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Polyvictimization Profiles and Variations in Youth Mental Health Symptoms: A Person-Centered Approach

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Abstract

Polyvictimization, exposure to multiple potentially traumatic events (PTEs), is prevalent and has profound mental health implications. Investigating the patterns and impact of co-occurring PTEs during childhood is essential to design and deliver tailored clinical services. This study included a diverse community sample of 326 youth (ages 7–16). Latent class analysis (LCA) of DSM-5 posttraumatic stress disorder (PTSD) criterion A events was conducted to identify PTE classes. Classes were further characterized using race-related, peer, and dating victimization, and psychopathology symptoms (PTSD, anxiety, depression). Three classes emerged: (1) *low trauma,* (2) *interpersonal and community violence (IPV/CV)*, and (3) *emotional abuse, neglect, and interpersonal violence in familial relationships (EA/N/IPVFam)*. Demographics, total PTEs, age at first exposure, race-related events, PTSD, anxiety, and depression symptoms varied across classes, indicating functional significance of identified profiles. Results underscore the importance of considering PTE profiles and person-centered approaches to understand and address trauma-related sequelae in youth.

Keywords

polyvictimization; posttraumatic stress disorder; anxiety; adolescence; trauma; ACEs

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Introduction

In the general youth population, potentially traumatic event (PTE) exposure is common (Copeland et al., 2007; Saunders & Adams, 2014). After exposure, youth often have minor or brief symptoms, while one in three go on to develop post-traumatic stress disorder (PTSD; Alisic et al., 2014; Copeland et al., 2007). Polyvictimization, or exposure to multiple PTEs, is also common, as exposure to one PTE confers risk for future PTE exposure (Finkelhor et al., 2005, 2007; Ford et al., 2010). Polyvictimization is a robust predictor of PTSD symptoms, surpassing the effect of individual PTEs (Finkelhor et al., 2007; Layne et al., 2014). The pervasiveness and overlap of PTEs, combined with the well-documented detrimental effects of polyvictimization in youth, underscores the value of co-occurring PTE assessment in research and clinical settings.

Prior research has evaluated distinct types of PTEs (e.g., sexual abuse; Chen et al., 2010) or employed a cumulative risk approach that tallies total PTE exposure and treats all similarly (e.g., Gach et al., 2018). These variable-centered approaches are limited by the vague boundaries and overlapping features often used in PTE categorizations (Smith & Pollak, 2021). The first approach does not account for meaningful PTE co-occurrence, and the second precludes investigation of whether particular PTEs may be more likely to co-occur with certain other PTEs (i.e., form meaningful PTE exposure profiles; Jenness & Mclaughlin, 2015). Variable-centered approaches also hinder investigations into the mechanisms that may drive differential effects of PTE profiles. For instance, the Dimensional Model of Adversity and Psychopathology (DMAP; McLaughlin & Sheridan, 2016) posits that events perceived as threatening (e.g., physical abuse) versus those that deprive the individual of species-expectant stimulation (e.g., neglect) are core adversity dimensions with distinct underlying learning mechanisms and emotional and cognitive health effects. An important step to deepen understanding of mechanisms underlying mental health outcomes is to test which types of PTEs tend to co-occur and impact health outcomes (Jenness & Mclaughlin, 2015). Person-centered methodologies provide a promising approach to address these questions. For example, latent class analysis (LCA), identifies patterns or constellations of PTEs (Pynoos et al., 2014), and allows for an exploration of profiles in relation to symptoms, behaviors, functional impairments, and treatment outcomes.

Work applying person-centered approaches to categorize youth PTEs has been employed, though largely focused on treatment-seeking, justice-involved, or older adolescent samples. Among juvenile detainees, three latent PTE classes were identified, with a polyvictimized group reporting the highest PTSD, anxiety, and depression symptoms (Charak et al., 2019; Ford et al., 2013). In youth identified for mental health services, LCAs consistently reveal low trauma classes, groups characterized by caregiver disruption or community violence, and multiple polyvictimization profiles, with some further distinguished by developmental period (e.g., familial adversity in early childhood, non-familial adversity in middle childhood and adolescence; Adams et al., 2016; Dierkhising et al., 2019; Grasso et al., 2016; Nguyen et al., 2023). In a national adolescent study (Ford et al., 2010), latent PTE clusters included two profiles characterized by individual PTEs and four groups characterized by polyvictimization, with polyvictimization profiles associated with a higher

likelihood of DSM-IV diagnosis and delinquency relative to individual PTE exposure classes. Another national study of community adolescents identified four groups – low risk, sexual risk, non-sexual risk, and high risk – with all victimization groups showing worse mental health outcomes than the low risk group (McChesney et al., 2015). A third study of young adults retrospectively reporting PTEs occurring prior to age 13 grouped into low, sexual assault, and violence exposure classes (Ballard et al., 2015). Both PTE exposed groups demonstrated worse mental health outcomes in young adulthood relative to the low PTE group, but with key differences. Higher levels of broad psychopathology were found in the sexual assault group, whereas the violence exposure group had higher PTSD and antisocial personality disorder symptoms. This work highlights the importance of examining profiles of co-occurring PTEs to understand impacts of these events on health outcomes. Further delineation of PTE clusters in community samples across childhood and adolescence is necessary for early identification of profiles that may confer risk for psychopathology as children age.

Current Study

Taken together, prior investigations of PTE corroborate the link between poly- victimization and pervasive negative mental health consequences. The present study builds on research in youth already accessing services (Adams et al., 2016; Dierkhising et al., 2019; Grasso et al., 2016; Nguyen et al., 2023; Pynoos et al., 2014) or who are system-involved (Charak et al., 2019; Ford et al., 2013), and research in community samples conducted only in adolescents (Ford et al., 2010; McChesney et al., 2015) or via adults' retrospective reported childhood PTEs (Ballard et al., 2015). We examine PTE co-occurrence in a community sample spanning childhood and adolescence, and including multiple reporters (i.e., youth self and caregiver report). Furthermore, we include the correspondence of racial trauma in relation to criterion A event profiles. There are racial and ethnic differences in PTE exposure, particularly community violence (Roberts et al., 2011; Zimmerman & Messner, 2013), youth from minoritized backgrounds experience higher levels of polyvictimization (López et al., 2017), and race-based PTEs contribute to trauma-related symptoms (Carter et al., 2020). Examining race-related events can enhance understanding of PTE accumulation and mental health symptoms in minoritized youth. Lastly, we sought to examine whether groups differed on additional PTE characteristics (e.g., age at PTE) and interpersonal PTEs and behaviors less frequently assessed: peer and dating victimization and aggression.

We used LCA to identify PTE profiles and examine associations with mental health outcomes in a large, diverse, community sample of children and adolescents (7–16 years). We hypothesized that distinct PTE profiles would emerge, including a group characterized by low PTE endorsement (given community sampling) and one or more polyvictimization groups, consistent with prior work. We then tested whether these groups demonstrated differential associations with health outcomes, as seen in prior work in older, treatment-, and systems-involved youth. We hypothesized that polyvictimization groups would report higher PTSD, anxiety, and depression symptoms than the low PTE group. Exploratory hypotheses included that polyvictimization, defined by criterion A events, would correspond to higher peer- and dating-related victimization, and race-related events for youth with an ethnic and/or racial minority background.

Method

Participants and Procedure

A total of 364 youth were recruited from the community through advertisements, flyers, and schools for a NIMH-funded longitudinal investigation (R01MH112209) of risk and resilience factors and mental health among youth. Participants were eligible if they met the following criteria: in third, sixth, or ninth grade; ages 7–16 years; willing caregiver participation; ability to speak and write in English; no history of psychosis; and no developmental delay that would interfere with study procedure completion. Eligible participants were 11.49 years old on average (*SD* = 2.47); 49.5% female; 52% White, 38.7% Black/African American; and 91.2% non-Hispanic/Latino. Data presented here were derived from the baseline laboratory visit and serve as an in-depth and data-driven assessment of PTEs as a foundational step in the longitudinal study. Study procedures were approved by the Institutional Review Board. Youth participants and caregivers provided assent and consent, respectively, prior to the laboratory visit. Procedures included clinical interviews conducted by trained study staff and administration of self-report measures.

Measures

Demographic Information. Caregivers and youth reported age, gender, race, and ethnicity.

PTE Exposure and PTSD Symptoms. The UCLA Posttraumatic Stress Disorder Reactivity Index (UCLA-PTSD-RI; Kaplow et al., 2020; Steinberg et al., 2004) was administered via clinical interview to youth and caregivers to assess DSM-5 PTSD criterion A traumatic events and PTSD symptoms. Respondents were asked whether the youth was exposed to a comprehensive list of PTEs and at what age(s). To capture all exposures, PTEs were counted if the youth *or* the caregiver endorsed that item. Of 364 participants, 38 youth were missing both youth and caregiver report on the UCLA, which were excluded from the LCA analytic sample. Of the 326 remaining youth, 11 had only self-report data (3.37%), 11 had only caregiver-reported data (3.37%). Two of three subjects who endorsed sexual assault/rape (not by a caregiver; $n = 3$) also endorsed sexual abuse (by a caregiver; $n = 13$); therefore, these items were combined to reflect sexual violence ($n = 14$). PTEs with less than 3% endorsement were excluded: abduction/kidnapping ($n = 1$), terrorism ($n = 0$), war/political violence ($n = 0$), trafficking/sexual exploitation ($n = 0$), bereavement (i.e., violent or traumatic loss; $n = 4$), forced displacement (i.e., refugee; $n = 7$), and suicide attempt or witnessed ($n = 9$). Final variables included serious accidental injury ($n = 95$), illness/medical trauma ($n = 109$), community violence ($n = 25$), witnessing domestic violence ($n = 42$), school violence ($n = 36$), physical assault (not by a caregiver; $n = 16$), physical abuse/maltreatment (by a caregiver; $n = 14$), neglect ($n = 15$), emotional abuse/psychological maltreatment (e.g., verbal abuse, emotional neglect; $n = 14$), caregiver impairment/interference (e.g., depression, medical illness, substance abuse; $n = 21$), caregiver separation (e.g., foster care, parent hospitalized or jailed; $n = 66$), bullying (repeated aggressive peer victimization; $n = 92$), sexual violence ($n = 14$) and natural disaster ($n = 17$).

If a PTE exposure was endorsed as directly experienced or witnessed, the UCLA symptoms assessment was administered to assess past month DSM-5 PTSD criteria (intrusion, negative alterations in mood or cognitions, arousal/reactivity, and avoidance) related to the index event, or the event bothering the youth most. Respondents answered using a 5-point Likert scale. A total PTSD symptom severity score was calculated across items and for each diagnostic criterion domain. Total scores >35 are highly indicative of PTSD diagnosis and clinically significant symptoms. Cronbach's alpha was excellent for caregiver (α = .92) and child report (α = .94).

Peer Experiences. The Peer Experiences Questionnaire – Revised (R-PEQ; Prinstein et al., 2001) is a 36-item self-report measure capturing past year experiences being aggressive toward or victimized by peers. The R-PEQ captures overt (e.g., physical) and indirect (e.g., relational) aggression and victimization. Youth answer how often they aggressed and how often they were victimized. Youth responded using a 5-point Likert scale ranging from *never* (1) to *a few times a week* (5). Sums were calculated for aggression and victimization scales, with higher scores indicating higher frequency of each type of experience. Cronbach's alpha in the current sample was good (victimized scale; α = .90; aggressive scale; α = .83).

Dating Violence. The Conflict in Adolescent Dating Relationships Inventory – Short Form (CADRI-S; Fernández-González et al., 2012) is a 20-item, self-report measure capturing abusive behaviors in adolescent dating relationships. It was administered to youth (a) in at least 8th grade and (b) reporting at least one previous dating relationship (n = 50). The CADRI-S assesses victimization and perpetration of abusive dating behaviors, including threatening behavior, physical, sexual, relational, and verbal/emotional abuse. Youth responded on a 4-point Likert scale ranging from *never/never happened* (0) to *often/ happened 6 or more times* (3). Items for victim and perpetrator scales were summed. The CADRI-S demonstrated good internal consistency in the current sample (α = .90).

Race-Related Events and Symptoms. The Race-Related Events Scale (RES; Waelde et al., 2010) is a 23-item, yes/no, self-report measure of events related to one's race or ethnicity. For example, "treated rudely or coldly," "ignored," or "insulted or called an insulting name" because of one's race or ethnicity. Internal consistency in the current sample was excellent (α = .85). If a race-related event was endorsed on the RES, participants then indicated which bothers them the most, and frequency of related PTSD symptoms on a 4-point Likert scale from 1 (*not at all*) to 4 (*often*) on the Children's Revised Impact of Event Scale (CRIES; Perrin et al., 2005), a 13-item, self-report measure. Items were summed, with higher scores representing more PTSD symptomatology related to race-related events. The CRIES demonstrates adequate sensitivity and specificity for discerning PTSD in youth (Perrin et al., 2005). CRIES internal consistency in the current sample was good (α = .84). RES scores are only reported for youth who reported a racial or ethnic minoritized identity (n = 192), and CRIES scores are reported for the subset of these youth who endorsed race-related events and completed the measure (n = 51).

Anxiety Symptoms. The Multi-Dimensional Anxiety Scale for Children (MASC-2; March, 1997) is a 50-item measure of anxiety symptoms with youth self-report and

caregiver report versions. Items are rated using a 4-point Likert scale and yield a Total, Separation Anxiety/ Phobias, Generalized Anxiety Disorder (GAD) Index, Social Anxiety, Obsessions and Compulsions, Physical Symptoms, and Harm Avoidance scores. *T* scores 60 to 64 reflect slightly elevated, 65 to 69 are elevated, and >70 reflect very elevated scores. The MASC-2 demonstrated excellent internal consistency in our sample (caregiver report: α = .92; youth report: α = .92).

Depression Symptoms. The Children's Depression Inventory (CDI) is a 27-item youth self-report measure quantifying depression symptoms in the past two weeks. Each item consists of three graded statements (0–2), with higher values representing increased depressive symptom severity. Items were summed into a total depression score. Scores above 20 are considered clinically significant. Cronbach's alpha in the current sample was good (α = .88).

Data Analytic Strategy

All analyses were conducted using SPSS v29.0.1.0 and Mplus8. One-way ANOVA demonstrated no significant differences in youth age, gender or race for participants with UCLA PTE data (N = 326) versus those with data missing across all UCLA PTE items (N = 38; i.e., missing both caregiver and youth responses; p's > .05). Within the analytic sample (N = 326), there were no differences in demographic variables for participants with both respondents, only caregiver responses, or only youth self-report responses. Across PTEs, no items had missing responses. Missing data on the LCA indicators are accounted for using full information maximum likelihood (FIML), where data are assumed missing at random.

LCA, a type of person- centered mixture modeling incorporating responses on categorical indicator variables, was used to identify potential subgroups of PTE exposure. A series of models, beginning with a one-class model, were conducted, adding classes until the best model was identified, consistent with standard LCA protocol (Weller et al., 2020). To avoid local maxima for parameter estimates, 1000 random starts with 100 optimization iterations and 50 iterations for the stochastic expectation-maximization algorithm were used to ensure accurate estimation. Models were compared based on statistical criteria to select the final class structure, including indices of model fit, parsimony, and class meaningfulness and interpretability. The Bayesian Information Criterion (BIC), Akaike information criterion (AIC), and sample-size adjusted Bayesian information criterion (SABIC) were examined; lower values indicate superior model fit. The Vuong-Lo-Mendell-Rubin adjusted likelihood ratio test (VLMR-LRT; Lo et al., 2001; Vuong, 1989) and the bootstrapped likelihood ratio test (BLRT; McLachlan & Peel, 2000) provide p values indicating if one model is statistically better than another. Entropy indicates how accurately the model defines classes (Masyn, 2013; Wang et al., 2017). Conditional dependence of indicators was assessed via the bivariate residual association (BVR) method (Asparouhov & Muthén, 2015; Visser & Depaoli, 2022). No cutoff is established for elevated BVR statistic, but it is recommended to consider multiple comparisons and only the largest BVR statistics. A cutoff of 30 was used in the current study, consistent with a prior instructional example (Asparouhov & Muthén, 2015).

The 3-step modified Bolck-Croon-Hagenaars (BCH) method was used to examine class differences on auxiliary variables (Bolck et al., 2004; Nylund-Gibson et al., 2019), following the recommended Mplus procedures (Asparouhov & Muthén, 2014). This method accounts for classification error and misclassification bias while using weighted multiple group analysis to examine class differences in parameters of interest. We examined Chi-square tests of overall class differences, and pairwise comparisons for each class, in auxiliary variable means. Auxiliary variables were examined to determine the meaningfulness of the class profiles and for additional hypothesis generation. In hypothesized tests of symptom differences, we present subscale comparisons for descriptive understanding of classes, and pairwise comparisons using Bonferroni correction per family of tests (i.e., five PTSD subscales, $\alpha = .01$; six anxiety subscale comparisons, $\alpha = .0083$), while $\alpha = .05$ was used for description of classes and exploratory analyses.

Results

Latent Class Analysis

Table 1 summarizes model information and fit indices. AIC values for the 3-, 4-, and 5-class models were lowest and nearly equal. The BIC indicated the lowest value for the 2-class model, and the sample size adjusted BIC corresponded to the 3-class model. The VLMR-LRT *p* value indicated the 2- and 3-class models were most parsimonious. The BLRT *p* values were significant for the 2-class and 3-class models. Quantitative and qualitative fit indices and careful interpretation of latent classes suggested the 3-class model best explained the data. There was not strong evidence of conditional dependence among indicators in the 3-class model (i.e., no indicator pairs demonstrated a BVR estimate above 30) or severe model fit violations.

Item-response estimated probabilities express the relation between PTEs and latent classes. Each class was given a descriptive label based on high item-response probabilities, or defining characteristics of latent class membership (Figure 1). The *low trauma* class ($n = 194$; 59.7%) demonstrated low probability of PTE endorsement. The *interpersonal/community violence (IPV/CV)* class ($n = 108$; 33.1%) was characterized by accidental injury, community violence, physical assault and bullying. The *emotional abuse, neglect, and interpersonal violence in the family (EA/N/IPVFam)* class ($n = 24$; 7.2%) was characterized by domestic violence, physical abuse, neglect, emotional abuse, caregiver interference, and separation from a caregiver.

Demographics and Additional PTE Characteristics by Class

Classes were similar in mean age and evenly distributed across gender (Table 2). Classes did not differ in racial identity, $\chi^2 = 3.60$, $p = .17$. While nonsignificant, *IPV/CV* class was composed of slightly more youth from minoritized identities than the *low trauma* class ($\chi^2 = 3.50$, $p = .06$) Classes varied in the number of total PTEs $\chi^2 = 344.79$, $p < .001$, with significant pairwise differences between each class for all comparisons. The *EA/N/IPVfam* class reported more PTEs than both the *IPV/CV* and *low trauma* classes, and the *IPV/CV* class reported more PTEs than the *low trauma* class. Interpersonal violence PTEs also varied across classes, $\chi^2 = 274.22$, $p < .001$ (Table 2). The *IPV/CV* and *EA/N/IPVFam* classes

reported more IPV PTEs than the *low trauma* class (p's < .001), while the *IPV/CV* and *EA/N/IPVFam* difference was non-significant (p = .10). Classes varied in their age at first PTE, χ^2 = 21.70, p < .001 (Table 2). *EA/N/IPVfam* and *IPV/CV* classes were younger at their first reported PTE than the *low trauma* group (p's < .001), though did not differ from each other.

Exploratory Analyses: Peer, Dating, and Race-Related Events

Exploratory analyses showed that peer victimization did not vary by class overall, χ^2 = 5.33, p = .07, nor did peer aggression, χ^2 = 4.97, p = .08, though trends were observed for higher peer victimization and aggression in the *IPV/CV* compared to the *low trauma* class (Table 2). Of the 50 youth who completed the CADRI-S, 34 reported some form of dating victimization and 31 reported some form perpetration. Neither dating victimization nor perpetration varied by class. For youth with a minoritized racial or ethnic identity, there was a class difference in race-related events, χ^2 = 24.69, p < .001, where the *IPV/CV* and *low trauma* means were higher than the *EA/N/IPVfam* class (p's < .001) (Table 2).

PTSD Symptoms by Class

A graded pattern of PTSD symptoms emerged, with higher scores for *IPV/CV* and the highest scores for the *EA/N/IPVFam* compared to the *low trauma* class (Table 3). The omnibus test revealed differences in youth-reported total PTSD (χ^2 = 11.93, p = .003), avoidance (χ^2 = 10.55, p = .005), negative mood/cognitions (χ^2 = 10.56, p = .002) and arousal (χ^2 = 14.60, p = .001) symptoms. Dissociation (χ^2 = 6.63, p = .04) differences did not survive correction for multiple comparisons. The *EA/N/IPVFam* mean was higher than the *low trauma* class on total PTSD symptoms (χ^2 = 11.72, p = .001), avoidance (χ^2 = 8.95, p = .003), negative mood/cognitions (χ^2 = 10.02, p = .002), and arousal (χ^2 = 13.64, p < .001) scores. The *EA/N/IPVFam* mean was higher than the *IPV/CV* class on arousal symptoms (χ^2 = 7.79, p = .005) and negative mood/cognitions (χ^2 = 5.40, p = .02), which did not survive multiple comparisons correction. *Low trauma* and *IPV/CV* classes did not differ in youth-reported PTSD symptoms. The *IPV/CV* class reported more avoidance symptoms that the *low trauma* class, though this did not survive multiple comparisons (χ^2 = 5.38, p = .02). Classes did not vary in race-related PTSD symptoms.

Classes differed on caregiver reported total PTSD symptoms, (χ^2 = 22.77, p < .001), reexperiencing/intrusion (χ^2 = 19.22, p < .001), avoidance (χ^2 = 13.12, p = .001), negative mood/cognitions (χ^2 = 19.33, p < .001), and arousal (χ^2 =15.88, p < .001) symptoms. *IPV/CV* class means were higher than the *low trauma* class on caregiver reported total PTSD scores (χ^2 = 7.83, p = .005), while reexperiencing/intrusion (χ^2 = 6.82, p = .009), negative mood/cognitions (χ^2 = 6.68, p = .01) and arousal (χ^2 = 6.05, p = .01) symptom means differed but did not survive multiple comparisons. *EA/N/IPVFam* symptom means were higher than the *low trauma* class on caregiver reported total PTSD (χ^2 = 18.71, p < .001), reexperiencing/intrusion (χ^2 = 15.14, p < .001), avoidance (χ^2 = 13.00, p < .001), negative mood/cognitions (χ^2 = 14.47, p < .001), and arousal (χ^2 = 15.21, p < .001). The difference for dissociation did not survive multiple comparisons (χ^2 = 5.56, p = .02). *EA/N/IPVFam* and *IPV/CV* classes differed on caregiver reported total PTSD (χ^2 = 6.10, p = .01) and avoidance (χ^2 = 6.87, p = .009) symptoms. The differences for reexperiencing/intrusion (χ^2

= 4.71, $p = .03$) and negative mood/cognitions ($\chi^2 = 5.33$, $p = .02$) did not survive multiple comparisons correction.

Anxiety and Depression Symptoms by Class

Youth reported depression varied by class ($\chi^2 = 6.50$, $p = .04$), with *IPV/CV* higher than the *low trauma* ($\chi^2 = 5.27$, $p = .02$). Youth reported anxiety did not vary across classes (Table 3). Caregiver reported separation anxiety did not survive correction for multiple comparisons. Classes varied on caregiver reported total anxiety ($\chi^2 = 18.08$, $p < .001$) generalized anxiety disorder (GAD; $\chi^2 = 16.21$, $p < .001$), obsessions/compulsions (OCD; $\chi^2 = 21.87$, $p < .001$), physical symptoms ($\chi^2 = 12.36$, $p = .002$), and social anxiety ($\chi^2 = 12.29$, $p = .002$). *EA/N/IPVFam* means were higher than the *low trauma* class on total anxiety ($\chi^2 = 17.76$, $p < .001$), GAD symptoms ($\chi^2 = 16.02$, $p < .001$), physical symptoms ($\chi^2 = 11.06$, $p = .001$), and social anxiety ($\chi^2 = 12.14$, $p < .001$), and higher than the *IPV/CV* class on total anxiety ($\chi^2 = 10.52$, $p = .001$), GAD ($\chi^2 = 9.63$, $p = .002$), physical symptoms ($\chi^2 = 6.93$, $p = .008$) and social anxiety ($\chi^2 = 9.66$ $p = .002$) scales.

Discussion

Polyvictimization, or exposure to multiple PTE types, during childhood and adolescence is common and highly predictive of poor mental health outcomes (Finkelhor et al., 2007, 2009; Layne et al., 2014), conferring the highest risk for symptoms of PTSD, anxiety, and depression. The present study builds on investigations of single PTE types, dimensional adversity models, and cumulative risk approaches by examining person-level groupings of PTEs using a comprehensive measure of exposures and symptoms to better understand the impact of trauma in youth. In a diverse community sample of youth, we identified three profiles: (1) *low trauma*, (2) *interpersonal and community violence* (*IPV/CV)*, and (3) *emotional abuse, neglect, and interpersonal violence in the family (EA/N/IPVFam)*, which varied in symptoms, suggesting functional significance of the identified profiles in conferring risk for mental health symptoms.

Intra-familial PTE exposure—encompassing both direct victimization and witnessed trauma, as well as family dysfunction—was less common in our community sample but emerged as a stronger predictor of PTSD symptoms than exposure to violence outside the family. The patterns of PTE exposure align with the cumulative risk and ACEs frameworks, while extending these models to highlight which types of exposures tend to accumulate in the general population. Our findings specifically extend research informed by the DMAP, which distinguishes between threatening interpersonal events and exposures defined by neglect (Henry et al., 2021; McLaughlin & Sheridan, 2016; Schäfer et al., 2023). Youth reporting emotional abuse and neglect in the present community sample were not exposed to these events in isolation. A clear “deprivation only” group did not emerge, suggesting this conceptualization may not be ecologically valid in community samples. Neglect may accompany threatening experiences, particularly when the source of threat is within the family (versus community). Experiences characterized solely by deprivation may be specific to certain populations where widespread neglect is more distinctly observed (e.g., very young, institutionally reared).

EA/N/IPVFam youth may get a "double hit" of both threat (threats to physical integrity) and deprivation (absence of expected environmental inputs) exposure. Research suggests that threat and deprivation result in different outcomes through different mechanisms (McLaughlin et al., 2014), yet, both predict higher levels of psychopathology longitudinally in youth (Schäfer et al., 2023). Arguably, neglect is also inherently threatening for humans, reflecting a lack of adequate relationships, social interaction, safety, and support necessary for survival (Berscheid, 2003; McLaughlin et al., 2017). Emotional abuse or psychological maltreatment may also reflect both acts of omission (e.g., lack of care, nurturance, or meeting emotional needs) and commission (e.g., verbal put downs, rejections; Henry et al., 2021). A comparative analysis found that abuse and neglect in isolation were related to psychopathology, though emotional maltreatment demonstrated the strongest effects on symptoms (Schlensog-Schuster et al., 2024). While delineating threat and deprivation experiences can yield important distinct mechanisms of conferred risk, future research should address their cooccurrence.

The *EA/N/IPVFam* class displayed a particularly pervasive and deleterious picture: Children were younger when they experienced their first PTE, consistent with previous work demonstrating early onset of familial PTE exposure for poly-victimized youth (Dierkhising et al., 2019; Grasso et al., 2016). Exposure to emotional abuse and neglect may reflect general family dysfunction and risk for other PTEs, as they have been linked to adverse parental characteristics (e.g., antisocial or criminal behavior; Brassard et al., 2020) and home environment (e.g., dark, crowded, noisy; Zhang & Topitzes, 2022). Interpersonal frameworks are often used to interpret the way emotional abuse specifically confers risk; it may interfere with developmental tasks of autonomy, social and behavioral skills, or lead to internalization of negative cognitions that affect identity development and self-esteem (Haslam & Taylor, 2022).

The *EA/N/IPVFam* class demonstrated the highest symptom burden across multiple informants and measures. This is consistent with previous research underscoring the potency of emotional abuse and neglect (Hoeboer et al., 2021; Schlensog-Schuster et al., 2024; Spinazzola et al., 2014) and polyvictimization generally (Finkelhor et al., 2007). The *EA/N/IPVFam* class differed from the *low trauma* and *IPV/CV* classes across multiple respondents and PTSD symptom domains. This aligns with research demonstrating a particularly pernicious combination of abuse within the home or victimization by caregivers or within close relationships (Källström et al., 2020). The accumulation of PTEs in the home was also relevant for caregiver reported child anxiety, consistent with research demonstrating that emotional abuse and neglect may specifically confer risk for PTSD and co-occurring psychopathology (McMillan & Asmundson, 2016; Nanda et al., 2016). In sum, family adversity was associated with trauma-related PTSD and broad anxiety risk.

Notably, generally subclinical psychopathology scores were endorsed across measures despite *IPV/CV* and *EA/N/IPVFam* classes reporting multiple criterion A events. Classes did not vary in age; therefore, class differences are unlikely a function of development or age. It is essential for longitudinal research to track the outcomes of profiles over time to determine how each may differentially relate to PTSD and anxiety symptoms, particularly as youth enter adolescence, when psychopathology risk increases (De Girolamo et al., 2012).

Unlike previous research showing links between polyvictimization and clinically elevated mental health symptoms in this age group (e.g., Grasso et al., 2016), our community sample reported subclinical symptoms, highlighting important potential mechanisms of resilience (e.g., emotion regulation ability; Cole & Diaz, 2024; positive interpersonal experiences: parental warmth and peer support; Zhang et al., 2021). As findings are cross-sectional, longitudinal work should examine PTE profiles in relation to later mental health problems, allowing for the examination of these potential mechanisms of risk and resilience.

While often separated from other adversities, research suggests bullying is independently associated with higher internalizing and externalizing problems (Trompeter et al., 2024). Although not reaching statistical significance, polyvictimization groups generally reported higher peer victimization in exploratory analyses, similar to previous research indicating co-occurrence of familial and peer victimization (Espelage et al., 2012). Interpersonal violence exposure can also beget a cycle of violence. There are well documented associations between victimization and perpetration (Nazaretian & Fitch, 2021), and victimization predicts externalizing symptoms, delinquency, and aggressive behavior (Fowler et al., 2009; McDonald & Richmond, 2008). Victimization can lead to adaptation to violence (i.e., desensitization) and increased aggression or violent behavior over time for some trauma-exposed youth (Gaylord-Harden et al., 2017; Kennedy & Ceballo, 2016). The *IPV/CV* class reported a higher prevalence of interpersonal criterion A PTEs, and a pattern of higher peer victimization and aggression (though nonsignificant), which may reflect normalization of violence within this group. Yet, the *IPV/CV* class demonstrated sub-clinical PTSD symptoms, which may indicate resilience. This combination of preliminary exploratory findings warrants further investigation, including how latent trauma exposure groups might moderate the relationship between children's coping mechanisms, resilience factors, and mental health outcomes. It is important to equip youth with the skills necessary for healthy social and relational functioning, particularly after IPVand CVexposure, as this may contribute to both victimization and perpetration of peer violence.

There were no significant differences in the exploratory examination of dating violence, though findings were limited as the sample had largely not yet engaged in dating relationships. While non-significant, a pattern emerged where polyvictimized classes reported higher dating violence, and *IPV/CV* exposed youth reported higher dating violence perpetration. Future studies with larger samples should continue to assess the contribution of dating violence to models of polyvictimization, as family and peer victimization factors have been shown to be associated with dating violence victimization, perpetration, poorer mental health outcomes (e.g., self-harm, suicidal ideation and attempts, substance use, aggressive behavior), and may be particularly salient for marginalized youth (Hébert et al., 2017; Woolweaver et al., 2024).

Race-related events varied, while race-related PTSS did not vary in exploratory analyses across latent classes. Youth from minoritized backgrounds in the *IPV/CV* class endorsed more race-related events, while race-related PTSD symptoms did not vary. Though we may have been underpowered to detect group differences. Overall, racial trauma is largely unassessed in research and clinical arenas. And further, may be under-reported due to circumscribed DSM criteria, and professionals' discomfort, bias, or lack of awareness of

racial trauma and its impact (Saleem et al., 2020). Race-related PTEs are discrete and may serve as a risk factor for other exposures (e.g., justice system involvement), and are a determinant of physical and mental health outcomes (Assari et al., 2017). Further, other factors like emotion dysregulation or vigilance may link race-related stress and trauma to outcomes (Roach et al., 2023; Woody et al., 2022). It is essential to include racial trauma in future work.

Strengths, Limitations, and Future Directions

The present study used a comprehensive PTE and symptom assessment across multiple informants using gold standard measures, addressing concerns regarding the limitations of self-reported or single criterion A event reports (Rubin et al., 2024). Though PTE measurement is an active area for future research. This work can consider how PTE profiles may vary as a function of self- and caregiver-reported PTE separately to determine if individually reported PTE classes differentially and meaningfully contribute to symptoms of psychopathology. Future research should also continue to examine both youth and caregiver reported symptoms. Consistent with previous work, caregivers reported lower symptoms across classes on multiple scales (Hughes & Gullone, 2010). While the UCLA PTSD-RI is considered gold standard, objective events do not capture the entirety of exposures or their impact. Participants were prompted to identify a “worst event” or which contributed most to current symptoms. A child’s most distressing event may not match caregiver, interviewer, or clinician perceptions. Subjective experience may be informative (Gradus & Galea, 2023). For example, polyvictimized adolescents and young adults often identify normal loss (i.e., natural death) and/or bereavement as the “worst” despite endorsement of many other PTEs (Gold et al., 2005; Modrowski et al., 2021).

The present study included a diverse (e.g., half identified as a racial and/or ethnic minority) community sample, spanning multiple phases of child development. Most of the sample reported low PTE exposure and subclinical symptoms. While examination of PTE profiles in the general community are essential, findings may not translate to youth oversampled for PTE exposure or clinical samples. Future research should continue to determine the utility of profiles for tailoring services (e.g., “watchful waiting”, psychoeducation, brief intervention, outpatient treatment). Larger samples would allow for increased sampling of polyvictimized youth from the general population, which may further improve class separation and class assignment estimates (e.g., entropy), and increase power to detect meaningful differences in peer, dating, and race-related events. While emotional abuse and neglect are commonly reported in treatment-seeking or systems-involved populations (Layne et al., 2014), the *EA/N/IPVFam* class reflected a small subgroup of the sample. These experiences may be overlooked or difficult to assess in community samples, leading to underreporting (Hibbard et al., 2012; Spinazzola et al., 2014). Further, emotional abuse/psychological maltreatment is rarely the focus of youth interventions (Spinazzola et al., 2014), and caregiver inclusion in treatment is rarely explored as a treatment factor, despite consensus that this is important (Kiser et al., 2020). Findings suggest the importance of thorough assessment and capturing of emotional abuse and neglect to understand youth mental health risk and potential targeting of caregiver behavior and treatment involvement.

Conclusions

The present study examined PTE profiles and how each map onto peer, dating, and race-related victimization, and symptoms of PTSD, anxiety, and depression. Findings lend further empirical support to theories delineating the importance of deprivation experiences in youth and revealed distinctions between interpersonal violence *outside the home* versus interpersonal violence *inside the home*. Emotional abuse and neglect co-occurred with *in the home* threat exposures in a diverse, community sample. PTE exposure profiles generally corresponded to graded PTSD symptoms and elevations in broad anxiety risk for youth in the *EA/N/IPVfam* class. This work provides a strong base for future research examining the mechanisms by which combinations of PTEs impact child and adolescent mental health in the general population.

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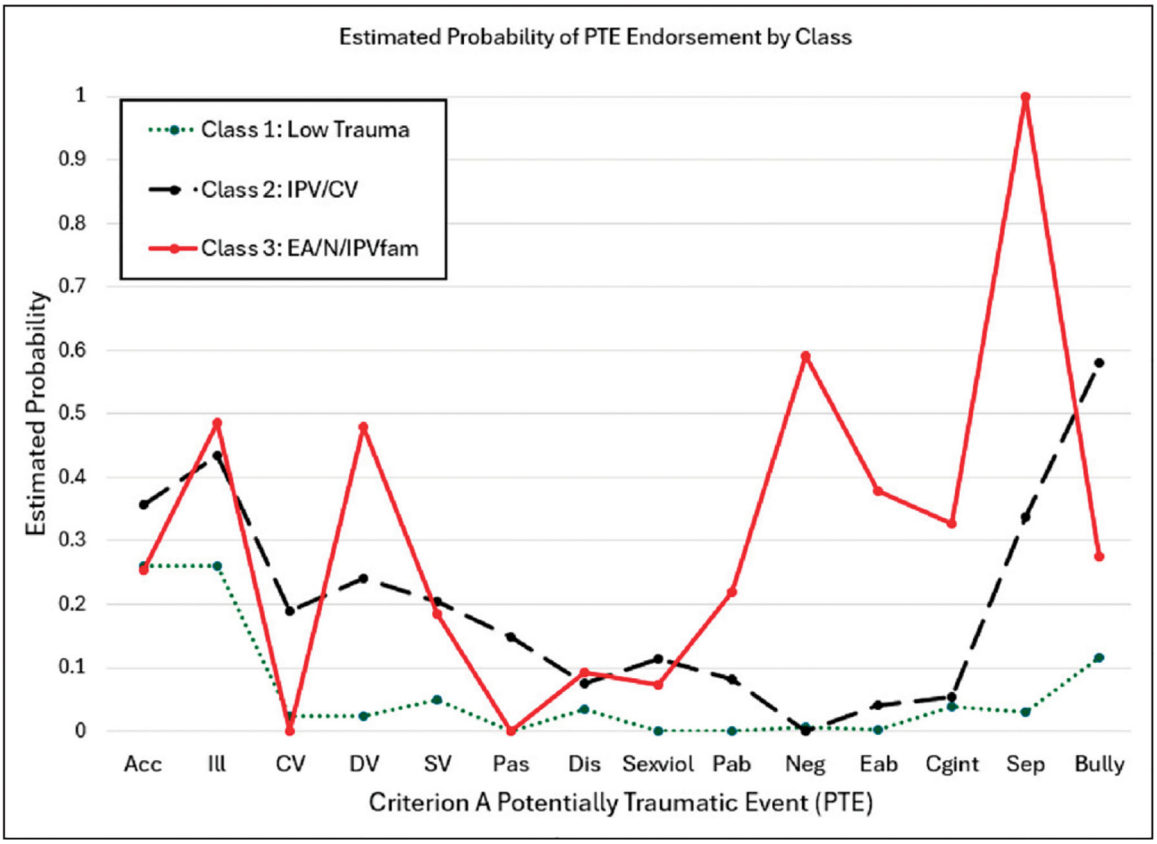

Figure 1.

Estimated probabilities of criterion A PTEs by class. PTEs = potentially traumatic events; Acc = serious accidental injury; Ill = illness/medical trauma; CV = community violence, DV = witnessing domestic violence; SV = school violence; Pas = physical assault (not by a caregiver), Dis = natural disaster; Sexviol = sexual violence (i.e., including sexual abuse by a caregiver and/or sexual assault/rape not by a caregiver); Pab = physical abuse/maltreatment (by a caregiver); Neg = neglect; Eab = emotional abuse/psychological maltreatment; Cgint = caregiver interference or impairment (e.g., depression, medical illness, substance abuse); Sep = caregiver separation (e.g., foster care, parent hospitalized or jailed); Bully = bullying.

Table 1.

Model Fit Indices.

Model/k classes	AIC	BIC	SABIC	LL	No. Estimated parameters	No. Corr resid	VLMR-LRT *p*	BLRT *p*	Entropy
1-Class	3091.971	3144.987	3100.58	−1531.985	16,348	3	NA	NA	NA
2-Class	2974.895	3084.715	2992.729	−1458.448	16,338	0	0.0069	0	0.673
3-Class	2948.923	3115.546	2975.981	−1430.461	16,329	0	0.0258	0	0.704
4-Class	2951.424	3174.851	2987.707	−1416.712	16,315	0	0.1844	0.5	0.793
5-Class	2952.229	3232.460	2997.736	−1402.115	16,303	0	0.2654	0.6667	0.819
6-Class	2960.462	3297.496	3015.194	−1402.115	16,289	0	0.4922	1	0.815

Note. AIC = Akaike information criterion; BIC = Bayesian information criterion; SABIC = sample size adjusted BIC; LL = log-likelihood; Corr resid = correlated residuals (using a cutoff of 30 to indicate severe model fit violations); VLMR-LRT = Vuong-Lo-Mendell-Rubin adjusted likelihood ratio test; BLRT = bootstrapped likelihood ratio test.

Table 2.

Demographic Information, Criterion a Events, Additional Adversities and Events by Class.

	Low trauma	IPV/CV	EA/N/IPVFam	χ^2 *p*
Demographic information *M* (*SE*)				
Age *M* (*SE*)	11.49 (.21)	11.45 (.30)	11.74 (.59)	.91
Gender *M* (*SE*)	1.53 (.04)	1.43 (.06)	1.64 (.12)	.28
Race *M* (*SE*)	1.70 (.12)	2.17 (.19)	1.88 (.40)	.17
Ethnicity *M* (*SE*)	.11 (.03)	.04=(.03)	.15 (.08)	.26
Criterion A events (conditional response probabilities)				
Accidental injury	.26	.36	.25	–
Illness	.26	.44	.49	–
Community violence	.02	.19	.00	–
Domestic violence	.02	.24	.48	–
School violence	.05	.20	.19	–
Physical assault	.00	.15	.00	–
Disaster	.03	.08	.09	–
Sexual violence	.00	.11	.07	–
Physical abuse	.00	.08	.22	–
Neglect	.01	.00	.59	–
Emotional abuse	.00	.04	.38	–
Caregiver interference	.04	.05	.33	–
Separation	.03	.34	1.00	–
Bullying	.12	.58	.28	–
Total count PTEs, *M*(*SE*)	.45 (.10)	3.63 (.17) *	5.07 (.49) *^	**.000**
Total count IPV PTEs *M*(*SE*)	.05 (.06)	2.03 (.13) *	2.60 (.29) *	**.000**
Age at first PTE *M* (*SE*)	8.09 (.44)	5.53 (.39) *	4.78 (.77) *	**.000**
Additional adversities and events				
Peer victimization, *M*(*SE*)	18.05 (.62)	21.29 (1.16)	20.02 (1.98)	.07
Peer aggression, *M*(*SE*)	14.95 (.44)	17.46 (.89)	15.47 (.79)	.08
Dating victimization, *M*(*SE*)	1.38 (.59)	3.20 (1.44)	2.36 (.89)	.49
Dating perpetration, *M*(*SE*)	.93 (.58)	3.19 (1.54)	.88 (.32)	.32

	Low trauma	IPV/CV	EA/N/IPVFam	χ^2 *p*
Race-related events, *M*(*SE*)	2.17 (.44)	2.73 (.41)^	.19 (.36)*	**.000**

Note. Trauma types are not mutually exclusive. PTE = potentially traumatic event. IPV/CV = interpersonal violence and community violence; EA/N/IPVFam = emotional abuse, neglect, and interpersonal violence in the family.

* significant pairwise difference from *Low Trauma* class mean.

^ significant difference between *IPV/CV* and *EA/N/IPVfam* means.

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Table 3.

Youth Symptom Ratings by Class: PTSD, Anxiety, and Depression.

	Low trauma	IPV/CV	EA/N/IPVFam	χ^2 *p*
PTSD symptoms – Youth self-report				
PTSD total score	10.71 (3.07)	17.44 (2.66)	35.39 (6.63) *^	**.003**
Intrusion	2.55 (.75)	3.34 (.61)	6.46 (2.08)	.19
Avoidance	.83 (.42)	2.46 (.41) *	3.08 (.64) *	**.005**
Negative mood/Cognitions	3.38 (1.46)	6.54 (1.29)	16.68 (3.99) *^	**.005**
Arousal	3.95 (.88)	5.11 (.77)	9.17 (1.14) *^	**.001**
Dissociation	.94 (.49)	1.80 (.41)	5.19 (1.70)	.04
Race-related PTSS	12.64 (2.04)	11.53 (2.07)	19.17 (6.82)	.58
PTSD symptoms - caregiver report				
PTSD total score	2.33 (2.19)	12.59 (1.98) *	28.57 (5.81) *^	**.000**
Intrusion	.09 (.52)	2.47 (.51) *	6.05 (1.48) *^	**.000**
Avoidance	.69 (.40)	1.51 (.30)	3.96 (.84) *^	**.001**
Negative mood/Cognitions	.59 (.94)	4.77 (.89) *	12.62 (3.10) *^	**.000**
Arousal	.96 (.76)	3.85 (.60) *	5.94 (1.07) *	**.000**
Dissociation	.31 (.21)	.61 (.31)	.46 (.28)	.045
Anxiety symptoms – Youth self-report				
Total anxiety	59.63 (1.00)	60.22 (1.59)	62.39 (2.67)	.29
Separation	64.61 (1.13)	63.69 (1.68)	64.07 (3.42)	.67
GAD	55.06 (.92)	55.59 (1.54)	57.46 (2.86)	.52
Obsessions & compulsions	58.39 (1.06)	61.14 (1.56)	59.40 (3.25)	.39
Harm avoidance	53.77 (.64)	52.58 (.95)	54.75 (2.00)	.31
Physical symptoms	54.77 (.86)	55.91 (1.43)	59.78 (2.70) *	.13
Social anxiety	55.24 (.89)	53.32 (1.48)	55.95 (2.50)	.32
Anxiety symptoms – Caregiver report				
Total anxiety	53.47 (1.03)	56.33 (1.85)	68.31 (3.30) *^	**.000**
Separation	60.65 (1.21)	61.36 (1.95)	69.81 (3.40)	.04
GAD	53.91 (1.05)	56.10 (1.70)	69.52 (3.42) *^	**.000**

	Low trauma	IPV/CV	EA/N/IPVFam	χ^2 *p*
Obsessions & compulsions	49.03 (.87)	54.72 (1.80) *	61.22 (2.85) *	**.000**
Harm avoidance	47.12 (.57)	47.84 (1.02)	50.47 (1.57)	.19
Physical symptoms	51.58 (.95)	54.03 (1.72)	65.87 (3.78) *^	**.002**
Social anxiety	52.53 (.87)	52.85 (1.45)	62.84 (2.93) *^	**.002**
Depression symptoms – Youth self-report				
Total score	6.83 (.57)	9.62 (.91) *	9.50 (2.10)	**.04**

Note. IPV/CV = interpersonal violence and community violence; EA/N/IPVFam = emotional abuse, neglect, and interpersonal violence in the family. Race-related PTSS = race-related posttraumatic stress symptoms (reported for youth with racial and/or ethnic minority identity endorsed). GAD = generalized anxiety disorder symptoms.

*significant pairwise difference from Low Trauma class mean.

^significant difference between IPV/CV and EA/N/IPVfam means.