

# SEVERITY OF MALTREATMENT AND PERSONALITY PATHOLOGY IN ADOLESCENTS OF JAMMU, INDIA: A LATENT CLASS APPROACH

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## Introduction

- Severity within each type of abuse/neglect, has been reported to be the best predictor of psychopathology in children/adolescents when compared with other indices (e.g., maximum severity across subtypes; Litrownik et al., 2005).
- Combined effect of types of maltreatment and their severity, in relation to specific outcomes of adolescent psychopathology have scarcely been addressed (cf. English et al., 2005).
- The phenomenology of experience of multiple types of maltreatment has recently been investigated with preference for person-centered analytic models (e.g., Latent Class/Profile Analysis) over variable-centered models for assessment (Roesch et al., 2010).
- Experiences of maltreatment have been associated with less adaptive personality traits in children (Nederlof et al., 2010), which tend to persist over time (Rogosch & Cicchetti, 2004).
- Gender differences have been found on dimensions of personality pathology (using the DAPP-BQ-A) with girls scoring higher on internalizing personality pathology including submissiveness, cognitive dysregulation, identity problems, affective lability, anxiety, low affiliation, insecure attachment, and compulsivity, and boys scoring higher on externalizing personality traits (e.g., stimulus seeking, callousness, conduct problems; Tromp & Koot, 2008).
- It was hypothesized that (i) mutually exclusive groups would be identified based on reported maltreatment (e.g., Nooner et al., 2010), (ii) males would display more dissocial/externalizing personality pathology (e.g., conduct problems), and females would score higher on emotion dysregulation/internalizing personality pathology, (iii) the more types of maltreatment the adolescents have been exposed to and the more severe this exposure, the more symptoms of personality pathology would be reported, and (iii) it was explored whether experiences of severity of abuse and neglect would have a gender-differential effect on the dimensions of personality pathology

## Method

### Participants

- The study comprised of 702 adolescents in the age range of 13-17 years ( $M = 15.2$ ,  $SD = 1.5$ , 41.5% female) from Jammu, India. The study was conducted in class-room settings in schools with English as a medium of communication and teaching.
- The study was conducted in line with the ethical guidelines laid down by VU University Amsterdam, The Netherlands where it was designed and analysed.

### Measures

- Childhood trauma questionnaire (CTQ; Bernstein & Fink, 1998):** It consists of 25 self-report items measuring emotional, physical, sexual abuse, and emotional and physical neglect. Cut-off scores were used to make categories of minimal, low, and moderate-severe levels of abuse or neglect.
- Dimensional assessment of personality pathology-short form for adolescents (DAPP-SF-A; Tromp & Koot, 2008; 2014):** It has 136 item questionnaire for adolescents derived from its adult predecessors, the Dimensional Assessment of Personality Pathology-Basic Questionnaire (DAPP-BQ; Livesley & Jackson, 2002). There are 17 lower-order dimensions under 4 higher-order dimensions (normal and boldface font in Table 2, respectively). Cronbach alphas in the present study ranged from 0.60-0.83.

### Stepwise Analytic Plan

- (i) Missing data analysis using Little's MCAR test; (ii) Latent class analysis for 3-5 classes (LCA; in Mplus 7.11); (iii) Multivariate analysis of covariance with age as a covariate (MANCOVA; in IBM SPSS 20).

## Results

- No statistically reliable deviation from randomness for missing values was found [ $\chi^2 (df = 2450) = 2244.62$ ,  $p > .05$ ]; expectation maximization algorithm used.
- Nearly 15% experienced one type of maltreatment, 23.6% reported two, 22.2% reported three, 15.2% reported four, and 12.5% reported to have experienced five types of maltreatment. 13% reported minimal maltreatment.
- Four-class solution** was found to be the best based on a number of fit indices (e.g., lowest adjusted BIC, significant LMR test/BLRT; Table 1), and conceptual validity.

Table 1: Fit indices for the latent class models with three to five classes for severity within the type of abuse and neglect in Indian adolescents

Number of classes	LMR (p value)	BLRT (p value)	Entropy	AIC	BIC	SSABIC
3	195.01 (0.000)	-3399.90 (0.000)	0.77	6666.09	6811.82	6710.21
<b>4</b>	<b>56.42 (0.005)</b>	<b>-3301.05 (0.000)</b>	<b>0.71</b>	<b>6630.89</b>	<b>6826.71</b>	<b>6690.18</b>
5	23.27 (0.71)	-3272.45 (0.15)	0.72	6629.30	6875.22	6703.75

Note: LMR = Lo-Mendell-Rubin adjusted likelihood ratio test. BLRT = Bootstrap likelihood ratio test. AIC = Akaike's information criterion. BIC = Bayesian information criterion. SSABIC = Sample size adjusted bayesian information criterion.

- Class 1 (16.2%) was labeled 'Moderate-severe all types of abuse and physical neglect', Class 2 (31.7%) was 'Moderate-severe physical abuse and sexual abuse', Class 3 (24.6%) was 'Moderate-severe neglect', and Class 4 (27.5%) was termed 'Minimal abuse or neglect', based on patterns of endorsement of items on CTQ (Figure 1).

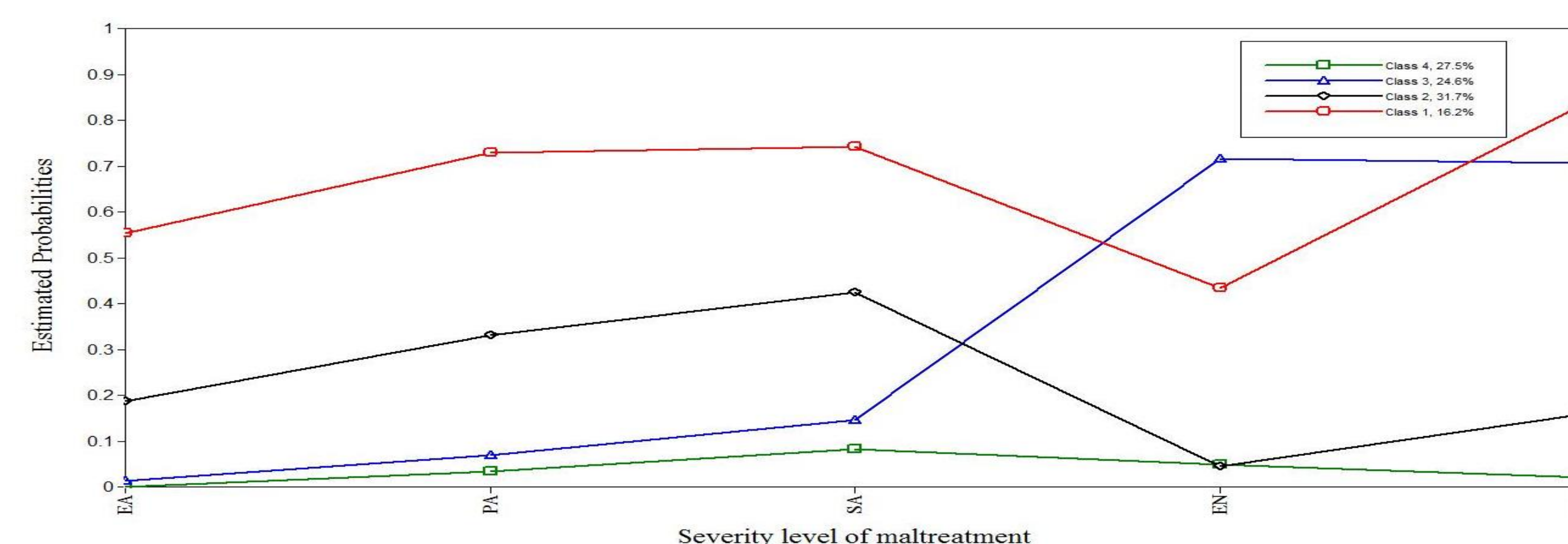


Figure 1: Probabilities of severity of five types of abuse and neglect for a four-class model. Note: EA = Emotional abuse. PA = Physical abuse. SA = Sexual abuse. EN = Emotional neglect. PN = Physical neglect.

- There were more male as compared to female adolescents in Class 1 (20.9% vs. 8.9%), and Class 2 (32.8% vs. 26.1%), whereas in Class 3 males and females were almost proportionate (25.5% vs. 24.4%). Further, more females than males (40.5% vs. 20.7%) were in Class 4 which represented the class with least maltreatment exposure.
- The difference between the four latent classes** and the 17 lower-order dimensions of **personality pathology** was **significant** [Pillai's trace = 0.27;  $F(51, 702) = 3.99$ ;  $p < 0.001$ ;  $\eta^2_{partial} = 0.12$ ], as were effects of **gender** [Pillai's trace = 0.14;  $F(17, 702) = 6.57$ ;  $p < 0.001$ ;  $\eta^2_{partial} = 0.14$ ], and **age** [Pillai's trace = 0.12;  $F(17, 702) = 5.53$ ;  $p < 0.001$ ;  $\eta^2_{partial} = 0.12$ ]. No significant effect of the class membership x gender interaction term was found [Pillai's trace = 0.06;  $F(51, 702) = 0.87$ ;  $p > 0.05$ ;  $\eta^2_{partial} = 0.02$ ].
- Class related differences were found on 13 dimensions of personality pathology (Table 2).
- Males were higher on conduct problems, stimulus seeking, callousness; females were higher on affect lability.

Table 2: Mean scores on the 17 lower-order dimensions of DAPP-BQ-SF-A across the severity of maltreatment four-classes and pair-wise comparison

Dimensions of personality pathology	Mean across the classes				Pair-wise comparison of classes	Dimensions of personality pathology	Mean across the classes				Pair-wise comparison of classes
	1	2	3	4			1	2	3	4	
<b>Emotional Dysregulation</b>											
Submissiveness	22.24	22.14	20.80	19.63	1, 2 > 4	<b>Self-harm</b>	19.32	19.78	17.86	16.34	1, 2 > 4
Cognitive dysregulation	17.05	18.58	17.11	16.77	2 > 1, 3, 4	<b>Dissocial Behavior</b>					
Identity problems	16.48	16.48	14.53	13.75	1, 2 > 3, 4	Stimulus seeking	23.86	27.49	23.18	25.39	2 > 1, 3, 4; 4 > 3
Affect lability	25.09	25.76	24.12	24.32	---	Callousness	27.51	25.92	26.09	23.51	1, 2, 3 > 4
Oppositionality	28.12	30.52	27.32	27.0	2 > 1, 3, 4	Rejection	24.38	27.10	24.71	25.63	2 > 1, 3
Anxiousness	17.04	17.52	16.79	16.70	---	Conduct problems	17.81	16.10	15.31	13.58	1 > 2, 3 > 4
Low affiliation	16.80	17.36	16.01	14.99	1 > 4; 2 > 3, 4	<b>Inhibited</b>					
Suspiciousness	23.26	24.02	22.67	21.80	---	Restricted expression	20.91	22.61	21.23	21.53	---
Insecure attachment	19.09	22.16	18.57	20.06	2 > 1, 3, 4	<b>Compulsivity</b>	25.53	27.91	26.65	29.35	2 > 1; 4 > 1, 3
Narcissism	24.74	26.93	24.56	25.86	2 > 1, 3						

Note: Class 1 = Moderate-severe all types of abuse and physical neglect. Class 2 = Moderate-severe sexual abuse and physical abuse. Class 3 = Moderate-severe neglect. Class 4 = Minimal abuse or neglect. In boldface/italicized font are the high-order dimensions. Compulsivity is a lower and a higher-order dimension. Pair-wise comparisons were based on post-hoc testing (Bonferroni correction) after MANCOVA with age as a covariate.

## Conclusions

- Four classes** based on severity and types of abuse and neglect emerged (Pears et al., 2008; Hypothesis 1 supported) as the most parsimonious solution.
- The gender distribution across the four classes is indicative of **higher proportion of males** than females in classes with **high severity of maltreatment**. Aspects of the present results (e.g., sexual abuse; Charak & Koot, 2014) stand in contrast to western literature, albeit many studies from Asian nations have consistently reported higher rates (Choo et al., 2011) and severity of maltreatment (Kacker et al., 2007) among males as compared to females.
- Males had higher scores** on dimensions within the **dissocial personality pathology** as compared to females (Tromp & Koot, 2008). **Females showed elevated score on affect lability** (Grilo et al., 1996); did not show elevated scores on all dimensions of emotion dysregulation, than the males (Hypothesis 2 partially supported).
- Adolescents from classes with more adolescents endorsing **multiple moderate-severe level of maltreatment** (Class 1 and Class 2) report **higher problem behavior** related with personality disorders (cf. Bagge & Trull, 2003) when compared with adolescents in Class 3 or Class 4. Adolescents in Class 3 (moderate-severe neglect) reported higher on callousness and conduct problems when compared with those in Class 4 (Hildyard & Wolfe, 2002; Hypothesis 3 supported).
- No significant effect of the class membership x gender interaction term was found (Hypothesis 4 not supported).

### Limitations

- Use of self-reports: response bias cannot be negated; sample of school-going adolescents from India: may limit generalization of the results to other age groups and cultures; CTQ does not take into consideration specific aspects related to severity of maltreatment, for example, age of onset, duration, or number of incidents.

### Implications

- The present findings highlight the high rates of polyvictimization in present sample of Indian adolescents. It advocates the need for stringent policy formulation for protection of children in India which is currently lacking. The present study adheres to the call for a more person-centered analytic approach (Roesch et al., 2010) for assessing child maltreatment, and also aids in identifying at-risk population of adolescents for personality problems.