



Contents lists available at ScienceDirect

Child Abuse & Neglect



The contribution of childhood emotional abuse to teen dating violence among child protective services-involved youth[☆]

Christine Wekerle^{a,*}, Eman Leung^b, Anne-Marie Wall^c, Harriet MacMillan^d,
Michael Boyle^d, Nico Trocme^e, Randall Waechter^b

^a Faculty of Education, Department of Psychology, Psychiatry Program, University of Western Ontario, London, Ont., Canada

^b Faculty of Education, University of Western Ontario, London, Ont., Canada

^c Department of Education, University of Western Ontario, York University, Toronto, Ont., Canada

^d Offord Centre for Child Studies, McMaster University, Hamilton, Ont., Canada

^e Faculty of Social Work, McGill University, Montreal, Que., Canada

ARTICLE INFO

Article history:

Available online 22 January 2009

Keywords:

Child maltreatment
Emotional abuse
Dating violence
Adolescence

ABSTRACT

Objective: For child protective services (CPS) youth who may have experienced more than one form of maltreatment, the unique contribution of emotional abuse may be over-looked when other forms are more salient and more clearly outside of accepted social norms for parenting. This study considers the unique predictive value of childhood emotional abuse for understanding adolescent post-traumatic stress disorder (PTSD) symptomatology and dating violence. Further, PTSD symptomatology is assessed as an explanatory bridge in the emotional abuse–teen dating violence link.

Methods: A random sample of 402 youth from the active caseload of a large urban CPS catchment area participated as part of a larger longitudinal study on adolescent health behaviors. Mid-adolescent youth across types of CPS status were targeted. CPS youth reported on lifetime maltreatment experiences, PTSD symptomatology, and past year dating experiences, using published scales.

Results: Over 85% of CPS youth had begun dating. For dating youth, some level of dating violence was common: over half of females (63–67%) and nearly half of males (44–49%). Taking into account other forms of maltreatment, emotional abuse emerged as a significant predictor of both PTSD symptomatology and dating violence among males and females. PTSD symptomatology was a significant mediator of the male emotional abuse–perpetration and the female emotional/physical abuse–victimization links, indicating a gendered patterning to findings.

Conclusions: These results indicate that: (1) CPS youth are a high priority group for dating violence and PTSD-linked intervention; and (2) CPS youth continue to experience the unique negative impact of childhood emotional abuse in their adolescent adjustment. All CPS children should be evaluated for emotional abuse incurred, and appropriate intervention attention be given as to how it specifically impacts on the child's approach to relating to themselves and to others.

Practice implications: The present study directs practice implications in regards to: (1) the problem of teen dating violence, (2) the salience of childhood emotional abuse; and (3) the

[☆] The MAP Project is funded by the Canadian Institutes of Health Research (CIHR), Institute of Gender and Health (IGH), the Provincial Centre of Excellence in Child and Youth Mental Health at the Children's Hospital of Eastern Ontario, the Public Health Agency of Canada, the Centre of Excellence in Child Welfare, and the Ontario Ministry of Child and Youth Services. Dr. Wekerle is supported by a mid-career award from CIHR IGH and the Ontario Women's Health Council.

* Corresponding author address: Faculty of Education, Althouse Building, The University of Western Ontario, 1137 Western Road, London, Ontario, Canada N6G 1G7.

importance of targeting PTSD symptomatology among CPS youth. A substantial number of CPS youth report early engagement in violent romantic relationships and require support towards attaining the non-coercive relationship experiences of their non-CPS-involved age mates. The topic of dating, healthy dating relationships, and dating violence may need to be part of the regular casework, with a view towards supporting youths' conceptualization of and skill set for healthy, close relationships. Further, this knowledge needs to be translated to foster parents and group home staff. With regard to the impact of childhood emotional abuse, CPS workers need to be sensitive to its potential for *long-term, unique* impact impairing relationship development. Emotional abuse is (a) unique among genders (i.e., for females, it clusters with physical abuse) and (b) uniquely predictive of PTSD symptoms and dating violence. Finally, as is consistent with theory and biopsychosocial evidence, PTSD symptomatology is a key causal candidate for understanding maltreatment-related impairment. Attention to targeting PTSD symptoms may be preventative for dating violence; attention to targeting emotional abuse experiences may be preventative for PTSD symptoms. CPS youth are an important population to involve in research, as their inclusion adds to the evidence-base to achieve evidence-informed practice and policy within child welfare.

© 2009 Elsevier Ltd. All rights reserved.

Introduction

Childhood maltreatment and adolescent dating violence are critical public health concerns, as well as child protection and human rights issues. The main types of maltreatment recognized by child protective services (CPS) include sexual abuse, physical abuse, emotional abuse, and neglect. Given the breaking of social expectation, the personal betrayal, and the feeling of self as being unworthy of loving care, all other forms of maltreatment may be experienced as emotional maltreatment. In law, the emotional abuse incurred is required to be causally linked to demonstrable psychological impairment in some jurisdictions. In practice, emotional abuse may be under-valued as distinctly contributing to functional impairment, as its impact may be considered within the context of other, more salient forms, such as sexual abuse, physical abuse, and physical neglect, where harm standards are concretized in physical indicators. As with spanking, psychological aggression (e.g., threats of physical harm, insults, etc.) is used by many parents (e.g., Clément & Chamberland, 2007). However, emotionally abusive acts are considered to have a high probability of damaging the child's physical or mental health, or her/his physical, mental, spiritual, moral, or social development (WHO, 2006). Emotional abuse captures a wide range of acts, from developmentally inappropriate punishment (e.g., bare-bottom spanking of a pubertal child), bizarre punishment (e.g., forcing a child to eat from the dog bowl), to aggressive and aversive relating (e.g., shaming, swearing at child), to frank terrorism (e.g., exploiting a child's fears as entertainment). As a stand-alone category, the CPS system finds substantiation rates for emotional abuse at low levels, compared to other forms (0.9/1000 children, USDHHS, 2005; 3/1000 children, Canadian Incidence Study of Reported Child Abuse and Neglect, Trocmé, Tourigny, MacLaurin, & Fallon, B., 2003). To assess whether CPS is not giving emotional abuse sufficient consideration, research with CPS cases is important, as multiple forms of maltreatment are often experienced. Further, by applying statistics to multiple observations, research can identify the unique contribution of childhood emotional abuse to later youth functioning.

Maltreated children do their very best in adapting to their environment. But it still may lead to selecting to be hurt, even as it is a self-selected behavioral choice with survival advantage overall (e.g., Yates, 2004). In new environments, new choices become possible. However, the awareness of choice and self-efficacy in new actions need to be present. Historical, reinforcing close relationships lay the foundation for future relationship success. It is not surprising, then, that maltreated children are more likely to experience conflict and violence in their early romantic partnerships in adolescence. This has been found in community samples of youth (e.g., Herrenkohl et al., 2007), justice-involved females (e.g., Kelly, Owen, Peralez-Dieckmann & Martinez, 2007), antisocial males (e.g., Capaldi, Dishion, Stoolmiller, & Yoerger, 2001), child welfare-involved youth (e.g., Cry, McDuff, & Wright, 2006; Wekerle et al., 2001), and youth exiting foster care (e.g., Jonson-Reid, Scott, McMillen, & Edmond, 2007). Among maltreated and at-risk groups, pseudomaturity or an early drive towards adult behaviors (i.e., dating, sex, and alcohol use) is more prevalent. With less experience, maltreated youth are more vulnerable in terms of regulating behavior and recognizing problematic partner behavior. Thus, dating can provide an opportunity for maltreated youth to repeat historical relationship experiences, characterized by violence and dynamic roles as victim and/or victimizer, perhaps as a form of re-enactment (e.g., Wekerle & Wolfe, 1999). Dating violence has an unrecognized urgency: youth as early as grade 7 report engaging in dating violence (i.e., one-third of male and female youth sampled), with emotional or psychological abuse being most common (Sears, Byers, & Price, 2007). The only national epidemiological estimate comes from the Centres for Disease Control and Prevention bi-annual study of US high school youth. Several cycles of the Youth Risk Behavior Surveillance Study (YRBSS) have queried intentional physically assaultive behavior in dating relationships. Over many cycles, the YRBSS indicates (a) no gender differences in this aspect of victimization and (b) average rates at about 10% (YRBSS rates range: 7.1–13.1%, 1999; 6.9–18.1%, 2001; 6.5–14.0%, 2003; 6.0–16.3%, 2005). Similarly, a 10% dating physical victimization rate was found in the National Longitudinal Study of Adolescent Health, reflecting behaviors of pushing or shoving, with no gender differences; about 30% of youth reported psychological violence (swearing, insulting, threatening violence) (Halpern, Oslak,

Young, Martin, & Kupper, 2001). No epidemiological studies of dating violence among CPS-involved youth exist, despite being clearly a high-risk group for relationship dysfunction. Close relationships, with caregivers, and later with romantic partners, may be particularly salient for CPS youth whose system involvement may challenge them relationally with various CPS staffers, residential caretakers, service providers (e.g., vocational, mental health, justice), changing school staff, changing housemates, and changing neighbors.

Dating violence victimization has been found to be related to reports of lower psychological well being (Callahan, Tolman, & Saunders, 2003; Weisz, Tolman, Callahan, Saunders, & Black, 2007). Normatively, teens do not share with responsible adults their experiences of dating violence, being most likely to tell a friend (Weisz et al., 2007). However, maltreated youth also have fewer friendships and friendship experiences from which to expect support. Maltreated children are more likely to be ignored, bullied, and bully in the preschool (Holt, Finkelhor, & Kantor, 2007), school-age (Smith, 2006) and adolescent years (Smith, 2006). The lack of an emotional sharing process among family and friends may further bolster the negative impact of emotional abuse on teen dating.

Females, relative to males, emerge as a higher risk group. Using the YRBSS, Eaton, Davis, Barrios, Brener, and Noonan (2007) found that the odds of victimization from a partner increased with the number of risk factors and number of partners. For example, the presence of two risk factors increased the likelihood of dating violence victimization over 6-fold (among females) and 4-fold (among males). Four risk factors increased the odds over 18-fold (females) and 9-fold (males). For females, victimization was associated with a wider range of risk factors, including alcohol use, early entry into alcohol use, marijuana use, and sexual intercourse with partners. Using the YRBSS data, females reporting dating violence victimization were more likely to report a sexually transmitted disease diagnosis than were females not reporting dating violence (Decker, Silverman, & Raj, 2005).

It has been suggested that females may be more vulnerable to dating violence given (a) their greater representation in childhood sexual abuse as a risk factor, (b) greater experiences of physical injury within dating violence, (c) tendency to date older partners who may be more predatory, (d) an emphasis on romantic relationships in forming an identity, and (e) less of an emphasis on establishing autonomy via personal mastery independent of a relationship context (e.g., Howard & Wang, 2005; Molidor & Tolman, 1998; Wekerle & Avgoustis, 2003). In terms of understanding perpetration, female teens' emotional style (i.e., feeling less guilt, shame about harm to others) was related to their report of using aggression with dating partners, whereas males' dating aggression was related to an externalizing blame style (Feiring, Deblinger, Hoch-Espada, & Haworth, 2002). Thus, dating violence is co-morbid with a range of serious issues. Despite existing prevalence rates, gender-based analyses remain important to consider.

Risk of harm to the victim of dating violence could be the result of aggression that is psychological (name-calling, threats), physical (e.g., kicking, hitting, punching), or sexual (e.g., nonconsensual sex, unwanted touching; Wekerle & Wolfe, 1999). Dating violence is a risk as long as the relationship continues, as well as in terms of future partner selection. For example, in a convenience sample of teens where 40% reported physically abusive dating behavior, Muñoz-Rivas, Graña, O'Leary, and González (2007) found that one third of their participants classified their current relationship as stable or serious. In the context of the first "serious" partnership, lack of experience may work against any teen. This is especially concerning when relationship knowledge is based heavily on abuse and neglect experiences.

Challenges to relationship development: Emotional abuse

Emotional abuse, in particular, may be subtle, but salient in its negative impact on relationship development (e.g., Erickson, Egeland, & Pianta, 1989). In emotional abuse, the victim is made to feel non-valued and their thoughts, feelings, and behavioral choices are not validated or are actively condemned. Emotional abuse creates a climate of fear and uncertainty, limiting confident exploration and personal assertion. The child victim may not feel "free" to show protest behavior or express a range of emotions. The sometimes unspoken, but felt, family edict against seeking, expecting, and receiving affection, support, and assistance may foster a difficult and distressing push-pull approach to intimacy. Maltreatment teaches children that not all relationships are positively reinforcing, and to expect punishment in relationships. In contrast, non-maltreated children experience a greater positive to negative ratio in their close relationships. Thus, with maltreatment, relationships in and of themselves may become an associative context for a host of negative affect (e.g., fear, anger) and a lack of positive affect (e.g., joy). The presence of emotional maltreatment may further heighten the associated affective injury in relationships, where the self is a direct recipient of emotional attack. Attachment theory predicts a coherence in relationship contexts. The maltreated adolescent, with their higher punishment to positive reinforcement template, may initiate prior relationship strategies (i.e., avoidance, freezing/stilling) that may facilitate victimization, with other strategies (i.e., clinging, angry approach, protest) that may facilitate perpetration in the dating context (e.g., Wekerle & Wolfe, 1998).

Social learning theory (SLT; Bandura, 1973, 1977) emphasizes the importance of observational learning in the acquisition of interactional skills. SLT, in the context of childhood maltreatment, suggests that modeling in the maltreatment environment is such that it promotes violence as a means of appropriate communication, rather than the more adaptive verbal and non-hostile forms of communication. Further, aggression as an appropriate interpersonal response (and counter-response) may be directly reinforced by maltreating caregivers, as when the child and parent enter into an escalating aversive pattern or when encouraging siblings to fight to solve their differences or enlisting them as co-abusers (Wekerle & Wolfe, 1999). The relationship context likely a critical discriminatory stimulus in learning theory terms for a maladaptive (maltreatment similar) response set being applied to new situations. The dating environment may serve as maltreatment cue, tapping

attachment features (i.e., separation anxiety, protest at separation) perhaps inappropriately early in the dating relationship, creating greater affective intensity and weight (e.g., Wekerle & Avgoustis, 2003).

Post-traumatic stress disorder (PTSD) symptomatology mediational model

Maltreatment and dating violence may have a shared connection in terms of the psychological well being of the adolescent. To date, both forms of violence have been associated with mental health issues, risky sexual practices, and substance use, such as cigarette, alcohol, and illegal drug use (Ackard & Neumark-Sztainer, 2003; Howard, Wang, & Yan, 2007; Lehrer, Buka, Gortmaker, & Shrier, 2006; Roberts & Klein, 2003; Wekerle & Avgoustis, 2003). Developmental traumatology theory (e.g., DeBellis, 2001; Watts-English, Fortson, Gibler, Hooper, & DeBellis, 2006) argues for a chronic vulnerability towards distress as maltreatment has driven the development of the body's stress response system. Specifically, PTSD symptoms emerge post-trauma and may underlie harm-to-self (dating violence victimization) and/or harm-to-others (dating violence perpetration). PTSD symptoms, such as hyperarousal, avoidance/numbing, and re-experiencing/reliving, may interfere with cognitive functioning (e.g., Anda et al., 2006) that would support self-care, including self-protection. Childhood physical abuse and dating violence victimization was associated with higher self-reported post-traumatic stress symptoms among females (Callahan et al., 2003).

It is emphasized that sub-threshold levels of PTSD symptomatology may be a sufficient mediator of negative outcome, as opposed to meeting disorder criteria (e.g., DeBellis, 2001). One way to operationalize this concept is to consider clinical elevations on some, but not all, PTSD symptom areas. As applied to dating violence, maltreatment may heighten the likelihood of PTSD symptoms via the anticipation of harm or insufficient care; PTSD symptoms, in turn, may make aggression a more likely behavioral decision (e.g., Wekerle et al., 2001). The violence and need for self-protection may then further exacerbate the PTSD response. Dating violence victimization has been linked with worries about the partnership ("relationship anxiety"), when dating violence is repeatedly measured over a shorter time course (Jouriles, McDonald, Garrido, Rosenfield, & Brown, 2005). Mediation testing has supported PTSD as a link between maltreatment and dating violence over a 2-year period in community youth (Wolfe, Wekerle, Scott, Straatman, & Grasley, 2004). The present study moves further along these issues in considering a randomly selected CPS sample, and whether childhood emotional abuse is a unique predictor of adolescent dating violence, beyond the contribution of other forms of maltreatment. In particular, we examined whether or not emotional abuse contributed to PTSD symptoms and dating violence. Consistent with the predictions of developmental traumatology, we expected that a subclinical threshold of PTSD would mediate the impact that emotional abuse may have on teen dating violence.

Methods

Participants

Research participants were drawn via a random numbers table from CPS agency-provided master lists of all active caseloads of youth, aged 14.0–17.0. This age range was selected to maximize involvement in dating. The three participating CPS agencies account for 95% of the child welfare caseloads in this urban center. Lists of randomly selected youth were forwarded to CPS staff members who were acting as liaisons for the Maltreatment and Adolescent Pathways (MAP) project. CPS liaisons and youth caseworkers screened the randomly generated lists of potential participants using the predetermined eligibility criteria described below. This was a necessary step given (a) some short case openings, and (b) limited data provided to the research team on the CPS agency master lists (i.e., only youth date of birth, caseworker, CPS branch, CPS identification number). This screening process eliminated 58% of those randomly selected initially. By the time the master lists were obtained, youth randomly selected, and youth name's checked at the CPS, many cases were closed (61% of ineligibility group). Thus, youth who remained CPS active at the CPS checking state were considered eligible for the MAP, and had their cases open 6 months or more. The agencies refreshed the master lists every 6 months for the research team. Other reasons for ineligibility at the CPS agency checking-stage were: out of age range, developmental delay, absent without leave, and deemed to be in a crisis (i.e., 8% of ineligibles: actively suicidal, in extended treatment or detention). Of eligible youth, the initial recruitment rate was 70%. While the MAP longitudinal study involves data collection every 6 months for 2 years, presently intake or time 1 data is used.

Informed consent

A community-based advisory board provided input on all aspects of the MAP from study inception. Ethical clearance was obtained from CPS agencies and university research ethics boards. CPS lawyers collaborated on the language of consent forms. While there is no research consent age in the MAP jurisdiction, 16 years old is the age of consent for medical treatment, to determine pregnancy or its termination, and independent living. As such, MAP youth participants were able to provide their own consent from age 16 onwards. Legal guardians provided consent for youth under age 16. When guardian status was in flux, such as with temporary wards, the CPS caseworker and parent provided consent. Youth caseworkers introduced the MAP study as an opportunity to participate in research and sought to obtain youth consent for telephone contact with research staff to fully explain the study and obtain final participant consent (standard script used by CPS caseworkers). If not interested

in researcher contact, CPS workers completed a basic non-identifying information form to assess participator versus non-participator differences. Caseworkers completed contact information and category of maltreatment history (substantiated and risk of maltreatment as per legal definitions). Interested youth met in person with MAP research staff to review the project (standard script). Where appropriate, guardians were met with in person or were contacted by phone. The MAP questionnaires were available to guardians upon request. Copies of signed consent provided to youth and/or their guardians. Consent forms were stored separately from all other research information.

The MAP explanatory letter highlighted limits to confidentiality and potential action for verbal disclosures of child abuse/neglect, harm to self, and harm to others, as well as the independence of the MAP with CPS services. The consent forms identify the university ethics contact person and contact information of the MAP principal investigator. The MAP is an anonymous study, linking a youth self-generated identification number (i.e., created in response to a series of static questions, such as the number of letters in your eye color) with a MAP identification number via computer program (e.g., “honest third-party broker” procedure for linking to track longitudinally). Reportable events that youth endorse in the questionnaires cannot be traced back to a specific youth’s identity. As such, verbal disclosures or MAP tester observed concerns would be the basis of any reporting. No new reports of maltreatment were filed. The clinical protocol for reporting child abuse/neglect concerns was to contact the caseworker and indicate the maltreatment event. MAP testers would proceed to contact CPS intake if the maltreatment was new or unknown to the caseworker, which operates on a 24-h basis. (In this jurisdiction, law dictates that the direct recipient of the information must be the reporter). A MAP incident form would be completed within 24 h indicating action taken, responses, any direct quotes noted in real-time, and signatures. The principal investigator and project manager were to be alerted immediately. If emergency clinical support was needed, the MAP tester would escort the youth to the local emergency room. A clinical consultation group (pager, phone, email notification) was also in place to support MAP staff. All testers had cell phones and tester logs were kept up to date on-line. Following every testing, youth received a help sheet with a range of web and local resources for all main variables queried in the MAP, including anonymous help sources, such as 24-h hotlines.

Remuneration

Pilot testing determined the upper limit of testing time and all youth were paid to minimum wage for this time per MAP testing point. Youth were paid \$28.00, given refreshments, and reimbursed for travel. Testing time ranged from 1.5 to 4.0 h, with an average of 2.5 h. Youth were given the option of participating in the study by meeting research staff at a CPS agency, healthcare institution, neutral location such as a library, or their place of residence, wherever privacy could be obtained. Most youth (80%) selected testing at their place of residence.

Sample characteristics

Of 640 eligible adolescents, 618 were contacted to participate in the MAP study, while 22 youth were still waiting to be contacted for involvement in the ongoing study at the time of writing up the current results. Of the 618 youth contacted, 210 declined participation. Participants did not differ significantly from non-participants with respect to youth age, gender or type of maltreatment. However, there is a significant contingency between participation in the current project and youth CPS status ($\chi^2 = 112.02$), with more youth coming from society ward (adjusted residual = 7.1) and Crown ward (adjusted residual = 4.0) categories, and fewer youth coming from community families (adjusted residual = -8.9). Thus, the MAP sample may generalize less well to community families.

At intake, participants in the present study were 408 adolescents (51.8% female) with a mean age of 16.30 years (S.D. = .99). The sample was diverse in terms of youth-identified ethnicity with 28.7% White; 24.5% Black; 3.2% Latin American; and 1.2% Native. Also, 31.6% reported having two or more ethnic identities and 10.8% reported some other ethnic identity. In terms of CPS status, 63% were Crown wards (parental rights legally terminated), 16% were community families, 15.5% were society ward (parental rights sharing agreement), 5.5% were in interim/voluntary/respite care arrangement. Youth were engaged with CPS about 5–6 years (ranged between .25 years and 17 years, with S.D. = 4.20).

Measures

CPS youth completed a package examining their lifetime self-report of maltreatment, mental health, and dating violence, among other measures. The following measures were used presently.

Maltreatment

Experiences of childhood maltreatment were assessed via the Childhood Trauma Questionnaire (CTQ; Bernstein et al., 1994). The CTQ short-form (Bernstein et al., 2003) assesses maltreatment via a standard stem (e.g., “While you were growing up. . .”), rating 28 items on a five-point scale (1 = “never true” to 5 = “very often true”) across five subscales: emotional neglect, physical neglect, sexual abuse, physical abuse, and emotional abuse. Of these three are validity items, and there are five items per subscale. The CTQ does not tap exposure to domestic violence. Two-week test–retest reliability of the CTQ for a MAP youth subsample ($n = 52$) was moderate [physical abuse ($r = .64$), sexual abuse ($r = .52$), emotional abuse ($r = .70$), emotional

neglect ($r = .63$) and physical neglect ($r = .56$), while internal validity was high [physical abuse ($\alpha = .92$), sexual abuse ($\alpha = .88$), emotional abuse ($\alpha = .85$), emotional neglect ($\alpha = .87$), and physical neglect ($\alpha = .68$)]. Youth report and worker's rating of childhood maltreatment are significantly correlated in terms of physical abuse ($r = .48$), sexual abuse ($r = .58$), and physical neglect ($r = .26$), but not for the emotional abuse or the emotional neglect subscales.

As the CTQ factor structure was not based on CPS youth, a principal components extraction with varimax rotation was performed. Presence of outliers, multicollinearity, and factorability of the correlation matrices were examined prior to extraction of principal factors. Preliminary analyses indicated that multicollinearity and singularity were not an issue in this sample. Even with an $\alpha = .001$ cut-off level, no outlier was identified among males or females. The Kaiser's measure of sampling adequacy was .93 for females and .86 for males, higher than the conventional cut-off of .60 (Tabachnick & Fidell, 2001), indicating high factorability. While the factor structure for CPS males matched the reported five-factor structure, a four-factor structure emerged for females, whereby emotional abuse and physical abuse items co-loaded (Wekerle, Leung, Goldstein, Thornton, & Tonmyr, 2008). Hence, factor scores (Bartlett scores) were computed separately for males and females and used as independent variables in the following gender specific analyses.

Self-report maltreatment was assessed also with the Childhood Experiences of Victimization Questionnaire (CEVQ) (Walsh, et al., under review; Wekerle, Miller, Wolfe, & Spindel, 2006). The CEVQ assesses physical abuse, sexual abuse, emotional abuse, witnessing domestic violence, peer-to-peer violence, and exposure to corporal punishment. It does not tap neglect. This self-report measure queries age of maltreatment, frequency, outcome, and perpetrator characteristics. The CEVQ demonstrates good test-retest reliability (kappas ranging from .61 to .91), and validity, as determined by clinician assessment, with estimates falling in a similar range (kappas for physical and sexual abuse were .68 and .74, respectively). Two-week test-retest reliability of the CEVQ among the MAP youth sample ranged from moderate to high [physical abuse ($r = .88$), sexual abuse ($r = .71$), emotional abuse ($r = .51$)], while internal validity also ranged from moderate to high [physical abuse ($\alpha = .82$), sexual abuse ($\alpha = .70$), emotional abuse ($\alpha = .68$)]. The CEVQ is used to provide more detailed descriptive information of maltreatment and can, therefore, reflect maltreatment where caregivers are the perpetrators (or failure to protect), as would be the chief concern in child welfare cases.

Trauma symptomatology

PTSD symptomatology was assessed with the Trauma Symptom Checklist for Children (TSCC) (Briere, 1996). The TSCC is a 54-item self-report measure consisting of six clinical scales (anxiety, depression, anger, PTSD, dissociation, and sexual concerns) and two validity scales (under-response and hyper-response). The measure was normalized on teens and was intended for use in the evaluation of children who have experienced traumatic events. Reliability is high (internal consistency is .82–.89) and good convergent, discriminant, and construct validity have been established. The 2-week test-retest reliability of the MAP subsample on the TSCC was moderate ($r = .50$) and internal validity was very high ($\alpha = .97$). In keeping with developmental traumatology hypotheses on the importance of subclinical symptoms, we used a total score of any clinical elevation among the subscales.

Dating violence

Adolescent dating violence was assessed via the Conflict in Adolescent Dating Relationships Inventory (CADRI; Wolfe et al., 2001). The CADRI is an 80-item self-report measure that assesses overt and covert forms of violence, intimidation, and positive communication both expressed and experienced by youth in their (minimum 2 weeks) dating relationships. Youth rate the frequency of various conflict resolution strategies over the past 12 months on a four-point scale (0 = never, 1 = rarely, 2 = sometimes, 3 = often). A dating relationship is defined as not single dates and of 2 weeks or longer. As used previously (Wekerle et al., 2001), a short form was derived from seven pairs of perpetration–victimization items that had the highest loading on factors generated from an exploratory factor analysis of CADRI items. These items (victimization version) are: (1) I said things just to make my partner angry, (2) I kicked, hit, or punched my partner, (3) I slapped or pulled my partner's hair, (4) I threatened to hurt my partner, (5) I threatened to hit or throw something at my partner, (6) I pushed, shoved, shook, or pinned down my partner, and (7) I threatened my partner in an attempt to have sex. The seven perpetration items are tallied up to form a perpetration score and the seven victimization items are tallied up to for a victimization score. Two-week test-retest reliability of the MAP subsample was moderate ($r = .38$ for perpetration and $r = .44$ for victimization), while internal validity was high ($\alpha = .85$ for perpetration and $\alpha = .91$ for victimization).

Data collection procedure

At each testing, youth were reminded verbally of the right to skip questions, withdraw from the study at any time without consequences and without explanation, and that CPS services were unrelated to their research involvement. Data collectors were undergraduate psychology or science students or graduate psychology students. MAP staff provided training in testing procedures, mandatory reporting, and clinical protocols. Post-training, testers first shadowed an experienced tester prior to independent testing. Testers communicated with supervisors on a weekly basis and kept filed testing notes per occasion indicating if testing was uneventful or noting any issues (e.g., youth has asthma, all adults in home smoke heavily). All MAP research team members signed confidentiality agreements with the CPS agencies. The majority of the data was collected

electronically on laptop computer. Dataset access is restricted by residing in a password protected, restricted on-line site; any hard-copy information is maintained in locked offices within locked cabinets.

Monitoring youth responses to study involvement

Given the sensitive nature of the questions, in conjunction with the nature of the population of participants, several questions were incorporated into the questionnaire package to measure reactivity to the research. Specifically, participants were asked to respond to a set of identical questions at the beginning and end of the questionnaire package on a 0 (not at all) to 6 (a lot) scale. An analysis of differences in responses to pre- and post-questionnaire items indicated that participants were slightly less relaxed [mean 4.4 drop to 4.0; repeated-measures $t(1157) = 3.281, p < .01$] and happy [mean 4.2 drop to 3.7; repeated-measures $t(1158) = 4.29, p < .01$], after completing the MAP intake package. Despite the slight negative impact of the questionnaire package on participant mood, the youth positively regarded the study on six other evaluation questions. Youth indicated that the study was interesting (mean = 4.1, S.D. = 1.2), the questions were clear (mean = 4.7, S.D. = 1.3), the questions were not distressing (mean = 2.4, S.D. = 1.2), and completing the questionnaire was not upsetting (mean = 1.1, S.D. = 1.0). Youth responded favorably (mean = 4.7, S.D. = 1.3) when asked if they still would have agreed to get involved in the study if they had known in advance what completing the questionnaire package would be like. More information on the MAP project is available in Wekerle et al.

Analysis plan

Hierarchical multiple regression analyses were conducted to examine the amount of variance in trauma symptomatology and dating violence that different maltreatment factor scores uniquely accounted for, after controlling for youth demographic variables, as well as the length and nature of CPS-involvement. Emotional abuse factor was a step of entry after other maltreatment factor scores. Multiple regression analyses were also conducted to examine the amount of variance in dating violence perpetration–victimization that trauma symptomatology accounted for, after control variables. The value and the significant test statistics of the overall model R^2 and the final step R^2 change are reported, as well as individual variable's unstandardized beta value, standard error and t -statistics. In cases when trauma symptomatology was the predictor, the number of TSCC subscales that exceeded clinical cut-off was entered instead of the actual values of all subscales because all TSCC subscales are highly correlated with one another, thus artificially underestimates the unique contribution of individual TSCC subscale. The interest, here, was in capturing sub-clinical symptomatology reflected in the clinical significance of some, but not all, trauma symptom groupings.

Results

Descriptive analyses—maltreatment

Based on caseworker category, 90% of MAP youth had multiple forms of substantiated maltreatment or substantial risk (i.e., this jurisdiction has a lower threshold for CPS involvement in serious risk for abuse/neglect). To describe the sample, each maltreatment type will be discussed separately, using both CEVQ and CTQ information. However, as presented below in the factor analysis results on the CTQ, it may be less fruitful to discuss distinct types among CPS youth when there seems to be a gender patterning in overlapping maltreatment types.

Emotional abuse: On the CEVQ, most youth reported that parents had said hurtful things (68% females, 55% males), with most incidents occurring between grades 6 and 8. This is consistent with the CTQ similar item: people in their family called them names (65% females, 56% males).

Physical abuse: On the CEVQ, about a third of youth reported physical abuse (32% of females; 28% of males) in terms of having been kicked, bit or punched by an adult with an intention to hurt. In terms of severe physical abuse, about a quarter of youth reported having been choked, burned or physically attacked with an intention to hurt (28% females; 27% males). Mothers were the majority perpetrator for females, and fathers were the majority perpetrator for males; these events mostly took place between grades 6 and 8. These figures are in-line with the CTQ item on being hit by someone in the family so hard that it left bruises or marks (53% females; 46% males).

Sexual abuse: As expected from epidemiological studies, more females (30%) than males (8%) reported sexual coercion, mostly between grades 1 and 5 and perpetrated by adults other than parents or relatives (61% females, 80% males). This is consistent with the CTQ item on touching or being made to touch in a sexual way (29% female; 14% male), and having someone sexually force themselves on the child was reported by 20% of females and 4% of males.

Neglect: While neglect is more difficult to capture on self-report given the pattern of acts of omission and potential context of poverty, many youth reported non-optimal circumstance (e.g., CTQ: not ever having enough to eat [42% females; 41% males]; ever having to wear dirty clothing [30% females and 31% males]).

Descriptive analyses—trauma symptomatology

For descriptive purposes, the average TSCC total score was 35.95 for females [S.D. = 34.23] and 29.14 for males [S.D. = 25.47]). Based on any elevation of the six major subscales, 26% of females and 23% of males exceeded the clinical

cut-off on one or more of the TSCC subscales. There were no significant gender difference in the total score, but there was a significant difference in the number of scales exceeding the clinical cut-off, with females having more cut-off subscale scores ($t = 2.06, p < .05$). Youth exceeded the clinical cut-off on all scales: Anxiety (12% females, 6% males), Depression (11%; 12%), Anger (10%; 7%); Post-traumatic Stress (12%; 7%), Dissociation (12%; 11%), and Sexual Concern (19%; 11%). There appears to be no clear dominance of clinical symptoms on any one TSCC subscale among CPS females and males, in terms of self-reported symptomatology.

Descriptive analyses—dating violence

Most MAP youth (85%) reported having begun dating (average age of entry is 13.03 for females [S.D. = 2.33] and 12.35 for males [S.D. = 2.47]); regression analyses were based on these dating youth ($N = 347$; 55% female; 45% male). The average age of male dating partners was 15 (S.D. = 5) and the average age of female dating partners was 18 (S.D. = 3). In terms of the perpetration of dating violence, the average score of the 7 CADRI short-form items was 2.67 for females (S.D. = 3.81) and .95 for males (S.D. = 1.46). For victimization, the average score on the 7-item short form was 2.40 (S.D. = 3.89) for females and 1.54 (S.D. = 2.37) for males. Endorsement of any violence was 44% (perpetration), 49% victimization for males; for females, 67% (perpetration) and 63% (victimization) was noted. In terms of specific endorsement patterns, psychological abuse was greater than physical abuse; both were more common than sexual coercion (e.g., 2–5% reported threatening their partner in an attempt to have sex).

PTSD symptom mediation model: Is the effect of childhood emotional maltreatment on involvement in dating violence mediated by trauma symptomatology, and is the mediation effect gender-specific?

The mediating role of PTSD symptomatology was first evaluated according to the regression-based guidelines proposed by Baron and Kenny following the four recommended criteria listed below (1986; see also Judd & Kenny, 1981). Regression analyses were conducted to predict specific outcomes from CTQ emotional abuse factor scores in male youth and from CTQ physical–emotional factor scores in female youth, with the effect of youth demographics, length and status of CPS involvement, and factor scores of other types of maltreatment first partialled out. The formal test of mediation follows with the use of the Goodman test (MacKinnon, Lockwood, Hoffman, West & Sheets, 2002).

Criterion 1: CTQ factor score predicts the number of TSCC subscales that exceeded clinical cut-off

Even after controlling for all covariates and other maltreatment factor scores, male CTQ emotional abuse factors score and female physical–emotional abuse factor score both significantly predicted the number of TSCC subscales that exceeded clinical cut-off (respectively, $B = .31, S.E. = .10, p < .01$, and $B = .37, S.E. = .11, p < .01$; see Table 1). Although, the unique contribution of the emotional abuse factor was relatively small in size (~6% of additional variance in both male and female models), it uniquely predicted youth distress levels.

Table 1

Predicting the number of TSCC subscales that exceeded clinical cut-off from CTQ Emotional Abuse Factor Scores in Female and Male (Final Model).

	Coefficients (female/male)		
	B_{Final}	S.E.	t
Step 1. Covariates			
Age	0.09/0.06	0.16/0.12	0.58/0.48
Ethnic status (white or not)	0.17/–0.15	0.39/0.29	0.45/–0.51
Ethnic status (multiracial or not)	0.10/–0.07	0.33/0.29	0.02/–0.24
Family SES	0.07/0.06	0.15/0.11	0.48/0.51
CPS status (crown or not)	0.14/0.64	0.38/0.30	0.38/2.12
Length of involvement with CPS	–0.05/–0.02	0.04/0.03	–1.25/–0.70
Step 2. Other maltreatment			
Emotional–physical neglect factor	0.17/–0.11	0.12/0.10	1.47/–1.04
Sexual abuse factor	0.58/0.15	0.11/0.09	5.35**/1.62
Physical neglect factor	0.30/0.21	0.11/0.10	2.65**/2.16*
Physical abuse factor (male only)	N/A/0.18	N/A/0.11	N/A/1.64
Step 3. Emotional abuse			
Emotional abuse factor (emotional–physical abuse factor for female)	0.37/0.31	0.11/0.10	3.33**/3.12**

Note: Dependent variable for female and male model: the number of TSCC subscales that exceeded clinical cut-off; overall female model $R^2 = .29$, female model final step R^2 change = .06; overall male model $R^2 = .17$, male model final step R^2 change = .06.

* $p < .05$.

** $p < .01$.

Table 2

Predicting male CADRI perpetration score from number of TSCC subscales that exceeded clinical cut-off (Final Model).

	Coefficients		
	B_{Final}	S.E.	t
Step 1. Covariates			
Age	0.20	0.17	1.17
Ethnic status (white or not)	0.18	0.38	0.49
Ethnic status (multiracial or not)	-0.68	0.40	-1.68
Family SES	-0.14	0.16	-0.88
CPS status (crown or not)	-0.78	0.42	-1.88
Length of involvement with CPS	-0.09	0.04	-2.15
Step 2: Trauma mediation			
Number of TSCC subscales that exceeded clinical cut-off	0.28	0.11	2.68**

Note: Dependent variable: male CADRI perpetration score $p < .05$; overall model $R^2 = .26$, final step R^2 change = .08.

** Dependent variable: male CADRI perpetration score $p < .01$.

Criterion 2: The number of TSCC subscales that exceed clinical cut-off predicts CADRI—short-form perpetration/victimization scores

For males, analyses indicated that, after controlling for youth demographics, the number of TSCC subscales that exceeded clinical cut-off significantly predicted CADRI—short-form perpetration scores ($B = .28$, $S.E. = .11$, $p < .01$; see Table 2) and victimization scores ($B = .43$, $S.E. = .18$, $p < .05$; see Table 3). For females, however, the number of TSCC subscales that exceeded clinical cut-off significantly predicted only CADRI victimization scores ($B = .64$, $S.E. = .19$, $p < .01$; see Table 3). Male distress was related to their overall dating violence; female distress was predictive of their dating victimization.

Criterion 3: CTQ factor score predicts CADRI perpetration/victimization scores

The male CTQ emotional abuse factor score significantly predicted CADRI perpetration scores and CADRI victimization scores in different regression models ($B = .35$, $S.E. = .16$, $p < .05$ and $B = 1.02$, $S.E. = .28$, $p < .01$, respectively; see Tables 4 and 5). In females, the CTQ physical–emotional abuse factor score significantly predicted CADRI victimization scores ($B = 1.09$, $S.E. = .36$, $p < .01$; see Table 5). For males, childhood emotional abuse was significantly linked to overall dating violence; for females, dating victimization only was explained.

Criterion 4: Relations between CTQ factor scores and CADRI perpetration–victimization scores are not independent of the number of TSCC subscales that exceed clinical cut-off

When the number of TSCC subscales that exceeded clinical cut-off was entered into the above regression models, where the effect of CTQ factor scores on CADRI perpetration–victimization scores was examined, only the relation between (a) CTQ emotion factor score and CADRI perpetration scores in male youth and (b) CTQ physical–emotion factor score and CADRI victimization scores in female youth dropped to non-significance, suggesting mediation by PTSD symptomatology. The number of TSCC subscales that exceeded clinical cut-off remained significant in both models ($B = .22$, $S.E. = .11$, $p < .05$ and $B = .73$, $S.E. = .23$, $p < .01$; see Table 6).

Table 3

Predicting female and male CADRI victimization score from number of TSCC subscales that exceeded clinical cut-off (Final Model).

	Coefficients (female/male)		
	B_{Final}	S.E.	t
Step 1. Covariates			
Age	0.22/0.09	0.39/0.30	0.57/0.29
Ethnic status (white or not)	1.16/0.95	0.90/0.66	1.29/1.43
Ethnic status (multiracial or not)	0.53/-1.32	0.80/0.69	0.67/-1.92
Family SES	-0.06/-0.44	0.32/0.28	-0.17/-1.58
CPS status (crown or not)	0.11/-0.68	0.91/0.73	0.12/-0.93
Length of involvement with CPS	-0.17/-0.08	0.10/0.07	-1.69/-1.03
Step 2. Trauma mediation			
Number of TSCC subscales that exceeded clinical cut-off	0.64/0.43	0.19/0.18	3.41**/2.39*

Overall female model $R^2 = .18$, female model final step R^2 change = .06; overall male model $R^2 = .20$, male model final step R^2 change = .06.

* Dependent variable for female and male model: CADRI victimization score $p < .05$.

** Dependent variable for female and male model: CADRI victimization score $p < .01$.

Table 4

Predicting male CADRI perpetration score from CTQ emotional abuse factor scores (Final Model).

	Coefficients		
	B_{Final}	S.E.	t
Step 1. Covariates			
Age	0.30	0.18	1.65
Ethnic status (white or not)	0.10	0.43	0.23
Ethnic status (multiracial or not)	-0.71	0.43	-1.64
Family SES	-0.12	0.18	-0.66
CPS status (crown or not)	-0.62	0.44	-1.40
Length of involvement with CPS	-0.08	0.05	-1.81
Step 2. Other maltreatment			
Male emotional-physical neglect factor	0.17	0.17	0.99
Male sexual abuse factor	-0.10	0.16	-0.65
Male physical abuse factor	0.29	0.19	1.52
Male physical neglect factor	0.08	0.18	0.42
Step 3. Emotional abuse			
Male emotional abuse factor	0.35	0.16	2.25*

Dependent variable: male CADRI perpetration score $p < .01$. Overall model $R^2 = .31$, final step R^2 change = .06.* Dependent variable: male CADRI perpetration score $p < .05$.

Assessment of the proposed mediation model

Since all criteria for statistical mediation were met, the Goodman Test was conducted on (1) the male mediation model (dating perpetration score), as well as (2) the female mediation model (dating victimization score). The Goodman tests for both were significant ($t = 2.03$, $p = .04$ and $t = 2.43$, $p = .01$, respectively), providing support for a PTSD mediation model for CPS-involved male perpetration of dating violence and CPS-involved female dating violence victimization.

Discussion

One clear finding to emerge is that CPS-involved youth are a high-risk group for dating violence. With an average age at intake in the 15–16-year-old range, most females and nearly half of males are reporting some degree of dating violence, and have been dating for 3 to 4 years already. Physically assaultive behavior was experienced by 13–21% of CPS youth, which is greater than would be expected from average national YRBSS estimates (at about 10%). Studies of help-seeking behavior suggest that the majority of victims and perpetrators do not seek help; when help is sought, it is not typically from professionals (Ashley & Foshee, 2005). Further, avoidance responses were common when victims of severe dating violence victimization sought support from a friend (Weisz et al., 2007). Although, caseworkers typically cover the use of protection with sex, dating relationships – healthy and unhealthy dating relationships, violent conflict resolution strategies in dating, and sexual coercion in dating – are not typically part of the regular “routine” checks with youth. As with questions of child abuse and neglect, purposeful disclosures initiated by the youth are in the minority; clinicians are advised to directly ask the

Table 5

Predicting female and male CADRI victimization score from CTQ emotional abuse factor scores (Final Model).

	Coefficients (female/male)		
	B_{final}	S.E.	t
Step 1. Covariates			
Age	0.55/0.46	0.48/0.28	1.14/1.61
Ethnic status (white or not)	1.85/0.66	1.11/0.65	1.67/1.02
Ethnic status (multiracial or not)	0.32/-1.09	0.99/0.65	0.32/-1.68
Family SES	-0.65/-0.34	0.43/0.27	-1.53/-1.28
CPS status (crown or not)	2.49/0.08	1.09/0.67	2.28*/0.124
Length of involvement with CPS	0.02/-0.05	0.12/0.07	0.2/-0.7
Step 2. Other maltreatment			
Emotional-physical neglect factor	-0.27/0.14	0.44/0.27	-0.61/0.51
Sexual abuse factor	0.04/-0.14	0.44/0.25	0.08/-0.56
Physical neglect factor	0.99/0.48	0.41/0.28	2.44*/1.72
Physical abuse factor (male only)	N/A/0.19	N/A/0.25	N/A/0.77
Step 3. Emotional abuse			
Emotional abuse factor (emotional-physical abuse factor for female)	1.09/1.02	0.36/0.28	3.03**/3.68**

Overall female model $R^2 = .22$, female model final step R^2 change = .07; overall male model $R^2 = .32$, male model final step R^2 change = .13.* Dependent variable for female and male model: CADRI victimization score $p < .05$.** Dependent variable for female and male model: CADRI victimization score $p < .01$.

Table 6

Predicting female and male CADRI perpetration score from number of TSCC subscales that exceeded clinical cut-off, controlling for emotional abuse and other maltreatment factor scores (Final Model testing mediation).

	Coefficients (female/male)		
	B_{Final}	S.E.	t
Step 1. Covariates			
Age	0.18/0.25	0.46/0.18	0.38/1.36
Ethnic status (white or not)	1.15/0.15	1.10/0.42	1.06/0.36
Ethnic status (multiracial or not)	0.51/–0.59	0.93/0.43	0.55/–1.37
Family SES	–0.20/–0.18	0.39/0.18	–0.51/–0.99
CPS status (crown or not)	0.71/–0.76	1.08/0.45	0.66/–1.71
Length of involvement with CPS	–0.11/–0.07	0.12/0.05	–0.94/–1.55
Step 2. Other maltreatment			
Emotional–physical neglect factor	–0.46/0.08	0.36/0.15	–1.27/0.55
Sexual abuse factor	–0.38/–0.08	0.34/0.15	–1.13/–0.57
Physical neglect factor	–0.20/0.03	0.32/0.15	–0.62/0.23
Physical abuse factor (male only)	N/A/0.43	N/A/0.16	N/A/2.62*
Step 3. Emotional abuse			
Male emotional abuse factor (emotional–physical abuse factor for female)	0.59/0.27	0.33/0.17	1.79/1.61
Step 4. Trauma mediation			
Number of TSCC subscales that exceeded clinical cut-off	0.73/0.22	0.23/0.11	3.16**/2.00*

Overall female model $R^2 = .31$, female model final step R^2 change = .09; overall male model $R^2 = .35$, male model final step R^2 change = .04.

* Dependent variable for female model: CADRI victimization score; dependent variable for male model: CADRI perpetration score $p < .05$.

** Dependent variable for female model: CADRI victimization score; dependent variable for male model: CADRI perpetration score $p < .01$.

dating violence questions within a broader assessment context of relationships. The current CADRI short-form assessment of dating violence may be a useful screening tool to use with CPS youth, as it covers psychological, physical and sexual partner violence. Relationships concepts and personal rights may be an important component of casework with younger youth (ages 12–13 years), and older youth (ages 14–17) may need support on specific skill development (i.e., assertive communication, conflict diffusion, sexual behaviors negotiation, emergency safety). Various effective programming available is available for CPS services or other health services to utilize (e.g., SafeDates, Foshee 1996, 1998, 2000); Youth Relationships Project, (Wolfe, Wekerle, Gough, & Reitzel-Jaffe, 1996; Wolfe et al., 2001; for other promising interventions, see Hickman, Jaycox, & Aronoff, 2004). Sensitivity to the presence of cross-relationship violence (e.g., Ozer, Tschann, Pasch, & Flores, 2004) may require models that would include the peer domain.

How teen-dating violence is conceptualized in child protection is a critical issue. Most CPS agencies claim jurisdiction over youth up to age 16. With youth for whom parental rights have been terminated, the age can extend further, to age 18–21. Importantly, mid-adolescents often fall between child and adult service systems. The protection from teen-dating violence would seem to be as much a protection concern as safety from psychological, physical and sexual harm from caregivers. Youth being victimized by a dating partner are youth in need of protection. This may be deemed of higher priority if the youth is under age 16 or 14. Further, CPS teens may have underage siblings or children of their own who are witnessing their dating violence, thereby perpetuating cycles of emotional maltreatment.

The unique impact of emotional abuse

This study provides evidence for the unique impact of childhood emotional abuse on adolescent impairment, in the areas of elevated PTSD symptomatology and dating violence. While the unique contribution was modest, it was significant and exceeded child and CPS characteristics. In this regard, the meaning of the co-loading of physical and emotional abuse items among females, and the distinctiveness of these among males, bears replication and presently invites only speculation. For females, developmentally, there may be a physical component to emotions, as with a visceral body-based awareness of feelings. Also, it could mean that females detect the emotional abuse that often accompanies episodes of physical abuse more readily than do males. Perhaps females in childhood are more attuned to words accompanying action. These findings, though, do suggest that there is something particular to emotional abuse, suggesting the need for it to be given greater discrete attention in any CPS assessment of maltreatment or maltreatment risk. The caregivers' use of emotionally abusive behaviors may need to be rethought in terms of parenting interventions and child maltreatment prevention programming. For the CPS youth, the non-physical assault on the child's sense of self, style and confidence in relating may need on-going attention from caseworkers, foster parents, alternate care providers, and educators, particularly as the child victim matures and moves into age-stage salient developmental tasks, such as dating. The ability to forge and nurture a close relationship is fundamental to any reasonably expectable level of quality of life across the lifespan. In school, in work, in partnerships, in families, there is a both a mind and skill set to healthful relating that may need to be explicitly developed and coached in CPS youth over time.

PTSD as a mediator of the relationship between emotional maltreatment and teen-dating violence

Results supported the mediating role of traumatic stress symptoms in the observed relation between emotional maltreatment and dating violence. This is consistent with prior evaluations of PTSD mediation, albeit the unique relationship between emotional abuse and dating violence was not teased out, and not with a randomly selected sample from CPS (e.g., Wekerle et al., 2001). Dating may be a particularly challenging developmental task for maltreated youth, given what may be experienced as competing desires for attachment, sex, safety, and autonomy. The specifics of how PTSD symptomatology may functionally bridge childhood maltreatment and adolescent dating remains to be illuminated. It may be that it interferes with behavioral decision-making from a social information-processing perspective, proposed for both child maltreatment (e.g., Bugental & Shennum (2002); Bugental & Happaney (2004) see also Price & Landsverk, 1998) and adult intimate partner violence (e.g., Holzworth-Munroe, 1992). For example, in an experimental study of conscious cognitions, cognitive distortions were noted in the areas of arbitrary inferences (i.e., accusation or conclusions without supporting evidence) and demandingness (i.e., tendency to make rigid, absolute demands) during an anger induction (hyperarousal condition) for college males who reported at least one dating violence perpetration with their current partner, as compared to nonviolent males (Eckhardt & Jamison, 2002). The “think aloud” experimental design allows for a reflective component to aggressive behavior that may have seemed reflexive and, as such, may be fruitfully incorporated in dating violence prevention programming. Further, targeting PTSD symptoms may be effective for violence prevention, with Trauma-Focused Cognitive Behavior Therapy and Dialectical Behavior Therapy for Adolescents as promising interventions to consider alongside lifestyle stress coping (e.g., mindfulness, meditation, jogging, prayer) (for a discussion, see Wekerle et al., 2006).

Limitations

The current study sample may have over-represented more severe or chronic CPS cases in the greater preponderance of Crown wards (e.g., wards of the state). Community families were less likely to participate, as were male youth, potentially limiting generalizability of results. Further, all variables were based on youth self-report, which raises concerns regarding biases.

Understanding gender differences remains challenging, therefore. In interviews about the “first” and “worst” violence perpetration, girls reported their acts of violence as related to male provocation (i.e., self-defense, taking a “fighting back” stand, or “fed up”). For males, aggression was identified dominantly as a means to prevent female escalation of aggression (Foshee, Bauman, Linder, Rice, & Wilcher, 2007). With aggression escalation at issue, relationship and conflict resolution intervention would seem to be indicated. With all variables based on self-report, there are concerns that significant findings are, in part, due to common method variance. Multiple informants, multiple methods of data collection on the same issue, and multiple assessments are remedies for future work. With private knowledge factors, such as maltreatment and dating violence, self-report will remain important to collect given the concern with an under-estimation of violence (i.e., Jouriles et al., 2005).

Future research needs to consider competing mediation models to direct service targets among CPS youth, including which groups of youth for whom the mediation model holds best (i.e., moderated mediation). For example, self-esteem mediated the link between parenting and teen-dating violence, for low SES youth (Pflieger & Vazsonyi, 2006). Witnessing adult partner violence is a critical variable for understanding child adaptation (e.g., Yates, Dodds, Sroufe, & Egeland, 2003). Several aspects of this study warrant replication, including the factor structure of maltreatment and gender-specific findings. This study does represent a clear message regarding the salience of emotional maltreatment to teen-dating relationships. Further research and practice attention needs to be afforded to this less visible form of injury.

Acknowledgements

The authors thank the MAP research staff, the MAP advisory board, the participating child welfare agencies and the youth participants. We thank Maria Chen for her valuable assistance. We greatly appreciate the involvement of Bruce Leslie, Deborah Goodman, and Brenda Moody.

References

- Ackard, D. M., & Neumark-Sztainer, D. (2003). Multiple sexual victimizations among adolescent boys and girls: Prevalence and associations with eating behaviors and psychological health. *Journal of Child Sexual Abuse*, 12(1), 17–37.
- Anda, R. F., Felitti, V. J., Bremner, J. D., Walker, J. D., Whitfield, C., Perry, B. D., Dube, S. R., & Giles, W. H. (2006). The enduring effects of abuse and related adverse experiences in childhood: A convergence of evidence from neurobiology and epidemiology. *European Archives of Psychiatry and Clinical Neuroscience*, 256(3), 174–186.
- Ashley, O. S., & Foshee, V. A. (2005). Adolescent help seeking for dating violence: Prevalence, sociodemographic, correlates, and sources of help. *Journal of Adolescent Health*, 36(1), 25–31.
- Bandura, A. (1973). *Aggression A social learning analysis*. Oxford, England: Prentice-Hall.
- Bandura, A. (1977). *Social learning theory*. Oxford, England: Prentice-Hall.
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51(6), 1173–1182.
- Bernstein, D., Fink, L., Handelsman, L., Foote, J., Lovejoy, M., Wenzel, K., Sapareto, E., & Ruggiero, J. (1994). Initial reliability and validity of a new retrospective measure of child abuse and neglect. *American Journal of Psychiatry*, 151(8), 1132–1136.

- Bernstein, D. P., Stein, J. A., Newcomb, M. D., Walker, E., Pogge, D., Ahluvalia, T., Stokes, J., Handelsman, L., Medrano, M., Desmond, D., & Zule, W. (2003). Development and validation of a brief screening version of the Childhood Trauma Questionnaire. *Child Abuse & Neglect*, 27(2), 169–190.
- Briere, J. (1996). *Professional manual for the trauma symptom checklist for children (TSCC)*. Odessa, FL: Psychological Assessment Resources.
- Bugental, D. B., & Happany, K. (2004). Predicting infant maltreatment in low-income families: The interactive effects of maternal attributions and child status at birth. *Developmental Psychology*, 40(2), 234–243.
- Bugental, D. B., & Shennun, W. (2002). Gender, power, and violence in the family. *Child Maltreatment*, 7(1), 56–64.
- Callahan, M. R., Tolman, R. M., & Saunders, D. G. (2003). Adolescent dating violence victimization and psychological well being. *Journal of Adolescent Research*, 18(6), 664–681.
- Capaldi, D. M., Dishion, T. J., Stoolmiller, M., & Yoerger, K. (2001). Aggression toward female partners by at-risk young men: The contribution of male adolescent friendships. *Developmental Psychology*, 37(1), 61–73.
- Clément, M.-È., & Chamberland, C. (2007). Physical violence and psychological aggression towards children: Five-year trends in practices and attitudes from two population surveys. *Child Neglect & Abuse*, 31(9), 1001–1011.
- Cry, M., McDuff, P., & Wright, J. (2006). Prevalence and predictors of dating violence among adolescent female victims of child sexual abuse. *Journal of Interpersonal Violence*, 21(8), 1000–1017.
- DeBellis, M. D. (2001). Developmental traumatology: The psychobiological development of maltreated children and its implications for research, treatment, and policy. *Development and Psychopathology*, 13(3), 539–564.
- Decker, M. R., Silverman, J. G., & Raj, A. (2005). Dating violence and sexually transmitted disease/HIV testing and diagnosis among adolescent females. *Pediatrics*, 116(2), 272–276.
- Eaton, D. K., Davis, K. S., Barrios, L., Brener, N. D., & Noonan, R. K. (2007). Associations of dating violence victimization with lifetime participation, co-occurrence, and early initiation of risk behaviors among U.S. high school students. *Journal of Interpersonal Violence*, 22(5), 585–602.
- Eckhardt, C., & Jamison, T. R. (2002). Articulated thoughts of male dating violence perpetrators during anger arousal. *Cognitive Therapy and Research*, 26(3), 289–308.
- Erickson, M. F., Egeland, B., & Pianta, R. (1989). The effects of maltreatment on the development of young children. In D. Cicchetti & V. Carlson (Eds.), *Child maltreatment: Theory and research on the causes and consequences of child abuse and neglect* (pp. 647–684). New York: Cambridge University Press.
- Feiring, C., Deblinger, E., Hoch-Espada, A., & Haworth, T. (2002). Romantic relationship aggression and attitudes in high school students: The role of gender, grade, and attachment and emotional styles. *Journal of Youth and Adolescence*, 31(5), 373–385.
- Foshee, V. A., Linder, G. F., Bauman, K. E., Langwick, S. A., Arriaga, X. B., Heath, J. L., McMahon, P. M., & Bangdiwala, S. (1996). The safe dates project: Theoretical basis, evaluation design, and selected baseline findings. *American Journal of Preventive Medicine*, 12(Suppl. 5), 39–47.
- Foshee, V., Bauman, K. E., Arriaga, X. B., Helms, R. W., Koch, G. G., & Linder, G. F. (1998). An evaluation of safe dates, an adolescent dating violence prevention program. *American Journal of Public Health*, 88(1), 45–50.
- Foshee, V. A., Bauman, K. E., Greene, W. F., Koch, G. G., Linder, G. F., & MacDaugall, J. E. (2000). The safe dates program: 1-year follow-up results. *American Journal of Public Health*, 90(10), 1619–1622.
- Foshee, V. A., Bauman, K. E., Linder, F., Rice, J., & Wilcher, R. (2007). Typologies of adolescent dating violence: Identifying typologies of adolescent dating violence perpetration. *Journal of Interpersonal Violence*, 22(5), 498–519.
- Halpern, C. T., Oslak, S. G., Young, M. L., Martin, S. L., & Kupper, L. L. (2001). Partner violence among adolescents in opposite-sex romantic relationships: Findings from the National Longitudinal Study of Adolescent Health. *American Journal of Public Health*, 91(10), 1679–1685.
- Herrenkohl, T., McMorris, B. J., Catalano, R. F., Abbott, R. D., Hemphill, S. A., & Toumbourou, J. W. (2007). Risk factors for violence and relational aggression in adolescence. *Journal of Interpersonal Violence*, 22(4), 386–405.
- Hickman, L. J., Jaycox, L. H., & Aronoff, J. (2004). Dating violence among adolescents: Prevalence, gender distribution, and prevention program effectiveness. *Trauma, Violence, & Abuse*, 5(2), 123–142.
- Holt, M. K., Finkelhor, D., & Kantor, G. K. (2007). Hidden forms of victimization in elementary students involved in bullying. *School Psychology Review*, 36(3), 345–360.
- Holzworth-Munroe, A. (1992). Social skill deficits in maritally violent men: Interpreting the data using a social information processing model. *Clinical Psychology Review*, 12(6), 605–617.
- Howard, D. E., & Wang, M. Q. (2005). Psychosocial correlates of U.S. adolescents who report a history of forced sexual intercourse. *Journal of Adolescent Health*, 36(5), 372–379.
- Howard, D. E., Wang, M. Q., & Yan, F. (2007). Psychological factors associated with reports of physical dating violence among US adolescent females. *Adolescence*, 42(166), 311–324.
- Jonson-Reid, M., Scott, L. D., Jr., McMillen, J. C., & Edmond, T. (2007). Dating violence among emancipating foster youth. *Children and Youth Services Review*, 29(5), 557–571.
- Jouriles, E. N., McDonald, R., Garrido, E., Rosenfield, D., & Brown, A. S. (2005). Assessing aggression in adolescent romantic relationship: Can we do it better? *Psychological Assessment*, 17(4), 469–475.
- Judd, C. M., & Kenny, D. A. (1981). Process analysis: Estimating mediation in treat evaluations. *Evaluation Review*, 5(5), 602–619.
- Kelly, P. J., Owen, S. V., Peralez-Dieckmann, E., & Martinez, E. (2007). Health interventions with girls in the juvenile justice system. *Women's Health Issues*, 17(4), 227–236.
- Lehrer, J. A., Buka, S., Gortmaker, S., & Shrier, L. A. (2006). Depressive symptomatology as a predictor of exposure to intimate partner violence among US female adolescents and young adults. *Archives of Pediatrics & Adolescent Medicine*, 160, 270–276.
- MacKinnon, D. P., Lockwood, C. M., Hoffman, J. M., West, S. G., & Sheets, V. (2002). A comparison of methods to test mediation and other intervening variable effects. *Psychological Methods*, 7(1), 83–104.
- Molidor, C., & Tolman, R. M. (1998). Gender and contextual factors in adolescent dating violence. *Violence Against Women*, 4(2), 180–194.
- Muñoz-Rivas, M. J., Graña, J. L., O'Leary, K. D., & González, M. P. (2007). Aggression in adolescent dating relationships: Prevalence justification, and health consequences. *Journal of Adolescent Health*, 40(4), 298–304.
- Ozer, E. J., Tschann, J. M., Pasch, L. A., & Flores, E. (2004). Violence perpetration across peer and partner relationships: Co-occurrence and longitudinal patterns among adolescents. *Journal of Adolescent Health*, 34(1), 64–71.
- Pfliederer, J. C., & Vazsonyi, A. T. (2006). Parenting processes and dating violence: The mediating role of self-esteem in low- and high-SES adolescents. *Journal of Adolescence*, 29(4), 495–512.
- Price, J. M., & Landsverk, J. (1998). Social information-processing patterns as predictors of social adaptation and behavior problems among maltreated children in foster care. *Child Abuse & Neglect*, 22(9), 845–858.
- Roberts, T. A., & Klein, J. (2003). Intimate partner abuse and high-risk behavior in adolescents. *Archives of Pediatrics & Adolescent Medicine*, 157, 375–380.
- Sears, H. A., Byers, E. S., & Price, E. L. (2007). The co-occurrence of adolescent boys' and girls' use of psychologically, physically, and sexually abusive behaviours in their dating relationships. *Journal of Adolescence*, 30(3), 487–504.
- Smith, D. (2006). The relationship between emotional childhood maltreatment and bullying (Doctoral dissertation, New York University, 2006). *Dissertation abstracts international section A: Humanities and social sciences*, 67(2-A), 724.
- Tabachnick, B. G., & Fidell, L. S. (2001). *Using multivariate statistics*. Boston, MA: Allyn & Bacon/Pearson Education.
- Trocme, N. M., Tourigny, M., MacLaurin, B., & Fallon, B. (2003). Major findings from the Canadian incidence study of reported child abuse and neglect. *Child Abuse & Neglect*, 27(12), 1427–1439.
- U.S. Department of Health and Human Services (ACYF). (2005). *Child maltreatment 2003: Reports from the states to the National Centre on Child Abuse and Neglect*. Washington, DC: Government Printing Office.
- Watts-English, T., Fortson, B. L., Gibler, N., Hooper, S. R., & DeBellis, M. D. (2006). The psychobiology of maltreatment in childhood. *Journal of Social Issues*, 62(4), 717–736.

- Weisz, A. N., Tolman, R. M., Callahan, M. R., Saunders, D. G., & Black, B. M. (2007). Informal helpers' responses when adolescents tell them about dating violence or romantic relationship problems. *Journal of Adolescence*, 30(5), 853–868.
- Wekerle, C., & Avgoustis, E. (2003). Child maltreatment, adolescent dating, and adolescent dating violence. In P. Florsheim (Ed.), *Adolescent romantic relations and sexual behavior: Theory, research and practical implications* (pp. 213–241). Hillsdale, NJ: Erlbaum.
- Wekerle, C., & Wolfe, D. A. (1998). The role of child maltreatment and attachment style in adolescent relationship violence. *Development and Psychopathology*, 10, 571–586.
- Wekerle, C., & Wolfe, D. A. (1999). Dating violence in mid-adolescence: Theory, significance, and emerging prevention initiatives. *Clinical Psychology Review*, 19, 435–456.
- Wekerle, C., Wolfe, D. A., Hawkins, D. L., Pittman, A.-L., Glickman, A., & Lovald, B. E. (2001). The value and contribution of youth self-reported maltreatment history to adolescent dating violence: Testing a trauma mediational model. *Development and Psychopathology*, 13, 847–871.
- Wekerle, C., Miller, A. L., Wolfe, D. A., & Spindel, C. (2006). *Childhood maltreatment: Advances in psychotherapy: Evidence-based practice*. Cambridge, MA: Hogrefe and Huber Publishers.
- Wekerle, C., Leung, E., Goldstein, A., Thornton, T., & Tonmy, L. (2008). *Substance use among adolescents in the child welfare versus adolescents in the general population*. Ottawa, Canada: Health Canada Report.
- World Health Organization. (2006). *Preventing child maltreatment: A guide to taking action and generating evidence*. Retrieved October 7, 2007, from http://whqlibdoc.who.int/publications/2006/9241594365_eng.pdf.
- Wolfe, D. A., Wekerle, C., Gough, R., & Reitzel-Jaffe, D. (1996). *The youth relationship manual: A group approach with adolescents for the prevention of women abuse and the promotion of healthy relationships*. Thousand Oaks, CA: Sage Publications Inc.
- Wolfe, D. A., Scott, K., Reitzel-Jeffe, D., Wekerle, C., Grasley, C., & Straatman, A.-E. (2001). Development and validation of the conflict in adolescent dating relationships inventory. *Psychological Assessment*, 13(2), 277–293.
- Wolfe, D. A., Wekerle, C., Scott, K., Straatman, A.-L., & Grasley, C. (2004). Predicting abuse in adolescent dating relationships over 1 year: The role of child maltreatment and trauma. *Journal of Abnormal Child Psychology*, 113, 406–415.
- Yates, T. M. (2004). The developmental psychopathology of self-injurious behavior: Compensatory regulation in post-traumatic adaptation. *Clinical Psychology Review*, 24, 35–74.
- Yates, T. M., Dodds, M. F., Sroufe, L. A., & Egeland, B. (2003). Exposure to partner violence and child behavior problems: A prospective study controlling for child physical abuse and neglect, child cognitive ability, socioeconomic status, and life stress. *Development and Psychopathology*, 15(1), 199–218.