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ORIGINAL ARTICLE

Loss and Grief among Persistently Delinquent Youth: The Contribution of Adversity Indicators and Psychopathy-Spectrum Traits to Broadband Internalizing and Externalizing Psychopathology

Amy E. Lansing[1,2] · Wendy Y. Plante[1,2] · Audrey N. Beck[2] · Molly Ellenberg[1]

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Abstract
Despite profound adversity exposure (loss, trauma) among delinquents, with adversity linked to early-onset persistent delinquency [EOPD], externalizing syndromes (Conduct Disorder) continue to overshadow impairing internalizing syndromes. Three understudied factors potentially contribute to both syndromes among delinquents: bereavement-related distress [BRD] from death-exposures; psychopathy-spectrum traits associated with system-involvement; and emotional abuse, implicated in lifespan morbidities. Therefore, we characterized loss/BRD among 107 EOPD adolescent girls and boys, comparing: (1) psychopathology and maltreatment (emotional, physical and sexual abuse); and (2) adversity-related (BRD, Post-traumatic Stress Disorder [PTSD], maltreatment) and psychopathy-spectrum predictors of internalizing and externalizing syndromes. Death exposure was common, resulting in developmental disruptions (school difficulties: 49.4%) and clinically significant BRD (33.8%), with girls evidencing greater BRD severity. BRD and psychopathy-traits, not PTSD, positively predicted all youths' internalizing, and boys' externalizing, syndromes. More frequent physical abuse increased both syndromes among boys. Emotional abuse alone predicted girls' externalizing syndromes, highlighting the contribution of this overlooked maltreatment-type.

Keywords Grief and bereavement-related distress · Child maltreatment · Emotional abuse · Broadband internalizing and externalizing syndromes · Psychopathy · Early-onset persistent delinquent youth

Introduction

Delinquent youth exhibit elevated rates of internalizing (e.g., depression), and externalizing (disruptive behavior disorders) psychopathologies. However, there is a propensity for systems (Juvenile Justice System: JJS, education) to focus on externalizing behaviors that adversely impact others, obscuring the potentially impairing impact of internalizing symptoms that are not readily obvious or disclosed. Specific externalizing (e.g., Conduct Disorder) and internalizing (e.g., Major Depressive and Separation Anxiety) disorders are both highly prevalent among JJS-involved youth (Teplin et al. 2002; Fazel et al. 2008), comorbid in community and delinquent youth (Achenbach and Rescorla 2001; Frey and Epkins 2002), reciprocal (Beyers and Loeber 2003) and implicated in diminished academic achievement (van Lier et al. 2012). Evidence from community-based longitudinal research supports comorbid depression and antisocial symptomatology that co-occurs over time in a stable fashion (Ritakallio et al. 2008). Thus, it is critical to assess - and address - both broadband syndromes. This is especially salient as transdiagnostic, dimensional symptoms disrupt social, academic and vocational development, particularly among youth already at high-risk for poor functional outcomes (Achenbach et al. 2016).

Psychopathologies, such as Post-traumatic Stress Disorder [PTSD], which reflect both 'internalizing' (avoidance) and 'externalizing' (hyperarousal) symptoms and adversity exposure (maltreatment, death of loved ones), are also characteristic of JJS-involved youth (e.g., Teplin et al. 2002; Abram et al. 2004). Specifically, 50% of detained youth report four or more adverse childhood experiences [ACEs], including maltreatment (physical, sexual and emotional

✉ Amy E. Lansing
alansing@ucsd.edu

[1] University of California, San Diego, 9500 Gilman Drive #0603, La Jolla, CA 92093-0603, USA

[2] San Diego State University, San Diego, CA, USA

abuse; physical and emotional neglect) and familial distress (parental psychopathology/suicidality, incarceration or substance use; domestic violence; divorce) indicators (Baglivio et al. 2014). Data support a dose response relationship between ACEs and increased medical (e.g., cancer) and psychiatric (e.g., depression) morbidity and mortality (Hughes et al. 2017), higher risk of reoffending among delinquents (Baglivio et al. 2014), and an earlier age of delinquency onset (Baglivio et al. 2015). Abram and colleagues noted that 90% of detained youth experienced a Diagnostic and Statistical Manual of Mental Disorders [DSM] qualifying trauma, requiring actual or threatened death, serious injury, or sexual violence (e.g., sexual abuse), with PTSD rates ranging from 3 to 50%, up to eight times that of community youths (Abram et al. 2004; Perrin et al. 2014; Wolpaw and Ford 2004). Despite converging evidence of the interconnectedness of adversity and psychopathology, several important gaps remain, including the relationships among understudied narrow-band dimensional syndromes (BRD, psychopathy-spectrum traits), adversity exposure (maltreatment not restricted to physical/sexual abuse) and broadband psychopathologies, particularly relevant to populations experiencing early, chronic, and wide-ranging adversity which places them at the highest risk for lifespan mental and medical health disparities.

Understudied Contributors to Broadband Syndromes

First, there has historically been a focus primarily on symptomatology arising from DSM-qualifying traumatic events, overlooking the potential psychopathology precipitated by non-qualifying events that confer potential psychiatric morbidity risk such as emotional abuse and loss (e.g., non-violent death of loved one). Neglecting loss is especially concerning as death-exposure is the most common type of adversity experienced by detained youth (61–90%), occurs during critical periods of development, and is associated with an increased risk of mood (single death) and disruptive (multiple deaths) disorders (Dierkhising et al. 2013; Harnisher et al. 2015). Our previous work indicates that, on average, early-onset persistent delinquent [EOPD] boys experienced four losses reflecting deaths and familial separations, with their first loss occurring by age four (Lansing et al. 2016). These losses were associated with cumulative grief, which alongside trauma symptoms, correlated with neuroanatomical regions implicated in language and executive functions (Lansing et al. 2016) that potentially amplify developmental disruptions (academic performance, emotion regulation, attachment, see Cloitre et al. 2009).

Between 10 and 20% of children and adults experiencing a death have grief that persists and/or increases over time (Melhem et al. 2011; see review: Jordan and Litz 2014). This bereavement-related distress [BRD], distinct from normative grief, is associated with intense, disruptive, prolonged and/or severe longing, yearning and preoccupation with the death, resulting in a cascade of symptoms and functional impairment. Facets of BRD have been captured by overlapping proposed diagnostic criteria (Complicated, Traumatic or Prolonged Grief; Persistent Complex Bereavement Disorder, see Maciejewski et al. 2016) with support for a dimensional approach favoring symptom severity (Holland et al. 2009).

While the BRD literature is dominated by older adults losing spouses, similar results are found among youth. In community adolescents, BRD after peer suicide or parental death is distinct from depression, PTSD, and anxiety, reflecting a distinct syndrome associated with important clinical indicators (suicidality) and functional impairment even after controlling for other psychopathologies (Melhem et al. 2004, 2007; evaluating "traumatic" and "complicated" grief respectively). Notably, young adults experiencing BRD after a friend's suicide were five times more likely to commit suicide than their bereaved counterparts who did not meet criteria (Prigerson et al. 1999). Taken together, data suggest that BRD may be extremely relevant to delinquent youth and their overall mental health. However, BRD's contribution to broadband internalizing and externalizing syndromes has not been investigated in delinquent youth.

Second, psychopathy-spectrum traits are associated with criminality, externalizing behaviors, suicidality and, more recently, adversity exposure (Vahl et al. 2016; Krischer and Sevecke 2008; Sevecke et al. 2016; Verona et al. 2001, 2005). However, the contribution of psychopathic traits in explicitly predicting broadband internalizing and externalizing syndromes is rarely considered. Unlike DSM disruptive behavior disorders that focus almost exclusively on comportment, psychopathy spans affective (callousness, remorselessness, unemotionality), interpersonal (manipulativeness, dishonest charm, grandiosity, lying), and behavioral (impulsivity, irresponsibility, thrill-seeking) domains (Hare 1996), making these traits potentially relevant to a range of clinical presentations. While 'psychopathy' may be controversial in youth and applicable diagnostically (i.e., categorically) to a small segment of the population, psychopathy-spectrum affective symptoms which are linked to delinquency (Frick et al. 2014) have gained diagnostic traction with Conduct Disorder with the recent inclusion of 'limited prosocial emotions' (remorseless, shallow affect, un-empathic) as a qualifier (American Psychiatric Association 2013).

Importantly, among delinquent boys, PTSD-related numbing has been linked to callous and unemotional traits (Kerig and Becker 2010); physical and emotional abuse are associated with psychopathy-spectrum traits (Krischer and Sevecke 2008); and significant overlap exists between the neuroanatomical correlates of antisocial symptoms (psychopathy, Conduct Disorder) and symptoms of cumulative

trauma, adversity, and grief (Lansing et al. 2016). These findings underscore the need to extend our understanding of the links between psychopathy-spectrum traits and trauma to delinquent girls. Further, data are needed to understand the relationships among a broader range of adversity-related indictors, such as BRD, and psychopathy-spectrum traits in youth at high-risk for death-exposure (both traumatic death and more typical losses). Finally, given notable psychiatric comorbidity among delinquent youth and strong overlap in clinical presentation between psychopathy-spectrum traits and other relevant disorders (numbing in PTSD, blunting in psychotic-spectrum disorders), the contribution of these traits to both internalizing and externalizing broadband syndromes should be considered alongside adversity-spectrum disorders (BRD, PTSD) and early adversity exposures (e.g., maltreatment).

Third, child maltreatment and multi-maltreatment (experiencing multiple child abuse-types) are associated with heightened risk for mental health and functional difficulties, yet most research focuses on physical and sexual abuse (Taillieu et al. 2016). In JJS-involved boys and girls, physical abuse has been linked to violent offending, high school dropout, and unemployment (Lansford et al. 2007), and sexual abuse in girls is associated with delinquency and violent offending (Siegel and Williams 2003). Combined sexual and physical abuse is associated with the worst psychiatric and functional outcomes, including antisocial behavior, externalizing and internalizing symptoms, and other comorbid psychopathology in community samples (Bensley et al. 1999; Ackerman et al. 1998).

Most studies, however, do not take into account emotional abuse, despite its high prevalence and probable co-occurrence with other maltreatment types (Dierkhising et al. 2013; Riggs 2010). A large study of urban at-risk youth demonstrated that although emotional abuse occurs more frequently alongside other maltreatment types than in isolation, it is a significant independent predictor of externalizing behavior and negative affect (Arata et al. 2007). Importantly, emotional abuse is also very common in juvenile delinquents, with data suggesting nearly half of delinquent youth experienced emotional abuse, making it more prevalent than physical (38.6%) and sexual (25%) abuse (Dierkhising et al. 2013). Emotional abuse also impacts a variety of lifespan mental health (depression, post-traumatic stress, substance use) and functional (academic performance, coping skills, attachment, emotion processing, and regulation) outcomes, therefore strongly meriting attention in delinquent populations (Riggs 2010; Iwaniec et al. 2006; Burns et al. 2010; Taillieu et al. 2016). Given evidence that other forms of maltreatment contribute to internalizing and externalizing problems (Bolger and Patterson 2003), emotional abuse requires consideration for understanding broadband syndromes in adversity-exposed youth.

The Present Study

Increasing evidence suggests that adversity, including maltreatment, as well as internalizing and externalizing syndromes are highly prevalent in delinquent populations. However, few studies evaluate the role of loss and BRD in the presenting broadband syndromes of delinquent youth, despite clear evidence suggesting they experience many losses during their young lives. Even less is known about the interrelationships among BRD, psychopathy-spectrum traits, and maltreatment, in youth who exhibit the worst long-term outcomes: those whose disruptive behavior emerges early and persists throughout adolescence (i.e., EOPD youth). Thus, in order to optimally alter this negative health spiral, it is critical to address relevant but understudied psychopathologies, traits, and risk-factors, alongside established predictors (physical/sexual abuse, PTSD, e.g., Cromer and Villodas 2017), that may underlie these overlapping broadband syndromes, particularly among youth at high-risk for adversity driven morbidities demonstrated in the ACE literature (Hughes et al. 2017). The present study therefore aims to characterize loss and BRD among 107 EOPD youth, and compares girls and boys on: (1) psychopathology and maltreatment (emotional, physical, sexual) profiles; and (2) adversity-related (grief, PTSD, maltreatment) and psychopathy-spectrum predictors of broadband syndromes (internalizing, externalizing).

Methods

Subjects

Subjects included 107 incarcerated youth, ages 16 to 18 years old (n = 51 boys, n = 56 girls), participating in a study on EOPD, cognition, life events, and psychopathology. See Table 1 for demographic data. Participants were recruited from San Diego County Probation Department's [SDCPD] Camp Barrett and Girls' Rehabilitation Facility. Youth at SDCPD facilities have similar age, offense, and racial/ethnic minority distributions as institutional commitment rates nationwide (Sickmund and Puzzanchera 2014). Youth were randomly selected from the three primary ethnic/racial groups represented in this setting (Hispanic, African American, Caucasian). Eligibility included right-handedness; English fluency (bilingual youth eligible); disruptive behavior symptoms by the age of 10; multiple arrests, adjudications and/or incarcerations alongside self-reported delinquency; and an IQ greater than 70. Exclusions included color blindness, serious neurological disorders, and psychotic symptoms interfering with informed consent and decisional capacity. Youth were screened and consented consistent with federal regulations, the University of California,

Table 1 Demographic and clinical characteristics

	EOPD boys (n = 51)			EOPD girls (n = 56)			Cohen's d
	Mean	SD	Range	Mean	SD	Range	
Age at assessment***	17.16	0.70	16–18	16.57	0.60	16–18	0.90
Family Resources Scale^{NS} (Raw score)	21.67	3.13	13.60–25.00	20.90	3.57	13.29–25	
Early disruptive behavior symptoms**	10.78	4.26	3–19	8.45	5.15	1–22	0.49
Number of arrests***	5.29	2.57	1–11	3.68	2.12	1–12	0.68
Age of earliest loss exposure^{NS} (LEC)	5.61	5.73	0–17	5.05	5.37	0–15	–
Age of earliest trauma exposure* (LEC)	9.90	3.87	2–17	8.24	4.39	0–17	0.40
Psychopathy total (50 items)^{NS} (YPI scores)	123.02	21.73	77–174	126.00	22.81	77–183	–
Interpersonal domain (20)^{NS}	45.34	10.62	24–65	48.35	12.28	23–77	–
Affective domain (15)^{NS}	35.98	5.90	22–51	33.88	6.63	18–49	–
Behavioral domain (15)^{NS}	41.70	7.89	24–60	43.77	7.49	30–59	–
Emotional abuse*** (CTQ Raw score)	7.44	3.07	5–20	10.76	5.38	5–25	0.76
Physical abuse^{NS} (CTQ Raw score)	7.81	3.39	5–18	8.80	4.79	5–22	–
Sexual abuse*** (CTQ Raw score)	5.15	0.88	5–11	9.47	6.34	5–25	0.95
Internalizing syndrome** (YSR T-score)	53.12	10.33	30–83	58.89	11.37	27–84	0.53
Externalizing syndrome* (YSR T-score)	67.39	8.58	51–83	71.31	10.58	49–93	0.41
Current PTSD severity*** (CAPS-CA)	19.51	21.28	0–89	39.62	29.75	0–107	0.78
Self-harm level* (SITBI)	1.10	1.89	0–5	1.96	2.12	0–5	0.46
Race^{NS}	**n**	%		**n**	%		
Hispanic	16	31.4		25	44.6		
African American	14	27.5		12	21.4		
Caucasian	21	41.2		19	33.9		
Grief-related characteristics	EOPD boys (n = 41)			EOPD girls (n = 36)			
Age of most significant death^{NS}	13.40	3.98	2–18	13.61	2.63	7–17	–
Time since most significant death^{NS}	4.20	4.03	0.50–15	3.27	2.49	0.67–10	–
Number of qualifying deaths^{NS}	2.76	1.74	1–9	2.17	1.46	1–7	–
Bereavement-related distress: Grief total** (ICG-19 raw score)	16.54	12.31	0–59	25.53	13.60	5–46	0.69
Number of Grief impairment indicators**	1.37	1.36	0–4	2.03	1.42	0–4	0.48

^{NS}=not significant; $^{\dagger}p < 0.10$,*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$

San Diego (UCSD) Institutional Review Board (IRB) and Department of Health and Human Services (DHHS), as previously published (Lansing et al. 2016, 2017).

Participant Screening

Youth consented for screening in writing and all participants signed a study assent (< 18 years old) or consent form (≥ 18 years old). Youth were queried about the study elements to ensure comprehension (e.g., purpose; risks and benefits; voluntary and knowing participation with Human Subjects Bill of Rights; no impact on their sentence length etc.). Female staff, with psychology- or psychiatry-related degrees, experience interviewing high-risk youth and extensive training and supervision, interviewed participants. Clinical interviews were reviewed and supervised, or administered, by a clinician. All youth completed testing over several sessions to reduce subject burden, allow research staff to know the youth better, promote optimal data collection, and allow flexibility in working around the youth's schedule.

Participation rates post-screening were high. One screened girl declined participation because of the time commitment involved, one consented pre-randomization girl demonstrated psychotic symptoms requiring immediate alternative treatment, and one randomized participant dropped out due to disinterest in participating in non-mandatory programming.

Participant Consenting

Research involving detained and incarcerated youth requires special procedures because all youth are officially Wards of the Court and many have limited parental contact or may not have a legal guardian who can provide consent. Therefore, parental consent was obtained when possible and youths' assent and consent was overseen by a participant-advocate who represented the youths' interests. Study methods and

consent forms were approved by the UCSD IRB; and the US Office of Protection from Research Risks and DHHS, which provides guidance on the involvement of prisoners in research (HHS regulations at 45 CFR part 46, subpart C). Consistent with these institutions; federal regulations; and the Centers for Disease Control and Prevention IRB; required parental consent was waived. A federal certificate of confidentiality was obtained from the National Institute of Child and Human Development in order to protect the privacy of research participants and confidentiality of sensitive data.

Measures

Screening Measures

Early Disruptive Behavior Scale (American Psychiatric Association 2000, Diagnostics and Statistics Manual 4th Edition Text Revision [DSM-IV-TR]) Youth were asked about the presence of absence of all Oppositional Defiant and Conduct Disorder symptoms by age 10, or earlier. Scores represent the total number of symptoms endorsed.

Family Resource Scale [FRS] (Dunst and Leet 1987) This 30-item socioeconomic status [SES] self-report assesses family resources (Basic Needs (food); Housing/Utilities; Benefits (job/healthcare); Social Needs/Self-care; Extra Resources) (Brannan et al. 2006), using a five-point scale (1 = not at all adequate to 5 = almost always adequate). We also queried free/reduced school lunches and excluded child-care reports, which was applicable to only few adolescents.

Assessment Battery

Achenbach Youth Self Report [YSR] (Achenbach and Rescorla 2001) The YSR self-report for adolescents, aged 11–18, addresses behavioral/emotional problems within the last 6 months, which are rated on a 3-point scale (0 = Not True, 1 = Somewhat or Sometimes True, and 2 = Very True or Often True) and cover eight, non-overlapping, factor analysis-derived scales (e.g., Anxious/Depressed, Withdrawal/Depressed, Attention Problems) grouped into three broadband subscales: Internalizing (comprised only of Anxious/Depressed; Withdrawn/Depressed; and Somatic scales), Externalizing (comprised only of Rule-Breaking and Aggressive scales), and Total Problems (i.e., a total of all problem subscales). Meeting threshold for a summary score is not equivalent to meeting a problem score threshold (e.g., Withdrawn/Depressed is only one problem area contributing to Internalizing Score). The YSR provides a reliable and valid assessment of current mental health problems, with Cronbach's α=0.90 for both the Internalizing and Externalizing scales (Achenbach and Rescorla 2001; Doyle et al. 2007). Reliability in our sample was also strong: for Internalizing (Cronbach's α=0.91) and for Externalizing (Cronbach's α=0.90). YSR gender- and age-based T-scores range from 50 to 100 (normal range: 50–59). Classifications for the presence/absence of clinically meaningful internalizing and externalizing problem scores were based on a T-score cut-off of ≥ 60 (borderline to extreme clinical range; see Achenbach and Rescorla 2001). Like other internalizing and externalizing measures, the YSR does not capture grief or full-spectrum psychopathy, nor does it capture precipitating traumatic event-dependent post-traumatic stress. However, the depression and internalizing problem scales correlate well with diagnoses of depression and the Aggressive Problems and Rule-Breaking scales correlate well with psychopathy, Oppositional Defiant Disorder, and Conduct Disorder (Ferdinand 2008; Semel 2017).

Inventory of Complicated Grief [ICG-19] (Prigerson et al. 1995) The ICG is a 19-item self-report using a five-point Likert frequency scale ranging from "0 = never" to "4 = always" that assesses the total frequency of current death-related grief symptoms (range 0–76). The ICG-19 was administered only to participants reporting the death of someone who was important to them occurring ≥ 6 months prior to interview (n = 77) as required for prolonged or complicated bereavement. The ICG-19 was administered based on their self-identified single most distressing death. Current symptoms reflected their experiences over the past year, which prevented symptoms from only being queried during a timeframe in which the youth was incarcerated. Debate persists in the nomenclature for prolonged BRD (e.g., Complicated, Prolonged, or Persistent Complex grief or bereavement) but symptoms include preoccupation with the death, anger, distrust and detachment, avoidance, and loneliness. The ICG-19 was designed to capture 'Complicated Grief,' and includes items such as "*Has it been hard for you to trust people ever since he/she died*," with an established cutoff point of 25 indicating high-risk for clinical care (Prigerson et al. 1995). For item endorsement counts, symptoms and impairment indicators were counted as 'present' if the participant endorsed them at a level one or greater. The internal consistency of the ICG-19 is high (Cronbach's α = 0.94), as is the concurrent validity with other scales of grief (Prigerson et al. 1995). Among EOPD youth, reliability of the ICG-19 was strong: Cronbach's α=0.90.

The ICG-19 is strongly correlated with adult functional impairment, even after adjusting for depression and anxiety comorbidities (Simon et al. 2007). One ICG-19 item reflects distress that may indicate impairment for children: thoughts of the deceased interfere with daily activities (i.e., 'I think about this person so much it's hard for me to do the things I normally do'). We included supplementary

items to the ICG-19, aimed at identifying impairment (e.g., social) and developmental burdens (e.g., change in caregivers or schools) incurred as a result of the loss. Specifically, three additional items from the revised ICG were included because they capture additional aspects of distress, relevant for youth who have lost a caregiver or friend: (1) difficulty making new friends or doing new activities; (2) feeling a lack of control (as may happen when a new caregiver steps in or they leave their childhood home or school); and (3) disrupted sleep (Prigerson and Jacobs 2001). Participants were asked about their loss history, relationship to the deceased (including primary caregiver status), whether they previously lived with the deceased, manner of death, and nine 'developmental burden' items potentially occurring as a result of the death: going into foster care, changing homes or schools, having a new caregiver, having to assume care for their siblings, being separated from siblings, joining/becoming more involved in a gang as a consequence of the death, feeling guilty about the specific death, having difficulty feeling close to others/lack of trust in people, and/or negative school consequences (worsening grades; onset of/increased truancy) all specifically in response to the death (Harnisher et al. 2015).

Clinician Administered PTSD Scale – For Children [CAPS-CA] (Nader et al. 1996) This 33-item structured interview assesses PTSD symptoms in response to the youth's self-identified 'worst' DSM-qualifying traumatic event, determined by the Life-Events Checklist (Gray et al. 2004). Symptom severity is determined by summing frequency (not at all – every day) and intensity (not at all – a whole lot) on a 0–4 scale, across all 17 symptoms. Severity ≥ 60 indicate severe to extreme PTSD levels. Rates of PTSD were obtained by adopting the most common scoring rule for symptom "presence": A Frequency of ≥ 1 and Intensity of ≥ 2 ('F1I2' criteria; Weathers et al. 1999). Cronbach's alpha of ≥ 0.75 was found for the CAPS-CA in a study of incarcerated adolescents (Newman et al. 1997). All CAPS-CA scores reflect the participants' current symptoms.

Youth Psychopathic Trait Inventory [YPI] (Andershed et al. 2002) A 50-item adolescent self-report tapping personality traits without reference to antisocial behavior, measuring three psychopathy-spectrum dimensions using a 4-point scale ("1 = does not apply at all" to "4 = applies very well"). The Grandiose-Manipulative dimension (20 items: range 20–80) addresses Dishonest Charm, Lying, Grandiosity, and Manipulation. The Callous-Unemotional dimension (15 items: range 15–60) addresses Callousness, Unemotionality, and Remorselessness. The Impulsive-Irresponsible dimension (15 items: range 15–60) addresses Impulsiveness, Irresponsibility, and Thrill-seeking. All three factors showed acceptable internal reliability (Cronbach alpha range: 0.764–0.927, total alpha = 0.942). Using the 4-point scale, symptom counts were also calculated to define a trait as "present" if it was endorsed at ≥ 3 level. Because the YPI was added to the assessment battery later in the study, not all participants received it. However, there were no significant differences on any other measure between those who did and did not receive the YPI.

Childhood Trauma Questionnaire [CTQ] (Bernstein and Fink 1998) This self-report assesses childhood maltreatment frequency across five subscales: physical, sexual, and emotional abuse; and physical and emotional neglect; and includes a minimization scale. The present study focuses on the three abuse scales with all scales ranging from "1 = none to minimal" to "5 = severe to extreme." Raw maltreatment scores range from 5 to 25 on each subscale. The CTQ boasts high reliability (Cronbach's $\alpha = 0.97$) and high convergent and discriminant validity when compared with maltreatment therapist-completed ratings (Bernstein et al. 1997). Among EOPD youth, Cronbach's alphas for Emotional Abuse, Physical Abuse, and Sexual Abuse were 0.88, 0.83, and 0.96, respectively.

Self-Injurious Thoughts and Behaviors Interview [SITBI] (Nock et al. 2007) The STBI is a structured interview assessing the presence, frequency, and characteristics of lifetime non-suicidal self-injury [NSSI] and suicidal thoughts, gestures and behaviors. The SITBI has strong concurrent validity with other measures of suicidal ideation, suicide attempt, and NSSI, as well as strong interrater and test–retest reliability. A Self-harm continuous variable was created to assess the degree of presence for these thoughts and behaviors on an ordinal scale: 0 = no NSSI or suicidal thoughts or behaviors, 1 = NSSI thoughts, never acted upon (and no suicidal ideation); 2 = engaged in NSSI behaviors; 3 = suicidal ideation; 4 = suicidal plans, gestures, or intentionally abandoned attempts; and 5 = interrupted or actual suicide attempts. The most severe occurrence was coded (if a youth had both self-injury behaviors and a suicide attempt, they received a code of 5).

Statistical Analyses

Analyses were two-tailed and conducted with SPSS (v.24). Independent samples t-tests and chi squared analyses were used for gender comparisons. Bivariate Pearson correlations supported our theoretically-driven regression model. Correlation magnitude and effect sizes (Cohen's *d*) were interpreted consistent with Cohen (Cohen 1988). Backward multivariate linear regressions were used to predict broadband syndromes (internalizing, externalizing), separately for EOPD boys and girls. Statistically significant findings ($p < 0.05$) and trends ($p < 0.1$) are reported.

Results

Demographic and clinical characteristics are presented in Table 1. Boys and girls were comparable on race/ethnicity and family resources/SES. The significant difference in age reflects < 6 months at assessment. The EOPD youths in the present study had an average of 9.56 disruptive behavior symptoms by age 10, and 4.49 prior arrests. Boys had more disruptive behavior symptoms by age 10 ($t(105) = 2.54$, $p < 0.05$) and prior arrests ($t(105) = 3.55$, $p < 0.001$), than did girls.

Characterization of All Death Experiences Among EOPD Youths

Overall, 77 EOPD participants (72.0% overall: 80.4% of boys, 64.3% of girls) reported a meaningful/important death that occurred at least 6 months prior to assessment, with five additional youth (4.7% of the sample) only reporting a single, more recent death (1–5 months before interview), which did not qualify for prolonged BRD. Boys and girls were comparable in age when the most significant death occurred and time elapsed between that death and their assessment age. On average, youth experienced 2.48 deaths, with 68.8% of EOPD youth experiencing ≥ 2 deaths. Of youth reporting any death, 6.5% lost a parent who was a primary caregiver, 1.3% lost a non-caregiving parent (non-custodial), and 44.2% lost a non-parental primary caregiver. Across relationship-types, 74.0% of respondents reported ≥ 1 deaths due to medical problems, 44.2% reported ≥ 1 murder or manslaughter-related deaths, 18.2% reported ≥ 1 vehicle-related deaths, 11.7% reported ≥ 1 drug or alcohol-related deaths, 9.1% reported ≥ 1 deaths due to 'other' circumstances, and 7.8% reported ≥ 1 suicide-related deaths.

Developmental burdens commonly occurred specifically as a result of youths' reported death experiences: 49.4% reported that their school or work performance worsened as a result of the death, 49.4% reported having difficulty feeling close to others or generalized distrust of people, 36.4% reported feeling guilty, 33.8% reported joining or becoming more involved with a gang as a result of the death, 13.0% had a change in caregivers, 9.1% experienced a change homes or schools, 7.8% reported having to assume a caregiving role for their siblings, and 2.6% reported being separated from their siblings. No youth went into foster care as a result of their most significant death. More boys than girls reported joining or becoming more involved in a gang as a result of the death ($\chi^2 = 4.03$, $p = 0.056$). No other gender differences in developmental burdens were found.

Bereavement-Related Distress

The average ICG-19 score for youths' most significant death experience was 20.74 (SD = 13.61, range = 0–59), with 26 participants (33.8% overall: 19.5% of boys, 50.0% of girls) meeting the ICG-19 clinical cutoff point of 25. Girls scored significantly higher than boys on the ICG-19 ($t(75) = -3.045$, $p < 0.01$) and significantly more girls than boys met the cutoff point ($x^2 = 7.97$, $p < 0.01$). Youths' average age at the most significant death occurred in early adolescence (M = 13.50, SD = 3.4, range = 2–18), in contrast with the very early average age at first loss (death or separation) exposure of 5.29 (SD = 5.57, range = 0–15). The most significant death occurred an average of 3.76 years (SD = 3.41, range = 0.5–15) prior to the interview. The participants also reported a variety of relationships to the *most important person who had died*. Most common were grandparents (27.3%); aunts, uncles, and godparents (27.3%); and friends or significant others (23.4%). In terms of their most important death, 36.4% of youth lost a caregiver (6.5% for a custodial parental caregiver, 29.9% for a non-parental caregiver). Table 1 includes ICG-19 total scores split by gender.

Indicators of potential BRD-related functional impairment for all death-exposed youth are presented in Fig. 1. For youth explicitly meeting the ICG-19 clinical cutoff, 30.8% endorsed an item *reflecting at least daily disruption* in their activities of daily living due to preoccupation about the death of their loved one. Further, among participants who met the cutoff point, 69.2% experienced ≥ 3 of 4 BRD-related symptoms suggestive of 'impairment' on at least a monthly basis (e.g., death-related sleep, social, or school disruption). For participants who did *not* meet the clinical cutoff point, 15.7% nevertheless experienced ≥ 3 of 4 BRD-related impairment symptoms, *each of which occurred at least monthly*. Girls experienced significantly more impairment indicators on at least a monthly basis, than did boys ($t(75) = -2.008$, $p < 0.05$).

Psychopathology and Maltreatment Profiles

The average current CAPS-CA severity score for all youth was 29.66 (SD = 27.68, range = 0-107), with 9.8% of boys and 37.5% of girls meeting criteria for PTSD. Girls endorsed significantly higher levels of PTSD symptoms than boys ($t(101) = -3.951$, $p < 0.001$) and were more likely to meet PTSD criteria than boys ($x^2 = 12.760$, $p < 0.01$). Of participants with the death of a loved one occurring ≥ 6 months prior to interview, only 15.58% had overlap between their most meaningful death (reported in ICG-19) and their precipitating event for PTSD.

The average YPI score for all youth was 124.48 (SD = 22.19, range = 77–183), with no significant gender differences on psychopathy-spectrum traits (YPI Total,

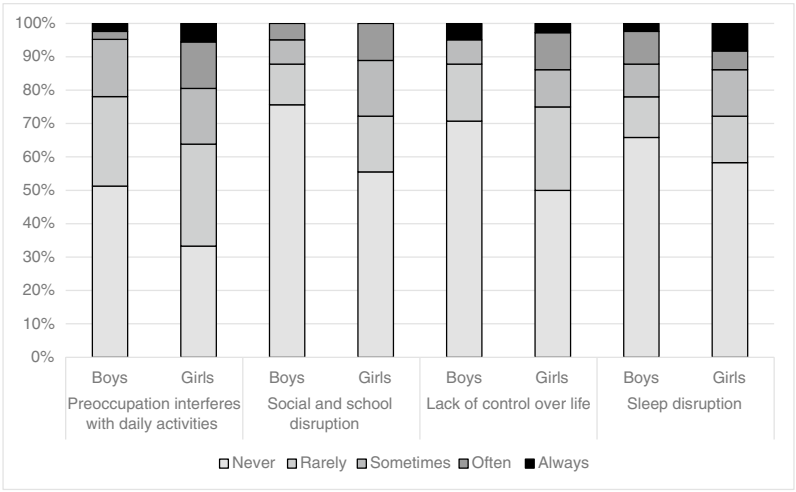

Fig. 1 EOPD boys and girls – Indicators of potential functional impairment related to BRD

Note: "Always" indicates impairment on a daily basis, "Often" indicates an almost daily frequency, "Sometimes" indicates weekly frequency, and "Rarely" indicates monthly frequency.

Interpersonal, Behavioral, Affective scores). While the highest trait endorsement occurred in the Behavioral domain, particularly within the Thrill-seeking subdomain, more than one-third of all items were endorsed by boys and girls across domains. On average, boys endorsed 66.5% of the YPI Behavioral traits, followed by 44.0% of Affective traits, and 40.2% of Interpersonal traits. Girls endorsed 70.2% of Behavioral traits, 47.4% of Interpersonal traits, and 38.3% of Affective traits. Within the Behavioral domain, boys and girls endorsed more Thrill-Seeking (boys: 81.3%, girls: 82.8%), than Irresponsibility (boys: 61.3%, girls: 57.7%) and Impulsiveness (boys: 56.9%, girls: 70.2%), traits. Among boys, the individual psychopathy-spectrum domains were significantly correlated exclusively with externalizing syndromes (r range = .358–.464), and no other psychopathology. Among girls, no psychopathy-spectrum domain was correlated with BRD but all three domains were significantly correlated with both internalizing (r range = .340–.570) and externalizing (r range = .346–.599) syndromes, with the Interpersonal domain consistently showing the strongest associations. The Interpersonal and Behavioral domains were significantly correlated with PTSD (r range = .353 and .336, respectively) for girls, with a trend for the Affective domain (r = .309, p = 0.06). The Behavioral domain was also significantly correlated with self-harm level for girls (r = .430). Youth were asked about NSSI and suicidal acts: 32.7% engaged in NSSI behaviors (20.0% of all boys, 44.4% of all girls) and 16.3% reported prior suicide attempts (8.0% of all boys, 24.1% of all girls). Significantly more girls than boys reported NSSI ($x^2 = 7.05$, $p < 0.05$) and suicide attempts ($x^2 = 4.91$, $p < 0.05$).

For all youth, average scores for emotional, physical and sexual abuse (CTQ) were 9.21 (SD = 4.74, range = 5–25), 8.34 (SD = 4.20, range = 5–22), and 7.46 (SD = 5.13, range = 5–25), respectively. Girls experienced higher frequencies of emotional ($t(101) = -3.92$, $p < 0.001$) and sexual ($t(101) = -5.01$, $p < 0.001$) abuse than boys. Figure 2 depicts the severity level breakdown of child abuse frequency by percent of EOPD girls and boys experiencing each level. Emotional abuse was the most frequent abuse-type for EOPD girls, with 60% experiencing low to extreme levels of abuse and 20% of all girls experiencing severe to extreme levels, compared to 25% of boys experiencing low to extreme abuse emotional abuse and only 2.1% reporting severe to extreme levels. Physical abuse was the most common abuse-type experienced by EOPD boys (39.6% low to extreme levels). Nearly half of all girls experienced low to extreme frequencies of sexual abuse, which was infrequently reported by boys. Overall, 18.8% of boys and 43.6% of girls experienced ≥ 2 forms of abuse. One boy (2.1%) and 29.1% of girls experienced all three abuse types.

Average internalizing and externalizing YSR T-scores for all youth were 56.15 (SD = 11.21, range = 27–84) and 69.45 (SD = 9.83, range = 49–93), respectively: 26.5% of boys and 51.9% of girls fell within the borderline to clinical range for internalizing vs. 75.5% of boys and 83.3% of girls within the same range for externalizing, syndromes. Girls scored significantly higher on internalizing ($t(101) = -2.69$, $p < 0.01$) and externalizing ($t(101) = -2.06$, $p < 0.05$) syndrome scores than boys. More girls than boys also fell within the borderline to clinical range for internalizing ($x^2 = 6.87$, $p = 0.01$) syndromes. Boys and girls were comparable for borderline-clinical classification of their externalizing syndromes. Transdiagnostic classification was common with 50.0% of EOPD girls and 25.5% of boys meeting or exceeding combined borderline-to-clinical cutoffs for both syndromes.

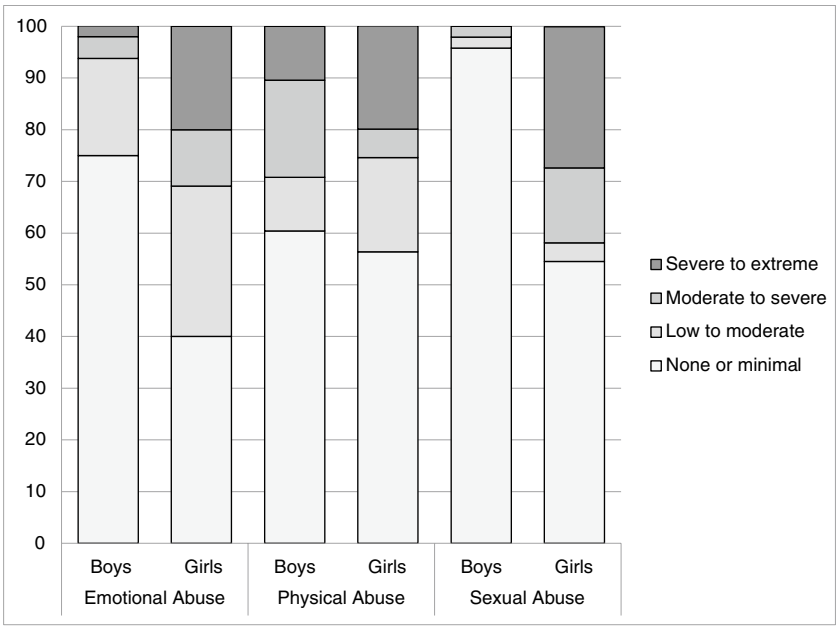

Fig. 2 Maltreatment profiles among EOPD boys and girls

Primary Psychopathology and Maltreatment Correlations

Correlations among psychopathology, maltreatment, and self-harm indices, separated by gender, are presented in Table 2. All significant correlations were positive. For all EOPD youth, internalizing and externalizing broadband syndromes demonstrated significant moderate correlations. For EOPD girls and boys, BRD was significantly associated with both internalizing and externalizing broadband syndromes as well as PTSD. Bereavement-related distress was not significantly correlated with psychopathy-spectrum traits for EOPD youth. For girls only, BRD was also significantly correlated with all child abuse types. The internalizing broadband syndromes of EOPD boys and girls were significantly correlated with PTSD, emotional and physical abuse. Girls' internalizing syndrome score was additionally correlated with sexual abuse, psychopathy-spectrum traits, and self-harm level. Externalizing broadband syndromes of only EOPD girls were significantly correlated with psychopathy-spectrum traits, PTSD, each child abuse-type, and self-harm level. Self-harm was not correlated with BRD for either boys or girls. For both boys and girls, self-harm level was significantly related to only one form of child maltreatment: emotional abuse. For only EOPD girls, self-harm level demonstrated significant correlations with internalizing and externalizing syndromes, current PTSD symptoms, and psychopathy-spectrum traits.

Predicting Internalizing and Externalizing Broadband Syndromes

Clinically relevant symptomatology for high-risk youth (BRD, psychopathy), not typically included in the construction of broadband scores, were used as predictors of internalizing and externalizing syndromes. The inclusion of both grief and PTSD in a backward regression permitted determination of which adversity-driven symptomatology was most important for boys and girls in determining different broadband syndromes. Emotional abuse, common among delinquents and associated with significant negative lifespan outcomes, was included alongside established maltreatment predictors of psychopathology (physical and sexual abuse). Thus, the final backward model included the ICG-19 total score, YPI total score, current CAPS-CA total score, alongside physical, emotional, and sexual abuse.

Best-fit backward linear regression models are presented in Tables 3 and 4. All terms were entered for models predicting internalizing and externalizing syndromes in EOPD boys and girls. Neither PTSD nor sexual abuse were retained in any of the four models. For all youth, higher levels of BRD and psychopathy-spectrum traits predicted greater internalizing syndrome severity, with more frequent physical abuse also contributing only among boys. The three measures explained 61.7% of the variance in internalizing syndrome for boys. Grief (BRD severity) and psychopathy-spectrum traits explained 46.2% of the variance for girls. The model for boys' externalizing symptoms paralleled their

Table 2 Pearson bivariate correlations

		I	II	III	IV	V	VI	VII	VIII	IX
I. Internalizing syndromes (YSR)	Boys	–								
	Girls	–								
II. Externalizing syndromes (YSR)	Boys	0.604***	–							
	Girls	0.600***	–							
III. Bereavement-related distress (ICG-19)	Boys	0.638***	0.380*	–						
	Girls	0.473**	0.497**	–						
IV. PTSD (current CAPS-CA severity total)	Boys	0.382**	0.211^{NS}	0.623***	–					
	Girls	0.531***	0.456**	0.412*	–					
V. Psychopathy-spectrum traits (YPI)	Boys	0.191^{NS}	0.458**	-0.212^{NS}	-0.144^{NS}	–				
	Girls	0.520***	0.572***	0.215^{NS}	0.392*	–				
VI. Emotional abuse (CTQ)	Boys	0.337*	0.091^{NS}	0.169^{NS}	0.034^{NS}	0.064^{NS}	–			
	Girls	0.445**	0.529***	0.423*	0.434**	0.349*	–			
VII. Physical abuse (CTQ)	Boys	0.372*	$0.283^{\dagger}$	0.045^{NS}	0.127^{NS}	-0.046^{NS}	0.461**	–		
	Girls	0.496**	0.537***	0.383*	0.366**	$0.281^{\dagger}$	0.762***	–		
VIII. Sexual abuse (CTQ)	Boys	-0.026^{NS}	0.097^{NS}	0.122^{NS}	0.446**	$0.301^{\dagger}$	0.079^{NS}	0.160^{NS}	–	
	Girls	0.510**	0.385**	0.379*	0.532***	$0.275^{\dagger}$	0.621***	0.619***	–	
IX. Self-harm level (SITBI)	Boys	0.099^{NS}	-0.002^{NS}	0.141^{NS}	0.006^{NS}	-0.115^{NS}	0.590***	0.211^{NS}	-0.106^{NS}	–
	Girls	0.296*	0.320*	0.100^{NS}	0.337*	0.312*	0.346*	0.079^{NS}	0.005^{NS}	–

^{NS}=not significant; $^{\dagger}p<0.10$,*$p<0.05$; **$p<0.01$; ***$p<0.001$

Table 3 Final backward regression model predicting internalizing syndromes

Internalizing							
Male				Female			
Predictor	B	Standard error	β	Predictor	B	Standard error	β
Physical abuse	1.010	0.323	0.348**	YPI Total	0.261	0.083	0.508**
YPI total	0.152	0.055	0.316**	ICG-19 Total	0.375	0.156	0.389*
ICG-19 total	0.599	0.096	0.707***				
$R^2 = 0.617$ F statistic = 16.613***				$R^2 = 0.462$ F statistic = 9.012**			

Table 4 Final backward regression model predicting externalizing syndromes

Externalizing							
Male				Female			
Predictor	B	Standard error	β	Predictor	B	Standard error	β
Physical abuse	0.508	0.280	0.228†	Emotional Abuse	2.259	0.349	0.810***
YPI total	0.219	0.047	0.592***				
ICG total	0.323	0.083	0.496**				
$R^2 = 0.513$ F statistic = 10.864***				$R^2 = 0.655$ F statistic = 41.853***			

internalizing model, with 51.3% of the variance accounted for by BRD, psychopathy-spectrum traits, and physical abuse (trending). Only emotional abuse accounted for girls' externalizing symptoms, explaining 65.5% of the variance.

Discussion

Consistent with data from detained youth (Dierkhising et al. 2013; Harnisher et al. 2015), most adolescent EOPD girls and boys experienced meaningful deaths, with 76.7% reporting the death of an important person in their lives (72% of youth with deaths occurring ≥ 6 months prior to interview) and > 67% experiencing two or more such losses. Deaths were frequently characterized by violence (murder, manslaughter, suicide) or substance/alcohol misuse. Over a third of EOPD youth experiencing the death of a loved one met the clinical cutoff point established in the ICG-19, nearly three times the rate of clinically significant BRD found in a community sample of youths experiencing sudden parental death (Melhem et al. 2011). Girls were particularly impacted by BRD, with 50% experiencing distressing grief suggesting the need for clinical care. Importantly, BRD was queried for the past year, yet on average, the referenced death occurred more than 3 years earlier suggesting that 'grief' is prolonged, enduring and suggestive of BRD for a substantial number of JJS-involved youth. Further, BRD was related to broadband syndromes, yet is rarely considered for intervention among delinquent youth. Loss is clearly an important and impactful adversity experience in this population, resulting in distress (as captured by 'complicated grief', and similar to other grief-related criteria; see Maciejewski et al. 2016) that merits further attention in understanding the psychosocial morbidity of these vulnerable youth.

Notably, many studies assessing grief that extends beyond normal bereavement in length, symptom severity, and/or impairment, focus exclusively on nuclear family losses (spouses, parents, children). In minority and low-income families, however, the large extended family has been identified as an effective and adaptive coping system. Extended families provide additional financial resources as well as childcare and moral support for other adults (Harrison et al. 1990). Given these deep family ties, the death of an extended relative may disproportionately impact low-income and/or minority youth. Many EOPD adolescents reported the deaths of grandparents, extended relatives, and older friends as their most significant losses. More than half of EOPD youths reported the death of a primary caregiver, though only a minority of these primary caregivers were a parent. It is clear that many of the participants were raised, at least partially, by extended family and even non-familial caregivers, highlighting the importance of extended kinship ties in these youths' lives and the necessity of addressing these relationships in grief assessments.

Aligning with the high prevalence of deceased caregivers as well as the violent and/or sudden nature of many of the experienced deaths, the developmental burden experienced by participants highlights the need to better address the psychosocial life changes caused by loss in children and adolescents. These youth reported experiencing their first loss (through death or separation), on average, by age five. Especially concerning for lifespan outcomes and opportunities,

nearly half of EOPD youth reported school disruptions (poor grades, disinterest in school, truancy etc.) directly as a result of their loss. Given the known cascading interrelationships of internalizing and externalizing syndromes with academic impairment (van Lier et al. 2012), developmental disruptions associated with loss pose yet another critical challenge for this vulnerable population. Additionally, nearly half of the youth experienced potential attachment disruptions ranging from difficulty feeling close to others to serious distrust. When coupled with the notable gang involvement as a result of their loss (~34%), these developmental disruptions may be linked to "callous/unemotional" clinical presentations described in psychopathy or Conduct Disorder, but potentially reflecting adversity-related numbing that may be quite amenable to appropriate, proactive preventative efforts (e.g., extended social support through schools during initial grieving) or early BRD interventions. In sum, experiencing such early loss, can compound psychological distress and functional outcomes when accompanied by life changes that further disrupt healthy development if inadequate supports are in place and/or extended family struggle to cope in healthy ways after a death. These potential death-related disruptions may represent overlooked aspects of both normal bereavement and BRD, posing challenges for youth and society by impacting academic and social (gang involvement, distrust) outcomes. Importantly, with support, these experiences may also promote resiliency and post-traumatic growth (Woodward and Joseph 2003).

Gender comparisons revealed that EOPD girls experienced significantly higher BRD, PTSD, and emotional abuse than boys. While boys reported more early-onset disruptive behaviors, EOPD youth overall had notable evidence of behavioral problems (~10 symptoms, on average, by age 10) and no significant gender differences on severity of psychopathy-spectrum traits. Both EOPD boys and girls did, however, score higher on all aspects of psychopathy-spectrum traits than community youth (Campbell et al. 2009). Finally, EOPD youths' maltreatment profiles replicated previous findings that delinquent youth experience notable child abuse, especially for girls (Taillieu et al. 2016). Among EOPD girls, the high rates of emotional abuse (~60%), sexual abuse (nearly half), and multi-maltreatment (~29% experiencing all three types of abuse) are particularly concerning. Overall, these data indicate that interventions should address the impact of emotional abuse and multi-maltreatment, both of which confer notable risk for lifetime psychopathology (Gibb et al. 2007), especially in delinquent girls.

Relevant for policy and treatment considerations, correlations revealed significant positive relationships between self-harm and the mental health indicators we explored. For girls, significant associations were found between self-harm and PTSD, psychopathy-spectrum traits, and internalizing and externalizing broadband syndromes, but not BRD; suggesting that suicide and NSSI risk assessments among EOPD girls should include externalizing symptomatology, rather than narrowly focusing on internalizing issues. Both EOPD boys' and girls' self-harm was significantly correlated with only one form of child maltreatment: emotional abuse. Restricting maltreatment focus to physical and sexual abuse among EOPD youth may therefore reduce accurate risk detection, particularly for boys who demonstrated no other significant associations with self-harm. Overall, self-harm independently constitutes a significant clinical concern among EOPD youth, with suicide attempt rates two to six times higher than national lifetime adolescent prevalence rates (EOPD boys: 8.0%, EOPD girls: 24.1%; Nock et al. 2013), and NSSI behaviors far exceeding community rates, aligning closest with psychiatric populations actually receiving mental health care (EOPD boys: 20.0%, EOPD girls: 44.4%; Brown and Plener 2017).

In terms of predicting broadband syndromes, the optimal models for predicting internalizing and externalizing syndromes among EOPD girls and boys had both shared characteristics and unique contributors. Notably, neither PTSD (prominent in the population and the focus of most adversity research) nor sexual abuse (elevated among EOPD girls) contributed significantly to understanding EOPD youths' broadband syndromes. Strongly supporting the transdiagnostic spectrum of internalizing and externalizing symptoms, BRD severity (grief) and psychopathy-spectrum traits were highly relevant for understanding both syndromes in EOPD boys, with physical abuse also contributing (accounting for ~62% and 51% of the variance, respectively). Girls' internalizing syndromes were similarly explained by BRD severity (grief) and psychopathy-spectrum traits (46% of the variance) – even though neither of these syndromes are explicitly captured by Achenbach measures and psychopathy is most frequently associated with "externalizing" disorders (e.g., Conduct Disorder) or behaviors (e.g., aggression). In contrast, only emotional abuse, an insidious form of maltreatment, was critical for understanding EOPD girls' externalizing syndromes, explaining nearly 66% of the variance. Overall, these findings support the relevance of BRD, adversity exposure (maltreatment), and psychopathy-spectrum traits in determining *internalizing and externalizing* clinical syndromes. Further, the severity of EOPD youths' response to loss may be more relevant to their overall clinical presentation than PTSD – particularly for boys; and gender differences in the specificity of the contribution of emotional vs. physical abuse to broadband psychopathology suggest tailored interventions are important.

Taken together, these data support the: (1) interconnectedness of internalizing and externalizing problems; (2) significance of assessing loss and grief, as captured by BRD-type measures, among high-risk youths; (3) distinct role that both BRD and psychopathy-spectrum symptoms play

in EOPD youths' overall clinical presentation, beyond that of PTSD and child maltreatment; (4) relevance of assessing not only functional impairment, but the impact of developmental disruptions (changes in caregivers/schools, assumption of caregiving duties by children) among high-risk youth with early, multiple, and/or violent death-exposure; (5) importance of addressing how distressing grief may deteriorate school performance and impact attachments; (6) role of psychopathy-spectrum traits in precipitating broadband internalizing syndromes, suggesting that psychopathy may better be conceived on a transdiagnostic spectrum; (7) high prevalence of self-harm among EOPD youths, requiring clinical consideration; and (8) assessment of both internalizing and externalizing symptoms, and inclusion of emotional abuse, in order to improve prevention efforts (e.g., self-harm risk assessments) and intervene more effectively with EOPD youth.

Limitations and Directions for Further Study

In the present study, we utilized well-validated grief and maltreatment self-report measures. Future research should employ interviews with larger samples, for greater clinical nuance, and to capture additional grief (Prolonged Grief Disorder and Persistent Complex Bereavement Disorder criteria, not yet examined among high-risk youth) and maltreatment (neglect, additional severity indicators) details. Grief (BRD severity) was also assessed based on only the most important death, with symptoms assessed during the past year. This methodology may underestimate EOPD youths' total BRD in response to all of the deaths that each youth experiences, and the cumulative adversity burden of lifetime grief symptoms during development. Consistent with prior research, gender differences emerged on rates of PTSD, emotional abuse, and sexual abuse, raising the question of whether these rates reflect actual prevalence differences or potential under-reporting among boys. While our findings are comparable to prior research (e.g., Dierkhising et al. 2013; Abram et al. 2004), continued investigation is indicated and interpretation of results should bear this in mind. Future studies should explore symptom overlap across disorders and evaluate how BRD, PTSD, and psychopathy-spectrum traits emerge longitudinally in youth who experience early onset, often chronic, adversity exposures.

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Compliance with Ethical Standards

Conflict of Interest On behalf of all authors, the corresponding author states that there is no conflict of interest.

Ethical Standards All procedures followed were in accordance with the ethical standards of the responsible committee on human experimentation [institutional and national] and with the Helsinki Declaration of 1975, as revised in 2000.

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

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Amy E. Lansing, Ph.D. is on faculty in the Department of Psychiatry at University of California, San Diego and the Department of Sociology at San Diego State University. She received her B.A. from the University of Texas, Austin; an M.A. at John Jay College of Criminal Justice and a Ph.D. from Northwestern University. Her research interests include neurobehavioral and cognitive profiles associated with trauma; the developmental impact of cumulative trauma, adversity and grief; and tailored interventions addressing adversity.

Wendy Y. Plante, B.S. was a research assistant in the Department of Psychiatry at University of California, San Diego and the Department of Sociology at San Diego State University. Her current research interests focus on the development of interventions for marginalized populations. She received her B.S. from the University of California, Los Angeles and was the recipient of a NICHD Diversity Supplement.

Audrey N. Beck, Ph.D. is an Assistant Professor in the Department of Sociology at San Diego State University. Her current research interests focus on health outcomes among delinquent youth and race-ethnic disparities in health and mortality. She received her MA and PhD from Duke University.

Molly Ellenberg, B.S. is a graduate student in the Forensic Psychology Master's Program at The George Washington University. She received her B.S. from the University of California, San Diego. Her primary research interests focus on bereavement-related distress in early-onset persistent delinquent youth.