivity (Ciucci, Baroncelli, Franchi, Golmaryami, & Frick, 2014; Fanti & Henrich, 2015; Jolliffe & Farrington, 2011).

Few studies, however, have explored the topic of bullying and psychopathy using a longitudinal design (see however Fanti & Kimonis, 2013; Reijntjes et al., 2016). Such studies are of particular importance because they may shed light on the question of directionality of relationships. One distinctive longitudinal study found in the literature on youth psychopathy and bullying is the study by Fanti and Kimonis (2013). They reported that all three psychopathy dimensions (narcissism, CU traits, and impulsivity) significantly predict bullying after one year (longitudinally), and that impulsivity predicts victimization after one year.

Another improvement on earlier studies on the relationship between bullying and psychopathy is the use of peer reports next to self-reports. Self-reports are frequently used in the study of bullying and victimization, because it is an easily applied and relatively efficient method for collecting information about personal experiences (Cornell & Bandyopadhyay, 2009). However, statistical relations between self-reported measures may be inflated because of shared method variance while a key advantage of peer-reports is that scores are based on multiple informants, thus decreasing measurement error and providing a more reliable result (Branson & Cornell, 2009); the combination of both peer and self-reports is advised in the study of bullying and its correlates (Cornell & Bandyopadhyay, 2009).

Also important for the relevance of the study is that it is conducted in Pune, India. In contrast to the relative abundance of studies on bullying in western countries, there is a paucity of research on the topic of bullying from India, a country with 236 million youth, the largest number by country worldwide (UNFPA, 2014). The few studies that do exist, report prevalence estimates of bullying of 30% to 60% (Kshirsagar, Agarwal, & Bavdekar, 2007; Ramya & Kulkarni, 2011), calling attention to this topic. Indian society is characterized by considerable diversity and inequalities linked to factors such as caste, religion, socio-economic status (SES), and languages, which are unique to the Indian context (Panda & Gupta, 2004). It is likely that these factors play a role in youth's

bullying experiences (Froystad, 2013; Nambissan, 2009), and may make it questionable whether the regularities found in studies predominantly conducted in high-income western countries are generalizable to Indian society (Charak & Koot, 2015). To illustrate, given the multi-religious diversity in India, religious bullying is a normatively accepted and habituated practice (Erum, 2018). For example, countless ‘Sardaar’ (Sikh) jokes are the eventual punch line of most banter and jokes in the country, where the regularized humor is that Sikh are slow-witted (Froystad, 2013).

These culture-specific factors may interfere in the associations between individual traits and bullying behavior as explained through the *social push hypothesis* (Ray, Thornton, Frick, Steinberg, & Cauffman, 2016) that states that associations between individual attributes and behavioral problems only manifest when the social contexts are ‘less harmful’, as also seen in western countries (Ray et al., 2016) where manifestations of psychopathic traits are stronger in more affluent than in less affluent communities. Scholars reason that this is because the impact of the negative context overpowers the influence of personal psychopathology (Gao, Baker, Raine, Wu, & Bezdjian, 2009; Ray et al., 2016). In line with this reasoning and the evidence supporting it, it could be that the power of social inequalities in India overwhelms manifestations of psychopathic personality characteristics. Therefore, we include the socio-demographic constructs age, SES, caste, and religion in the present study. Furthermore, psychopathy has been observed to have a conflicting gender component, where some studies report higher psychopathy prevalence in males than females (Schrum & Salekin, 2006), while other studies reported no gender differences in prevalence rates (Campbell, Porter, & Santor, 2004). Similarly, males have been noted to score higher on bullying and victimization than females (Narayanan & Betts, 2014), which is why we include gender as a covariate in the present study.

Current Study

The aim is to use a longitudinal design to study the associations between psychopathic traits and bullying behaviors in school-going adolescents in India, by using peer-reported evaluations along with self-reported ones to measure bullying as well as victimization. The present study specifically aims to investigate whether the dimensions of psychopathy, namely CU traits, narcissism, and impulsivity, contribute unique variance in predicting bullying and victimization at three time points during a school year, with three months between waves. We also examine whether psychopathy dimensions differentiate between roles in bullying (i.e., bully, victim, bully-victim, and uninvolved group).

Building upon prior research (Fanti & Kimonis, 2013), we hypothesize that (1) all three dimensions of psychopathy predict bullies and bully-victims at time points T1, T2, and T3, and (2) impulsivity predicts victims at time points T1, T2, and T3. Furthermore, based on past research from India, we predict that (3) more boys classify as bullies, victims, and bully-victims than girls (Narayanan & Betts, 2014), and (4) more students from the non-general category of caste (“lower” caste) classify as victims than “general” caste students (Khatri & Kupersmidt, 2003). Meta-analytic studies from outside India have shown that SES is weakly related to bullying roles (Tippett & Wolke, 2014), whereas a study from India shows no clear relationship (Malhi, Bharti, & Sidhu, 2015). Inconsistent reports have been observed in literature from India about the associations between age and bullying behavior (Patel, Verma, Shah, Phatak, & Nimbalkar, 2017; Ramya & Kulkarni, 2010), and although religion-based bullying is common in India, it is observed to be more reciprocal between religions than uni-directional (Erum, 2018). Given these findings, we hypothesize, but with due caution, that (5) more students from lower SES will qualify as bullies, victims, and bully-victims than higher SES children, (6) age will not be related to bullying roles, and (7) more non-Hindu students will qualify as victims than Hindu children (Patel et al., 2017).

METHOD

The study reported here is part of a larger project on bullying and victimization in Indian schools. The dataset has not been published before. Here we present only the variables relevant to the current paper.

Participants

Data were collected from nine schools in and around the city of Indore. The initial sample in our study consisted of 1,908 students aged 11 to 16 years, from ten schools, from grade 7, 8, and 9 ($M_{age} = 13.01$, $SD = 1.15$). From the all-boys school, 143 students at T2 were excluded from data collection, due to administrative difficulty (laxed discipline in classrooms) in collecting data from a large number of participants from that school (566) at T1. From grade 7 of one school, 185 students had received two sets of questionnaires during data collection at T1, one in English and the second in Hindi the next day, because the students found the English questionnaires difficult to follow thus excluding these students from final analyses. All students (337) of another of the ten participating schools were excluded from analyses as the school chose to drop out in Wave 3 because of undisclosed reasons and hence, data were missing, not at random. Five students were excluded due to incomplete data on their grade.

Every student enrolled in a class at the participating schools was invited to complete the questionnaire. However, beyond the above-mentioned exclusions, students that opted out of the research or were absent during data collection (118 at T1; 202 at T2; and 232 at T3) were marked as missing in analyses. A distinction between who opted out and who was absent during data collection was not made in the present study. Most students present at the days of data collection chose to participate; however, some students chose to go to the library or complete their home assignments in the back rows of the class, thus resultingly being marked as absent (missing) in analyses.

Large class sizes (sometimes over 50 students), students sitting closer together on one bench especially in lower SES schools, and lax disciplinary structures have long been identified to complicate data collection processes in India (Bapat, 2016; Hirway, 2010). Thus, a record telling the absentees apart from the students who opted out was not maintained. All attention focused on the students filling out the questionnaires by addressing their questions and keeping them at task during data collection. Counting out the students who were absent, excluded, or opted out of research, of the initial sample size of 1908 students the final sample consisted of 1,238 students from nine schools where 1,120 of the 1,238 students were present at T1 (296 girls, 824 boys); 1,036 students were present at T2 (274 girls, 762 boys); and 1,006 students were present at T3 (282 girls and 724 boys). Students completed the questionnaire in either Hindi ($N = 497$; 40%) or English ($N = 741$; 60%), depending the formal language of instruction of the participating schools. For caste, students identified as either “general” category ($N = 551$; 44%), which denotes a social group that belongs to the “forward caste” or a caste perceived to be “higher” than other groups (Nambissan, 2009), or as non-general category ($N = 376$; 30%) that includes “scheduled caste”, “scheduled tribe”, and “other backward classes”. Students self-identified their religion as Hindu ($N = 947$; 85%), Muslim ($N = 72$; 7%), Sikh ($N = 24$; 2%), and the remaining 6% students identified as Christian, no religion, or different religion. Of the nine participating schools, three were public schools (i.e., funded and run by the government) and six were private schools (privately owned by non-government organizations). Eight schools were mixed boys’ and girls’ schools, whereas one school was an all-boys’ school. Age and SES distribution of the participants are reported in Table 1.

Procedure

The Institutional Review Board of the Institute of Education and Child Studies at Leiden University approved of the study. A convenience sample was obtained by

approaching 15 schools in Indore, India. Ten schools agreed to participate. The principals, acting in loco parentis, gave permission to collect data from students in grades 7, 8, and 9, and though parents were not invited to give consent for their child's participation, students were allowed to opt out of the research. Data were collected at three time-points with intervals of two to four months in the school year of 2015-2016.

A team of 20 trained research assistants, all first- or second-year Master of Social Work students, helped to collect data. At least two research assistants were present in each class, gave instructions and were available to answer any of the students' questions. Students sat next to each other on benches, and were instructed not to look at each other's responses and cover their questionnaires while filling them out. Class teachers were in the class too, helping to keep students on task and making sure that students did not look into each other's questionnaires, but were asked not to interfere with completing the questionnaires or to peer into any student's questionnaire. Students were told that their participation was voluntary and that their answers would not be shared with parents, teachers, or classmates. The students took approximately 75 minutes to complete the questionnaire.

Instruments

Students self-reported information regarding socio-demographics like gender, grade, age, caste, religion, and family background.

Family Affluence Scale II

The Family Affluence Scale II (FAS; Currie, Elton, Todd, & Platt, 1997) was used to measure SES. This self-report measure consists of four questions, each using a different response scale. FAS was developed so that adolescents can give an approximation of their socioeconomic status. The FAS has been found to be a valid indicator of SES (Boyce, Torsheim, Currie, & Zambon, 2006), and has been validated for its use with Indian adolescents (Bapat, 2016). Test-retest correlations between Wave 1 and Wave 2,

Wave 2 and Wave 3, and Wave 1 and Wave 3 were found to be $r = .73$, $r = .79$, and $r = .75$ for the English questionnaires, and $r = .70$, $r = .77$, and $r = .65$ for the Hindi questionnaires.

Psychopathy

Students were asked to complete the Youth Psychopathic Traits Inventory – Short Version (YPI-S; Van Baardewijk et al., 2010) at time point 1 (T1). This 18-item self-report comprises of three dimensions (interpersonal, i.e., narcissism; affective, i.e., C.U traits, and behavior, i.e., impulsivity) with six items each. Response options are *does not apply at all* (1), *does not apply well* (2), *applies fairly well* (3), and *applies very well* (4). Previous research supports criterion and convergence validity for the scale (Colins et al., 2012; Van Baardewijk et al., 2010). In the present study, Cronbach's alpha was found to be .76 for the English as well as the Hindi questionnaire for the interpersonal dimension, .69 for English and .71 for Hindi for the affective dimension, and .74 for English as well as Hindi for the behavioral dimension.

Self-report of Bullies and Victims

The Illinois Bully-Fight-Victim Scale (Espelage & Holt, 2001) was used to assess self-reported bullying and victimization. The scale has been found valid and reliable (Espelage, Holt, & Henkel, 2003). The bully scale consists of nine items on teasing, name-calling, social exclusion, and rumor spreading (e.g., "I teased other students."). For the bully classifications the bully scale was combined with the fight scale. The fight scale consists of five items on physical fighting (e.g., "I got into a physical fight"). The victimization scale consists of four items that measure the experience of victimization by peers (e.g., "Other students picked on me."). Response options for the scales are *never* (1), *1 or 2 times* (2), *3 or 4 times* (3), *5 or 6 times* (4), and *7 or more times* (5) in the past 30 days. In the present study, Cronbach's alpha for the combined bully/fight scale was found to be .87 at T1, .93 at T2, and .92 at T3 for the English questionnaires and .93 at T1, .93 at T2, and .96 at T3 for the Hindi questionnaires. Cronbach's alpha for the victimization scale was found to be .81 at T1, .84 at T2, and .85 at T3 for the English

questionnaires and .88 at T1, .90 at T2, and .92 at T3 for the Hindi questionnaires.

Peer-report of Bullies and Victims

All students were given a sheet of paper that described bullying behavior on the top in a few words (teasing, fighting, excluding, name calling etc.), and had two columns with a list containing first and last names of all classmates. Students were asked to nominate bullies (circle names in the first column) from their class, and draw a line from the bullies to their victims in the second column. While the number of victims to be listed was not limited, we set a limit of up to five nominations for bullies to be listed. This was essential to avoid having a chaos of crossing lines and consequently scoring problems. Dyadic nominations of bully and victim status, received by peers from within a class, are found to be a reliable and valid estimate yielding consistent results with other informant reports (Veenstra et al., 2007). A total score was computed based on the number of times an individual was marked as a bully or victim by their classmates. These total scores were changed into proportions by dividing the total scores by the number of students in class (Veenstra et al., 2007).

Analysis Plan

Power

Applying a set of assumptions for any main effect (OR = 1.2, lognormal distribution for the predictor, base rate or each group 25%, alpha = 0.05, power = 0.80, and $R^2 = 0.10$ for other predictors) for the current data leads, according to Gpower 3.1, to a required sample size of 259 observations in total for reliable tests of the main effects in a single logistic model. As we applied a multinomial model with four classes (and thus three transitions), just over 750 participants would be required. This number is exceeded by the available sample size of 1,238. In addition, it is common practice to fit simpler models on data that exceed the 10:1 ratio of events and non-events to the number of candidate parameters (Peduzzi, Concato, Kemper, Holford, & Feinstein,

1996). For individual prediction models 20 to 50 observations per variable lead to stable AUC performance in such models (Van der Ploeg, Austin, & Steyerberg, 2014). These numbers are easily exceeded in the current study.

Missing Value Analyses

Missing value analyses indicated that Little's (1988) Missing Completely at Random (MCAR) was significant ($\chi^2(59, 534) = 47,681.94, p < .001$). Full Information Maximum Likelihood (FIML) estimation is a sophisticated procedure known to adequately deal with data that are not missing completely at random and thus, all statistics reported in the analyses used the FIML estimation (Schlomer, Bauman, & Card, 2010). Part of the missings was caused by the procedure used for classifying participants into bullying categories. Only those students were classified who filled out at least 80% of the psychopathy, bully, fight, and victim subscales. The eventually remaining missing scores of students who did not meet the 80% criterion, were dealt with using FIML estimations in main analyses which allow us to not only include students for whom we had mean scores at T1, T2, and T3, but also those students for whom we had means at both T1 and T2, but not T3, or students for whom we had means for both T2 and T3, but not T1 (Schlomer et al., 2010), and thus students with less than 80% responses were also included in final analyses.

Furthermore, we compared students that were present in all three waves of the study ($N = 795$) to students that were present at either point T1, but absent at T2 and T3 ($N = 63$), or students that were present at T1, but absent at either T2 ($N = 113$) or T3 ($N = 149$). Independent t -test analyses showed that the two groups were not significantly different on SES or psychopathy traits, but were significantly different on age at T1 ($F(1123, 591.37) = 2.58, p < .05$) such that the students who were present in all three waves were significantly younger than students who were absent at either T2 or T3, or both. Chi-square tests revealed that the two groups did not differ on caste and religion but the proportion of males present in all three waves was significantly higher ($\chi^2(1) =$

12.77, $p < .001$) as compared to the absentee group.

Analysis

At step 1, we computed means for students who had responded to 80% or more items on the self-reported bully/fight and victim subscales for T1, T2, and T3 respectively, while scale scores for students who had incomplete data on more than 20% items on each subscale in a particular wave were defined as missing. The 80% cut-off rule was necessary as a first step so that students could be classified into one of the four bully or victim categories (Espelage & Holt, 2001), and these categories were then used as dependent variables in the main analyses. Students who scored one standard deviation above the mean or more ($M+1SD$) on the bully/fight scale were classified as bullies, whereas those who scored more than $M+1SD$ on the victim scale were classified as victims. Students who qualified as both, bullies and victims, were labeled bully-victims, while participants who did not qualify in either category were classified as the uninvolved group. In the same manner, using the 80% rule, we computed subscale means for narcissism, CU traits, and impulsivity on the psychopathy scale for T1. For the peer-reported bully and victim scales, percentage of times a child was marked a bully/victim in class was calculated by classroom size ($\text{count} \times 100 / \text{total number of students in class}$) (Veenstra et al., 2007) and the standardized values were then classified by the $M+1SD$ criterion.

For main analyses, we conducted multinomial logistic regression (MLR) analyses using robust standard errors to investigate the effects of psychopathy traits on bullying and victimization over time, while accounting for the multilevel nature of the data structure, and still allowing for FIML estimation (Tabatabai et al., 2014). All main analyses were conducted in *R version 3.4.3* (R Core team, 2019). The bully, victim, bully-victim, and uninvolved categories were added as outcome variables in MLR analyses. In model I of MLR, we added Gender, SES, age, caste, and religion as independent variables. In model II, to test if psychopathic traits added significant variance over and

above the covariates in predicting the likelihood of a student being a bully or a victim, we included narcissism, CU traits, and impulsivity as independent variables in addition to the covariates.

The intraclass correlations for the main variables in the study were found to be in the range of 0.02 to 0.15 which is considered to be negligible (Shieh, 2016), thus not requiring formal multilevel modeling for analysis. The potential residual effects of nesting were addressed through robust standard error estimation, to resolve the issue of residual higher order nesting variance in the estimation of the natural variability of the main effects, namely the confidence intervals for significance interpretation (Tabatabai et al., 2014). Thus, data were robustness-corrected for between-subjects and within-subjects dependence given the nested structure of the study. Furthermore, explicit multilevel modeling was not used because FIML for multilevel MLR is not implemented and as such it would require multiple imputation for which no pooling rules are available (Enders, Keller, & Levy, 2018). Lastly, we also performed sensitivity analyses using a *mean +2 SD* criterion to classify bully/victims, and alternating leave-one-out analyses for each of the nine schools, to examine if the magnitude or direction of associations between psychopathy and bullying or victimization was affected by the given parameters.

RESULTS

Table 1 reports descriptive statistics and Table 2 the correlations for the main variables of the study. Concurrent correlations between self- and peer-reports of bullying and victimization were low, and the inter-rater reliability between the self- and peer-reports of bullying and victimization was not significant (Krippendorff's $\alpha > .05$ at T1, T2 and T3) which indicates that self-reported scores yield a different set of victims as compared to peer-reported victims. Psychopathy subscales were significantly inter-correlated at T1.

Table 3.1.*Descriptive statistics of variables in the study*

	N	M	SD	Range
Age (T1)	1125	13.15	1.16	10
Age (T2)	1028	13.32	1.21	8
Age (T3)	1014	13.60	1.18	7
SES (T1)	1118	4.91	2.29	9
SES (T2)	1027	5.11	2.29	9
SES (T3)	995	5.17	2.25	9
Self-report bullying (T1)	1073	1.69	0.71	4
Self-report bullying (T2)	1010	1.77	0.79	4
Self-report bullying (T3)	984	1.87	0.84	4
Self-report victim (T1)	1084	2.13	1.10	4
Self-report victim (T2)	1014	2.16	1.13	4
Self-report victim (T3)	987	2.18	1.13	4
Peer-report bullying (T1)	1233	14.00	16.11	100
Peer-report bullying (T2)	1235	12.76	14.85	80
Peer-report bullying (T3)	1236	12.19	13.87	89
Peer-report victim (T1)	1233	16.49	13.97	94
Peer-report victim (T2)	1235	28.89	19.11	80
Peer-report victim (T3)	1236	26.72	15.93	89
Narcissism (T1)	1081	2.36	0.72	3
CU traits (T1)	1074	2.31	0.69	3
Impulsivity (T1)	1078	2.30	0.69	3

Note. Count and percentages for Caste and Religion have been reported in the participant section.

Table 3.2.*Zero-order correlations for variables in the study*

	1	2	3	4	5	6
1. Self-report bullyT1	-					
2. Self-report bullyT2	.51**	-				
3. Self-report bullyT3	.50**	.57**	-			
4. Self-report victimT1	.51**	.33**	.27**	-		
5. Self-report victimT2	.27**	.51**	.32**	.52**	-	
6. Self-report victimT3	.24**	.27**	.51**	.42**	.49**	-
7. Peer-report bullyT1	.24**	.27**	.24**	.08*	.13**	.11**
8. Peer-report bullyT2	.25**	.24**	.26**	.07*	.10**	.10**
9. Peer-report bullyT3	.22**	.20**	.25**	.01	.06*	.09**
10. Peer-report victimT1	.06	.06*	.01	.12**	.10**	.09**
11. Peer-report victimT2	.07*	.13**	.05	.22**	.19**	.12**
12. Peer-report victimT3	.11**	.09**	.08**	.13**	.14**	.10**
13. Narcissism	.34**	.25**	.26**	.14**	.15**	.09**
14. CU traits	.27**	.25**	.20**	.20**	.19**	.12**
15. Impulsivity	.35**	.31**	.30**	.22**	.17**	.15**

* $p < .05$, ** $p < .01$

7	8	9	10	11	12	13	14	15
-								
.74**	-							
.68**	.78**	-						
.20**	.17**	.15*	-					
.09**	.08*	-.10	.48**	-				
.11**	.11**	.13**	.42**	.38**	-			
.09**	.11**	.11**	.03	.03	.04	-		
.06*	.05	.07*	.06*	.07*	.04	.50**	-	
.12**	.10**	.12**	.08**	.04	.11**	.49**	.58**	-

Between 6.3 to 7.7 percent of students classified as bullies on the self-reported scale, whereas between 10.3 to 15.1 percent classified as bullies on the peer-reported scale over time. Similarly, the percentage of students that classified as victims was higher on the peer-reported scale, as compared to the self-reported victims (see Table 3). Model I in our analyses refers to the covariates only model where we test if the covariates age, gender, SES, caste, and religion can predict the likelihood of a student classifying as a bully, victim or bully-victim. Model II refers to an addition of the psychopathic variables (narcissism, CU traits, and impulsivity) with the covariates as independent variables, to test if psychopathic traits predict bully and victim classifications over and above the covariates. MLR analyses indicated that model II with all three psychopathy traits included as predictors, along with socio-demographic covariates, showed to be the parsimonious model based on the 'Akaike information criterion' (AIC) in explaining variance in the dependent variables at all three time-points for the self- as well as peer-report, as compared to model I with only gender, SES, age, caste, and religion as predictors. However, univariate results of model II were not significant for effects of either Narcissism, CU traits or impulsivity on predicting bully or victim categories for neither the peer- nor the self-reports, at all three time points (see Table 4). Hypotheses 1 and 2 were rejected. Univariate psychopathic traits, do not predict the likelihood of a student being a bully, victim or bully-victim. However, when the dimensions are taken together, they collectively serve as a better predictor of bullying roles beyond socio-demographics. With respect to the covariates, we found partial support for hypothesis 3: Gender predicted bullies at T2 ($B = 2.06, p < 0.01$) and bully-victims at T3 ($B = 2.15, p < 0.05$) for the self-reported scale, where more boys classified as bullies and bully-victims than girls. Also, a significant effect of caste was observed in predicting the victim category at time-point T1 ($B = -0.11, p < 0.05$) for the peer-reported scale, indicating that more general caste students qualified as victims as compared to non-general caste, contradictory to hypothesis 4. No effect of SES and age was observed in

predicting bully or victim categories for the self- as well as peer-reports. For SES, this finding conflicts with hypothesis 5, but for age this finding concurs with hypothesis 6. Finally, a significant effect of religion was observed in predicting the victim category at time-point T1 ($B = 0.02, p < 0.05$) and T3 ($B = 0.08, p < 0.05$) for the peer-reported scale, such that non-Hindu children were significantly more likely to classify as victims than Hindu children. This partly concurs with hypothesis 7. Furthermore, sensitivity analyses were performed with the alternating leave-one-out analysis for each of the nine school types, and a more extreme definition of bullies and victim ($\pm 2SD$ for classification) was also analyzed for its association with psychopathy dimensions, either of which did not change the magnitude and direction of the estimated association parameters.

Table 3.3.

Students classified into groups of bullies, victims, bully-victims and uninvolved

	Self-report		Peer-report	
	<i>n</i>	%	<i>n</i>	%
Bully T1	78	6.3	134	10.8
Bully T2	94	7.6	127	10.3
Bully T3	95	7.7	152	15.1
Victim T1	128	10.3	127	10.3
Victim T2	111	9.0	218	17.6
Victim T3	107	8.6	159	12.8
Bully-victim T1	69	5.6	36	2.9
Bully-victim T2	62	5.0	33	2.7
Bully-victim T3	77	6.2	35	2.8
Uninvolved T1	965	77.9	941	76
Uninvolved T2	978	79	860	69.5
Uninvolved T3	970	78.4	892	72.1

Table 3.4.*Multinomial logistic regression results - Model II*

Coefficient	(Intercept)	Gender	SES	Age
Self-Report				
Bully T1	-7.81	1.08	-0.04	0.04
Victim T1	-3.19	0.64	-0.11	-0.00
Bully-Victim T1	-6.03	1.72	-0.19	-0.33
Bully T2	-10.67	2.06**	0.13	0.17
Victim T2	-3.00	1.16	-0.02	-0.12
Bully-Victim T2	-8.03	1.52	-0.04	-0.03
Bully T3	-9.41	1.22	0.17	0.14
Victim T3	-2.34	0.54	-0.13	-0.03
Bully-Victim T3	-10.50	2.15*	0.36	0.03
Peer-Report				
Bully T1	-7.29	1.57	0.50	-0.00
Victim T1	-1.20	-0.17	0.50	-0.15
Bully-Victim T1	-41.86	14.61	0.69	0.47
Bully T2	-5.94	1.64	0.22	-0.01
Victim T2	-5.74	0.62	0.36	0.21
Bully-Victim T2	-12.85	0.80	0.15	0.47
Bully T3	-5.60	1.54	0.24	-0.01
Victim T3	3.87	-0.08	-0.03	-0.42
Bully-Victim T3	-6.03	0.90	0.18	0.00

Note. Gender: 0 = girls, 1 = boys; Caste: 0 = General, 1 = Non-general; Religion: 0 = Hindu, 1 = Non-Hindu

* $p < .05$, ** $p < .01$

Caste	Religion	Narcissism	CU traits	Impulsivity
0.23	0.08	0.77	-0.50	0.79
-0.48	0.08	-0.28	0.16	0.37
0.53	0.01	0.48	0.99	0.40
0.31	-0.02	0.40	-0.02	0.42
-0.73	0.15	-0.14	0.28	0.15
-0.19	0.08	0.23	0.73	0.33
0.37	-0.04	0.64	-0.51	0.95
-0.66	0.05	0.01	-0.29	0.36
0.29	0.18	0.14	-0.03	0.94
0.08	0.05	0.48	0.07	-0.08
-0.11*	0.02*	-0.23	0.25	0.22
0.35	0.11	-0.26	-0.29	0.86
0.02	-0.03	0.25	-0.15	0.18
-0.10	0.01	-0.22	0.26	-0.06
0.22	0.10	0.28	0.30	-0.24
0.15	-0.02	0.13	-0.17	0.20
-0.13	0.08*	-0.14	-0.23	0.51
0.34	-0.15	0.19	-0.42	0.29

DISCUSSION

The purpose of the present study was to examine the role of psychopathy in relation to bullying and victimization in Indian adolescents. The percentage of students that categorized as bullies and victims in the present study is low as compared to the few studies from within India that report a higher prevalence of bullying (Kshirsagar et al., 2007; Ramya & Kulkarni, 2011). India is a geographically vast country with enormous differences in regional socio-demographics (Charak & Koot, 2015), and therefore prevalence estimates of specific regions may not be generalizable to the nation as a whole. Furthermore, correlations between self- and peer-reports of bullying and victimization were low, suggesting that peer-reports and self-reports yield different sets of bullies and victims. The percentage of students that classified as victims was higher on the peer-reported scale than on the self-reported scale. Previous studies that investigated agreement between self-reported bullying and peer-reported bullying also found low to moderate associations between the two types of reports, and under-reporting of victimization on self-reports (see Cornell & Bandyopadhyay, 2009). Students may be hesitant in admitting bullying behaviors on self-reports due to stigma and potential punitive repercussions, while the self-serving attribution bias, i.e. individuals make attributions that preserve their self-perceptions and protect their self-esteem, may lead to under-reporting of victimization (Österman et al., 1994) in self-reports. The differences observed in the scores of self- and peer-reported bullies and victims in the present study further emphasize the necessity to use a combination of self- and peer-reported estimation in the study of bullying and victimization (Cornell & Bandyopadhyay, 2009).

In the main analyses of the present study, MLR analyses indicated that adding psychopathic traits in the prediction model served as a better predictor of bullying and

victimization than the covariate only model, thus, psychopathic traits in combination contribute towards predicting bullying roles. We found the improved model fit for both self- and peer reports, and in both the initial analyses as well as for the more extreme ($\pm 2SD$ for classification) definition of bullying. Thus, in the present study, our hypothesis stating that all three dimensions of psychopathy predict bullies and bully victims at time points T1, T2, and T3, and impulsivity predicts victims at time points T1, T2, and T3 was partially supported as we found a significant model fit with collective psychopathy traits, but not with individual subscale traits, in predicting bullying behavior for both self and peer reported bullying involvement. This leads us to believe that these results are not a statistical artefact, but reflect that all sub-dimensions add a small contribution to the prediction of bullying in order to form a significant combined overall effect.

Similar results have been reported in, for example, genetic research where sets of genes together were found predictive of externalizing behavior, but not individual genes (Windhorst et al., 2016). The results of the current study underscore the statement of Salekin (2016) that all scales of psychopathy should be used with youth. The findings are further in line with Lilienfeld (2018) who asserts that there are benefits to considering the broader syndrome of psychopathy instead of its unique dimensions, because a complete constellation of psychopathy statistically outperforms individual traits of psychopathy, in predicting external criteria in youth, like bullying behavior, as is the case in the present study (see for further discussion Salekin, Andershed, Batky, & Bontemps, 2018).

Furthermore, our hypotheses regarding the covariates, i.e., age, gender, caste, religion, and SES were partially supported. We hypothesized that more boys would classify as bullies, victims and bully-victims than girls, and more students from the non-general category of caste (“lower” caste) would classify as victims than general caste students, more students from lower SES would qualify as bullies, victims and

bully-victims than higher SES children, age would have no effect on bullying roles, and more non-Hindu adolescents would qualify as victims than Hindu youth. In the present study we found that gender predicted bullies and bully-victims for the self-reported scale, where more boys classified as bullies and bully-victims than girls, as observed in past literature (Narayanan & Betts, 2014). Additionally, we observed a unique effect of caste and religion in predicting the victim category at certain time-points for the peer-reported scales, where for caste the “general” caste category predicted victims and for religion the “non-Hindu” category predicted victim groups. These findings illustrate the cultural interference in the study of bullying in India. Nambissan (2009) points out that there is a structural distance between individuals from lower and upper castes, an inequality that is deep-rooted in the Indian society. Lower caste students are commonly made to sit in the corners of the classroom or back rows, are excluded from participation in co-curricular activities, and teachers do not reprimand students of higher caste who bully the lower caste children, thus, perpetuating and normalizing bullying behavior in class. Such favoritism in classrooms may lead to a residual angst among lower caste students, thus reversing into a backlash of victimization of the upper caste students by their peers.

In line with this, the finding in the present study indicates that “general” caste students experience more victimization as compared to non-general students which is contradictory to hypothesis 4. This highlights the *interference* of cultural factors like caste, more than the direction of the association in the given context, where caste based bullying is structurally prevalent between discrete groups, thus, overshadowing effects of individual characteristics, like psychopathy, in predicting bullying behavior. For religion, we observed that the non-Hindu category of religion predicted victim groups, such that more non-Hindu adolescents were victimized than Hindu students in the present study, which is in line with the hypothesis. This finding underlines the working of societal and cultural acceptance of a divide among peer groups in India,

based on its religious framework. There exists an ideological and cultural distance between Hindus and Muslims in India and consequently, Hindu children commonly bully Muslim children (Erum, 2018), reflecting how religious inclusion and exclusion norms in India shape interaction between peers. Such historically constituted divides and cultural practices in India may play a role in normalizing and regularizing bullying behavior in classroom, making it a part of a youth's identity and daily life experiences, and are instrumental in shaping the dynamics and understanding the associations between psychopathy and bullying in India.

Limitations

Data on psychopathy were obtained at one time-point only. However, psychopathic traits are generally stable and not expected to change acutely over time (Lynam et al., 2009). Several other factors, which are beyond the empirically supported risk constructs, for instance, academic performance and youth trauma histories, were not examined in the present study. Additionally, we did not use explicit multilevel modeling to examine a model of transition of bullying behavior over T1, to T2, to T3 that includes slope shape and variance assumptions (Enders et al., 2018), to address the longitudinal and nested structure of data in the current study. Lastly, logistical and methodological challenges encountered while collecting data in India, that have long been recognized and acknowledged in prior research (Hirway, 2010), led to a subsequent loss of data through attrition and exclusion of participants.

Research Implications

The present study concludes that psychopathy dimensions taken collectively are a better fit in predicting bullying behavior beyond socio-demographics, but the dimensions of narcissism, CU traits, and impulsivity, independently are not significant predictors of bullying and victimization in Indore, India. Non-significant findings are of great value in educational research to break the stranglehold of publication bias

(Cooper, Hedges, & Valentine, 2009), specifically when research from western studies are used, rather presumptuously, to design interventions in lower-income countries where indigenous research is sparse. Furthermore, the present study emphasizes the need for cultural replication and cross validation of research in the field of bullying and victimization to determine the extent of generalizability of previous findings (Charak & Koot, 2015). Future research is warranted in this area of study with an emphasis on a more context-specific examination of bullying, and factors that influence bullying.

Prevention and Policy Implications

Because the results from western studies may not be generalizable, professionals in India, with 236 million youth the largest youth population in the world (UNFPA, 2014), cannot build their preventions and interventions on the knowledge base about precursors and consequences of bullying available in the western world. As explained earlier in this discussion, bullying and victimization experiences are connected to power relations and social structures not only within the school community, but also in the wider community. Policies should focus on prevention and intervention in school and find ways to make sure that schools are safe places that are not intruded by powers and conflicts characteristic of the wider community. It seems fair to say that to realize this effort more research is needed.

The present findings assert the need to examine associations between psychopathy and bullying roles using longitudinal designs, and also use multiple-informant reports to assess bullying and victimization in future studies. Effective interventions and school-based programs for bullying should be designed keeping in mind the group dynamics within classroom, school climate and cultural factors in India, in addition to personality traits of students.

