



The linkages among childhood maltreatment, adolescent mental health, and self-compassion in child welfare adolescents[☆]

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ABSTRACT

Objectives: Childhood maltreatment is a robust risk factor for poor physical and mental health. Child welfare youths represent a high-risk group, given the greater likelihood of severe or multiple types of maltreatment. This study examined the relationship between childhood maltreatment and self-compassion – a concept of positive acceptance of self. While not applied previously to a child welfare sample, self-compassion may be of value in understanding impairment among maltreatment victims. This may be most pertinent in adolescence and young adulthood, when self-identity is a focal developmental process.

Methods: The present sample was drawn from the Maltreatment and Adolescent Pathways (MAP) Longitudinal Study, which followed randomly selected adolescents receiving child protection services across two years within an urban catchment area. Child maltreatment was assessed at baseline using the Childhood Trauma Questionnaire (Bernstein et al., 1994, 2003). Mental health, substance and alcohol use problems, suicide attempt, and self-compassion were assessed at the two-year follow-up point. There were 117 youths, aged 16–20 years (45.3% males) who completed the self-compassion scale (Neff, 2003). Bivariate correlations were computed between adolescent self-compassion and each form of self-reported maltreatment (physical abuse, sexual abuse, emotional abuse, emotional neglect, and physical neglect). Finally, hierarchical, stepwise regression was used to examine unique contributions of child maltreatment subtypes in predicting adolescent self-compassion, as well as maltreatment-related impairment.

Results: Higher childhood emotional abuse, emotional neglect, and physical abuse were associated with lower self-compassion. Controlling for age and gender, emotional abuse was significantly associated with reduced self-compassion, even when the effects of emotional neglect and physical abuse were taken into account. Youths with low self-compassion

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were more likely to have psychological distress, problem alcohol use, and report a serious suicide attempt, as compared with those with high self-compassion. A number of maltreatment-related areas of impairment, identified by screening instruments, were significantly associated with lower self-compassion.

Conclusion: Self-compassion may be a fruitful aspect of research to pursue in an effort to better understand the impact of childhood emotional abuse on adolescent functioning, particularly considering the under-researched group of those receiving child protective services.

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Introduction

In child maltreatment, the child is wronged, for no reason, and left to deal with the aftermath of a harsh relationship encounter(s). Maltreatment, which tends to cluster with other adverse events (e.g., parental dysfunction, intimate partner violence, loss), is a robust risk factor for victim mental health and substance abuse problems across the lifespan (Gilbert et al., 2009; McLaughlin et al., 2010). One study found that adverse childhood events accounted for 31–65% population attributable risk for mental health disorders (mood, anxiety, behavioral, substance abuse) in ages 4–12 years. In adolescence (13–19 years), it was between 24% and about 41%. Childhood adversity accounted for 17–41% of mental illness in young adulthood (Kessler et al., 2010). This suggests a higher mental health and substance use problem risk for maltreatment victims. While maltreatment levels are generally under-recognized, and there is overlap among subtypes (e.g., physical, sexual, and emotional abuse and neglect), emotional maltreatment is likely the most under-considered form in prevalence estimation and impact.

Hart and Brassard (1987) argued that psychological or emotional maltreatment is the core threat to victim's mental health. Although definition of child emotional maltreatment varies by context, it reflects caregiver's failure to provide a developmentally appropriate and supportive environment, including such acts as denigration (emotional abuse) and lack of affection (emotional neglect) (e.g., Garbarino, Guttman, & Seeley, 1986; Glaser, 2002; Hart, Brassard, Binggeli, & Gavidson, 2002; Trickett, Mennen, Kim, & Sang, 2009; WHO/ISPCAN, 2006). Exposure to intimate partner violence is not routinely recognized as emotional maltreatment, although it can be considered an indicator (Gilbert et al., 2009).

Emotional maltreatment is difficult to document by the child protective services (CPS), as it may not be identifiable as an event, or have clearly identifiable causal links to the victim's impaired functioning (Trocmé et al., 2005). Legal and medical definitions to guide CPS thresholds for intervention vary across states and regions (Hamerman, Pope, & Czaja, 2002). Although emotional maltreatment (not including exposure to domestic violence) represents a minority category among substantiated CPS cases, about one third to half of reported case had a sign of emotional harm (e.g., National Incidence Study of Child Abuse and Neglect (NIS-4), 2010; Public Health Agency of Canada, 2010; Trickett et al., 2009). Researchers have approached operationalizing emotional maltreatment in a variety of ways (e.g., Cicchetti, Rogosch, Sturge-Apple, & Toth, 2010; Egeland, 2009; Hart & Brassard, 1987). For example, self-report measures, such as the Childhood Trauma Questionnaire (CTQ), a well-validated and common tool, taps both emotional abuse and emotional neglect, in addition to three other subtypes of child maltreatment (Bernstein et al., 2003). However, in the child welfare and clinical domains, the unique contribution of emotional maltreatment has been under-attended relative to other forms of maltreatment (for example, see special issue in this journal, Yates & Wekerle, 2009).

Given that the phenomenology of maltreatment involves an attack on or disrespect of the child's personhood, the victim's self-identity processes seems germane to consider (Glaser, 2002; Hart & Brassard, 1987). Maltreated adolescents may engage in self-harming (Jacobson & Gould, 2007; Laye-Gindhu & Schonert-Reichl, 2005) or aggressive behaviors (Gordis, Feres, Oleszki, Rabkin, & Trickett, 2009) in an attempt to regulate (i.e., decrease or distract from) the experience of negative emotions, which may arise from maltreatment memories or environmental cues. Emotional maltreatment, in particular, has been linked to suicidal behaviors (Cicchetti et al., 2010) and relationship violence (e.g., Berzenski & Yates, 2010; Wekerle, Leung, Wall, et al., 2009; Zurbriggen, Gobin, & Freyd, 2010). However, not all maltreated children and youth develop dysfunctional features of the self-system.

To understand factors that differentiate youth who develop an overall healthy self-system from those who do not, aspects that may be protective need to be considered. Resilience is the process in which capacity of the individual to achieve positive and healthful outcomes despite the adversity (e.g., Cicchetti & Curtis, 2006; Ungar, 2007, 2008; Wekerle, Waechter, & Chung, in press). One candidate construct for resilience is self-compassion (Gilbert & Procter, 2006; Neff & McGehee, 2010), as it may represent an affective-cognitive stance that is facilitative of an adaptive response to personal adversity. Self-compassion is an orientation towards seeing the world, and the self, realistically, but kindly, and in a contextualized manner supportive of greater well-being (Neff, 2003; Neff & McGehee, 2010; Vettese, Dyer, Li, & Wekerle, 2011). It reflects a warm, accepting (not over-personalized) approach that is based on kindness, humaneness ("common humanity"), and deliberate and reflective cognitive approach that emphasizes the present, here-and-now experience ("mindfulness").

Youths involved with child protective services (CPS)

Maltreated youths receiving CPS services are likely to have primary caregivers as perpetrators, experience multiple forms of maltreatment, multiple caregivers and residential placements, as well as being faced with decreasing levels of child welfare support as they age out of care, complicating adolescent outcomes (e.g., Courtney et al., 2010). For example, frequent caregiver and school changes have been linked with higher trauma symptom and externalizing behavior scores (Raviv, Taussig, Culhane, & Garrido, 2010). Substance problems are noted in studies on maltreated adolescents (e.g., Shin, Edwards, Heeren, & Amodeo, 2009; for a review, see Tonmyr, Thornton, Draca, & Wekerle, 2010), adolescents in foster care (Vaughn, Ollie, McMillen, Scott, & Munson, 2007), and adolescents in CPS across various care categories (Wekerle, Leung, Goldstein, Thornton, & Tonmyr, 2009). The National Survey of Child and Adolescent Well-Being, a large-scale US study of children involved in the child welfare system, found that nearly 50% of school-age children exhibited clinical levels of mental health symptoms (Burns et al., 2004). Maltreatment links with mid-childhood suicidal thinking (Cicchetti et al., 2010) and adolescent suicidality (Enns et al., 2006; Rhodes et al., 2011). One population study has placed the risk of suicide at four to six times higher with child welfare-involved youths, as compared to the general youth population (Vinnerljung, Sundell, Lofholm, & Humlesjo, 2006). CPS-involved adolescents seem an important sub-population to consider the impact of emotional maltreatment, self-development (including self-compassion), and mental health and substance use outcomes.

The purpose of this study was to examine the applicability of the construct of self-compassion, as one element in resilient functioning, in CPS-involved adolescents. It is hypothesized that self-compassion would be inversely associated with maltreatment and, in particular, with emotional maltreatment. Self-compassion would be inversely related to health risk behaviors, such that maltreated youths with higher self-compassion scores would report fewer indices of maltreatment-related impairment (e.g., mood, anxiety, suicidality, and substance abuse; Gilbert et al., 2009). To our knowledge, this is the first study of a child welfare population to consider the utility of self-compassion and its association with mental health and substance use problems.

Methods

Participants

Participants in this study were drawn from the Maltreatment and Adolescent Pathways (MAP) Longitudinal Study (Goldstein et al., 2011; Stewart, McGonnell, Wekerle, & Adlaf, 2011; Wekerle, Leung, Goldstein, et al., 2009; Wekerle, Leung, Wall, et al., 2009) that collected data in 2002–2010. Initial data collection was followed by testing every 6 months to a two-year follow-up. Adolescents, aged 13–19, who were receiving services from an urban CPS catchment area (three large agencies participated in Ontario, Canada) were eligible for the study if the youth was: (1) the direct recipient of CPS services; (2) in either foster care, grouped care, independent living, or living with family-of-origin; and (3) initially between 14.0 and 17.0 years of age. Ineligibility included: (1) significant intellectual or learning problems, or disabilities, as deemed by the caseworker; (2) lack of English language fluency; (3) severe psychological health issues, such as actively suicidal or psychotic episode or being in an inpatient treatment program. Essentially, youths needed to be available for a two-hour assessment process over time. There were substantial challenges in the recruitment, retention, and testing to this group that tends towards mobility, disorganization, and case closings. The study sample was randomly selected from the active case lists provided to the research team containing minimal information via random numbers tables. The initial recruitment rate was about 70% of all eligible youth. Details of the MAP study methods can be found elsewhere (Wekerle, Leung, & Goldstein, et al., 2009; Wekerle, Leung, Wall, et al., 2009).

A total of 561 adolescents, most were aged between 14 and 17 years¹ (mean = 15.8, *SD* = 1.1, 47.1% males), were initially tested in the MAP study. A wide variety of ethnic groups completed the MAP survey with the highest representation for White (30.5%) followed by dual- or multiple-ethnicity (28.0%) and Black (26.1%). Most youths (about 61%) were in out-of-home care and had their parents' rights terminated (known as Crown Wards in Ontario). Most youths, therefore, had received long-term services (mean = 5.7 years; *SD* = 4.2 years). Thus, the MAP study captures youths who remained on the active caseload most typically 6 months and longer.

The present sub-sample is generally consistent with the larger MAP sample. At this two-year follow-up, youth (*N* = 117) were aged 16–20 years (mean = 18.1 years, *SD* = 1.0 years). The proportions of White, Black, and dual or multiple ethnicity were 27.0%, 31.3%, and 27.8%, respectively. Most youths (74.4%) were Crown Wards.² Most youth lived independently or with friends (40.7%), with remaining youths in a range of living situations (22.2% lived with foster families; 6.5% in group homes; 18.5% with at least one biological parent; 12.0% other). Youths' average length in CPS was 9.4 years (*SD* = 4.6 years). Significant group differences between the current MAP subsample and those lost to two-year follow-up (*N* = 444) were found in a few aspects. Current sample tended to be have Crown Wards status and had higher self-reported childhood physical abuse scores at initial; no significant differences in age, gender, and ethnicity distribution.

¹ About 4% of youth who were outside of age range of 14–17 years were included in the initial data.

² In Ontario, Crown Wardship is terminated between 16 and 18 and, if youths are in school or in a job, they received on-going CPS services with an Extended Care and Maintenance Contract, being eligible until age 21.

Informed consent

Ethics approval was obtained from all participating CPS agencies, as well as university-based research ethics boards. All MAP research team members and researchers who accessed the data signed confidentiality agreements with participating CPS agencies. Youth participants aged 16 and over provided informed consent; any youths under 16 years had their legal guardians as consenters. Youths and agencies were compensated monetarily.

Measurement

Child maltreatment was assessed at initial MAP testing, and all other variables were measured at two-year MAP testing point. The Ontario Student Drug Use and Health Survey (OSDUHS; <http://www.camh.net/research/osdus.html>) questionnaire was given to MAP youths at one- and two-year assessments. The OSDUHS is an Ontario-wide population survey to assess epidemiological trends in students in grades 7–12 for drug use, mental health, physical activity, and other health risk behaviors. The OSDUHS items used in this study were from the 2005 cycle: mental health screening measures; substance abuse screening measures; and a serious suicide attempt question. Self-compassion was not included in the OSDUHS. The OSDUHS provides a broader context to understand MAP results, since it confirms the population-level appropriate cut-off levels for screening instruments, as directed by the literature on these common screening instruments or selected items. Also, its database provides a comparison point by locating a larger sample of adolescents that can be tailored to age range and geographical region, in the present study, the same urban catchment area. Finally, because the OSDUHS includes a question on lifetime involvement with CPS, comparison can be made to system-involved versus non-system involved adolescents.

Childhood Trauma Questionnaire (CTQ, Bernstein et al., 1994, 2003). The CTQ is a 28-item self-report measurement of physical abuse, sexual abuse, emotional abuse, physical neglect, and emotional neglect that has shown good criterion validity and measurement invariance (Bernstein et al., 2003). There is no specified timeframe, with all items have the stem “When I was growing up”. Examples of questions are: for physical abuse, “I got hit so hard by someone in my family that I had to see a doctor or go to the hospital”, for sexual abuse, “Someone threatened to hurt me or tell lies about me unless I did something sexual with them”, for emotional abuse, “People in my family said hurtful or insulting things to me”, for physical neglect, “I had to wear dirty clothes”, and for emotional neglect, “There was someone in my family who helped me feel that I was important or special (reverse for score). In CTQ, emotional abuse measure was based on a definition: “verbal assaults on a child’s sense of worth or well-being or any humiliating or demeaning behavior directed towards a child by an adult or older person”. Emotional neglect was measured based on a definition: “the failure of caretakers to meet children’s basic emotional and psychological needs, including love, belonging, nurturance, and support” (Bernstein et al., 2003). For each statement, respondents are offered a 5-point scale from (1) never true to (5) very often true. The Cronbach’s alpha figures for each of the 5 CTQ abuse subscales in this study sample – ranged from .69 (physical neglect) to .94 (sexual abuse) – were comparable with the work of Bernstein et al. (2003).

Self-Compassion Scale (SCS; Neff, 2003). The SCS was introduced first at the two-year follow-up, and there is no MAP baseline SCS level to consider changes across time. The SCS is a 26-item self-report measure that assesses three SCS components: (1) self-kindness (e.g., “I try to be loving towards myself when I’m feeling emotional pain”) versus self-judgment (e.g., “I’m disapproving and judgmental about my own flaws and inadequacies”), (2) common humanity (e.g., “When things are going badly for me, I see the difficulties as part of life that everyone goes through”) versus isolation (e.g., “When I fail at something that’s important to me, I tend to feel alone in my failure”), and (3) mindfulness (e.g., “When something upsets me I try to keep my emotions in balance”) versus getting carried out the present with high emotionality (e.g., “When I’m feeling down I tend to obsess and fixate on everything that’s wrong”). There is no set timeframe. Respondents indicate how often they behave in the stated manner from (1) almost never to (5) almost always. For a present study, an average mean score (ranging from 1 to 5) across the three components was used for assessing the Pearson correlation and regression analysis, and a dichotomous variable for low and high total average self-compassion scores, split by the median value, was used for testing group difference in child maltreatment scores, mental health and substance use problems.

The set of 26 SCS items yielded good internal consistency ($\alpha = .92$, Neff, 2003; $\alpha = .89$ in this study sample). The item-total correlations in the study sample fell short of the .20 critical value for two questions.³ In earlier work, self-compassion was distinguished from self-esteem or global self-concept (Neff, 2003). To test this within our child welfare sample, we used the Rosenberg Self-esteem Scale (Rosenberg, 1965) short form⁴ that was used in the OSDUHS questionnaire. This MAP sample showed a reasonable internal consistency of Rosenberg Self-esteem Scale short form ($\alpha = .68$). Self-esteem and self-compassion were significantly and moderately associated ($r = .54$, $p < .001$), indicating conceptual distinction. Thus, we proceeded to use the SCS as an index of directing “loving kindness” (compassion) towards oneself in experiencing adversity.

³ These are “When I’m going through a very hard time, I give myself the caring and tenderness I need (item total correlation = .01)”, and “I’m tolerant of my own flaws and inadequacies (.10)”.

⁴ The 6 items were: “Sometimes I feel that I can’t do anything right”, “I feel good about myself”, “I feel I don’t have much to be proud of”, “I feel that I am a person of worth”, “Sometimes I think I am no good at all”, and “I am able to do most things as well as other people”. The items were answered on a five point scale: (0) Almost always true, (1) Often true, (2) Sometimes true, (3) Seldom true, (4) Never true. A reverse score was used for the positive statement (item 2, 4, 6), with higher score indicating the higher self-esteem. Total score was a sum of six scores, ranging from 0 to 24.

Center for Epidemiologic Studies Depression Scale (CES-D; Radloff, 1977)/OSDUHS. CES-D is a 20-item self-report screening scale for general population to measure depression symptoms during the prior week. It has shown the concurrent validity by clinical and self-report criteria, as well as evidence of construct validity (Radloff, 1977). The MAP study used the short-form employed by the OSDUHS, which is the four item (the factor named “Depressed Affect”) from the Radloff (1977) ($\alpha = .89$ in this study sample), and the OSDUHS scoring convention for at-risk for depression. These are: “During the last 7 days, how often have you . . . ‘felt sad’, ‘felt lonely’, ‘felt depressed’, and ‘felt like crying’?” Respondents were asked to choose one of the follows: (1) never or rarely, (2) sometimes, (3) often, (4) always. A total score was computed after recoding items to a dichotomous scale as follows: original item responses of (1) and (2) were set to zero, and responses of (3) and (4) were set to a value of one to indicate a high risk for depression. If all four items indicated high risk for depression (total score = 4 or responses to all four items were either “often” or “always”), we coded the case as positive for depression; all other cases (total score zero to 3) were coded negative for depression.

The General Health Questionnaire (GHQ; Goldberg & Blackwell, 1970; Golderberg & Williams, 1988)/OSDUHS. The GHQ is a self-report screening instrument used to detect current psychological distress ($\alpha = .88$ in this study sample) with adequate criterion validity against psychiatrist’s assessment (Goldberg & Blackwell, 1970). The 12-item GHQ was used to screen for three problems: depressed mood, anxiety, and problems with social functioning (Mann et al., 2011). Examples are: “Over the last few weeks, have you been able to concentrate on whatever you’re doing?” and “. . . have you felt that you are playing a useful part in things?” A score of 1 or 0 was allocated for each item depending on whether the respondent had been experiencing the symptom or behavior described. For example, respondents would score 1 if they had recently felt under constant strain “more than usual” or “much more than usual” and a 0 if the frequencies were “not at all” or “no more than usual”. A sum score was computed after recoding items to a dichotomous scale to give a total GHQ12 composite score for each respondent, ranging from zero to 12. The composite scores were recoded into a binary variable; scores 0–3 as no sign of distress (=0) and scores 4 or greater as sign of distress (=1).

The Alcohol Use Disorders Identification Test (AUDIT; Babor, Higgins-Biddle, Saunders, & Monteiro, 2001)/OSDUHS. The AUDIT was developed by the World Health Organization as a brief assessment for excessive drinking. It has shown a valid measure across gender, age, and culture (Allen, Litten, Fertig, & Babor, 1997; Saunders, Aasland, Amundsen, & Grant, 1993; Saunders, Aasland, Babor, de la Fuente, & Grant, 1993). The 10-item self-report version of the AUDIT was used for this study ($\alpha = .88$ in study sample). For the first 8 items, a respondent provides one of five response options. An example is: “How often do you have a drink containing alcohol?” with response options, (0) Never, (1) monthly or less, (2) 2–4 times a month, (3) 2–3 times a week, (4) 4 or more times a week. For the last two items (e.g., “Have you or someone else been injured as a result of your drinking?”), a respondent chooses an answer from three options: (0) no, (2) yes, but not in the last year, or (4) yes, during the last year. The total score is the sum of answer code that ranged from 0 to 40. Total scores of 8 or higher are recoded to indicate presence of alcohol problems (=1), and scores below 8 are recoded as absence of problems (=0) (Babor et al., 2001).

CRAFFT (Knight, Sherritt, Shrier, Harris, & Chang, 2002)/OSDUHS. The CRAFFT is a 6-item self-report screen test for substance abuse for adolescents aged 14 and up ($\alpha = .85$ in this study sample). It has been shown to validly detect substance problem use, abuse, and dependence among adolescent clinical patients (Knight et al., 2002). The name, CRAFFT, is an acronym for key components of use context: Car, Relax, Alone, Forget, Friends, and Trouble. The first two questions are: “Have you ever ridden in a CAR driven by someone (including yourself) who was “high” or had been using alcohol or drugs?” and “Do you ever use alcohol or drugs to RELAX, feel better about yourself, or fit in?”. Response to “yes” is scored 1 and 0 for “no”. We computed the total score of CRAFFT with a sum of 6 binary scores, ranging from 0 to 6. For the analysis, a total score of 2 or higher was classified as presence of drug use problems (=1), and score less than 2 were classified as absences of problems (=0) (Knight et al., 2002).

Suicide attempt/OSDUHS. We assessed whether youth have experienced serious suicidal attempt in the past year, with the item: “In the last 12 months, did you actually attempt suicide?” A response to “yes” is coded 1 and 0 for “no”. For the analysis, we used cases with valid entry for the analysis.

Analysis

Missing data were dealt with in the following approaches. For child maltreatment and SCS questionnaires, if more than 25% of items were not answered, we excluded the cases (7 youth were excluded based on this rule). Of those who responded at least 75% of items, for missing value, we substituted the individual mean of subscales with missing item in the same subscale of abuse. For the remaining study measures, cases with all or some missing items were less than 25% of study sample; thus these cases were included for analyses with missing value imputed using the following method. For a binary indicator of disorder that was determined by a set of questionnaire items, cases with any missing item were coded conservatively as absence for disorder (=0), unless there was enough information to determine the disorder (e.g., total score exceeded a screening cut-off). A number of cases that were coded absence for a disorder according to this method were 16 cases for CES-D, 27 cases for GHQ, 19 cases for AUDIT, and 18 cases for CRAFFT. For a question item for suicide attempt, 7 cases had missing response; these were coded absence for suicide attempt.

To examine the binary associations among key variables, we used Pearson correlation on data from the 117 youths (Table 1). We were interested in the clinical levels of expected maltreatment-related impairment. To explore this aspect with regard to the level of self-compassion, we examined the group differences of high and low SCS in each of five

Table 1
Bivariate table on study variables ($N = 117$).

	1	2	3	4	5	6	7	8	9	10	11	12
1. Physical abuse												
2. Sexual abuse	.41*											
3. Emotional abuse	.78*	.21*										
4. Physical neglect	.44*	.10	.50*									
5. Emotional neglect	.50*	.10	.70*	.63*								
6. Self-compassion score	-.30*	-.11	-.35*	-.20*	-.33*							
7. GHQ	.03	.10	.10	.19	.24*	-.33*						
8. CES-D	.21*	.21*	.22*	.29*	.27*	-.37*	.57*					
9. CRAFFT	-.02	.01	-.01	.20	.13	-.11	.10	.09				
10. AUDIT	.16	.04	.20*	.28*	.30*	-.21*	.15	.24*	.58*			
11. Suicide attempt	.16	.11	.25*	.18	.24*	-.30*	.16	.25*	.23*	.23*		
12. Years in CPS	-.12	.02	-.07	.14	-.09	.26*	-.20	-.02	-.09	.04	.00	

AUDIT: screening for alcohol use problems; CES-D: Center for Epidemiologic Survey for Depression; CPS: child protection services; CRAFFT: screening for substance use problems; GHQ: General Health Questionnaire. All variables are continuous scores, except for suicide attempt (1 = Yes/0 = No).

* $p < .05$.

maltreatment-related impairments: (1) anxiety/depression (CES-D), (2) psychological distress (GHQ), (3) alcohol use problem (AUDIT), (4) substance use problems (CRAFFT), and (5) suicide attempt (Table 2). Suicide attempt was a dichotomy (0 = no versus 1 = yes for attempted suicide); and for each of the other 4 components, a value zero was used to indicate a score falling below the clinical cut-off, whereas a value of 1 was used to reflect a score that met the clinical cut-off. Given that a screen does not confirm the problem or diagnosis, we identified adolescents that were at-risk for expected maltreatment-related impairment by creating a “maltreatment-related impairment risk score” that reflected the maximal number of positive screens for individuals. We also compared the MAP youth on these outcomes with the Ontario’s age-matched community sample (not weighted estimates) (Table 2).

Finally, we used a hierarchical, stepwise regression, taking into account the background information, to examine the relative contribution of identified child maltreatment subtypes in predicting SCS at the two-year point. This analysis enabled us to examine whether there are specific child maltreatment subtypes that are significantly associated with SCS. Based on the findings of this analysis, we used a hierarchical, stepwise regression to examine the relative contribution of maltreatment subtypes and SCS to predict the maltreatment-related impairment risk score. IBM-SPSS 17 was used for regression analyses, and SAS v.9.2 was used for all other analyses.

Results

To recap, this study involved two data points: (1) initial testing, using a self-report questionnaire for child maltreatment, and (2) the two-year follow-up testing, where a subset of MAP youths completed the self-compassion questionnaire, as

Table 2
Chi-square differences on exceeding clinical cut-off of maltreatment-related impairment between high versus low self-compassion scorers.

Maltreatment-related impairment screening measures	(a) MAP youth High self-compassion score % ($N = 62$)	(b) MAP youth Low self-compassion score % ($N = 55$)	(c) MAP youth total % ($N = 117$)	χ^2 for group difference between (a) and (b)	(d) 2009 OSDUHS Full Sample % ($N = 2,425$) ^a	(e) 2009 OSDUHS age-matched % ($N = 1,724$) ^b	(f) 2009 OSDUHS age-matched and lifetime involvement with CPS % ($N = 199$) ^c	χ^2 for group difference between (c) and (f) ^e
CES-D	1.6	9.1	5.1	3.35*	5.4	5.0	10.7	2.30
GHQ	11.3	38.2	23.9	11.60***	31.0 ^d	38.2 ^d	46.9 ^d	11.67***
AUDIT	8.1	21.8	14.5	4.44**	20.8	35.3	45.1	22.57***
CRAFFT	21.0	29.1	24.8	1.03	15.5	24.4	38.0	4.09**
Suicide attempt	4.8	16.4	10.3	4.21**	2.8	3.3	9.0	0.11

Note. AUDIT: screening for alcohol use problems; CES-D: Center for Epidemiologic Survey for Depression; CRAFFT: screening for substance use problems; GHQ: General Health Questionnaire. Self-compassion scores were split by a median score: high (≥ 3.076923) and low (< 3.076923). All screening measures were administered concurrently with self-compassion.

^a Figures were based on a random half sample of 4,851 youth (ages 11–20) surveyed in the 2009 OSDUHS.

^b 2009 OSDUHS ages 16–20: mean age = 16.9 ($SD = 0.78$); 51.1% male.

^c 2009 OSDUHS CPS involvement ages 16–20: mean age = 16.9 ($SD = 0.73$); 50.2% male.

^d GHQ in OSDUHS: a cut-off score of 3 or more as positive (MAP: score 4 or more).

^e Chi-square values were based on a 4-cell comparison among the proportion of adolescents who did and did not meet the threshold for a specific screening measure.

* $p < .08$.

** $p < .05$.

*** $p < .01$.

Table 3

Hierarchical, stepwise regression to predict self-compassion score and maltreatment-related impairment risk score.

Predictor	Regression 1 – Predicting self-compassion score					Regression 2 – Predicting maltreatment-related impairment risk score				
	ΔR^2	Adjusted R^2	<i>df</i> 1	<i>df</i> 2	<i>p</i>	ΔR^2	Adjusted R^2	<i>df</i> 1	<i>df</i> 2	<i>p</i>
Step 1										
Age, male	.103	.087	2	114	.002	.010	-.007	2	114	.548
Step 2										
CTQ Emotion abuse subscale	.057	.137	1	113	.007	.022	.007	1	113	.108
Step 3										
CTQ Physical abuse subscale	.000	.130	1	112	.862	.003	.002	1	112	.543
Step 4										
CTQ Emotion neglect subscale	.000	.122	1	111	.895	.026	.020	1	111	.082
Step 5										
Self-compassion score	N/A	N/A				.107	.123	1	110	.000
Total R^2	.160					.169				

Note. CTQ: Childhood Trauma Questionnaire; Maltreatment-related impairment risk score: exceeding screening cut-off on CES-D, GHQ, AUDIT, CRAFFT, and positive endorsement on “serious suicide attempt” item. N/A: not applicable.

well as the OSDUHS questionnaire ($N = 117$, 38.6% males). First, we assessed the bivariate associations between measured variables (Table 1). Self-compassion score was associated with male gender ($r = .23$, $p < .012$). The correlations between self-compassion scores and emotional abuse ($r = -.35$), emotional neglect ($r = -.33$), and physical abuse ($r = -.30$) were moderate; correlation with other two types were small.

Second, we examined the relationship between SCS and the five maltreatment-related impairments. As seen in Table 2a–c, there was a trend that youth with low SCS were more likely to have anxiety/depression, psychological distress, alcohol use problems, and report a serious suicide attempt, as compared to the youth with higher SCS. No relationship was found between substance use problems and SCS. For the MAP sample, we created a maltreatment-related impairment risk score by a total number of exceeding screening cut-off on five maltreatment-related outcomes; 54.2% of youth did not have any positive outcome, 25.4% had one, 10.2% and two, and 10.2% had three or more problems. As there was only one individual with 4 positive outcomes and another individual with 5 positive outcomes, we combined youth with 3 or more positive outcomes into one group; this led to a maltreatment-related impairment risk score of 0–3 for the analyses.

Table 2 also presents the corresponding figures for five outcomes from the Ontario’s community sample (OSDUHS; Paglia-Boak et al., 2010) for comparison with the MAP youth (Table 2d–f). These were the overall OSDUHS youth ages between 11 and 20 years (grade 7–12) (d), the OSDUHS sample with ages matched with the current MAP youth (e), and the OSDUHS age-matched sample who endorsed having had contact with the CPS (information about the length and the type of CPS care were not available) (f). Child maltreatment was not measured in the OSDUHS. Among OSDUHS samples, a subgroup of youth with CPS-involvement (Table 2f) had greater proportions of screen positive for all five outcomes compared with the overall aged-matched OSDUHS youth (Table 2e). In the comparison between the MAP youth and the age-matched and CPS-involved OSDUHS sample (Table 2c vs. f), the OSDUHS CPS-involvement group were significantly more likely reporting scores indicative of clinical levels of distress and substance and alcohol use problems, as compared to the MAP sample that dominantly comprised of youths who have years of CPS service, out-of-home care, and little to no contact with their biological parents. A proportion of suicide attempt and depression were similar between two groups.

Finally, we conducted two hierarchical, stepwise regression analyses with MAP sample: (1) a regression to predict the mean total self-compassion score from child maltreatment (Table 3 – Regression 1), and (2) a regression to predict a maltreatment-related impairment risk score from child maltreatment and self-compassion score (Table 3 – Regression 2) – both accounting for youth’s age and gender. For the first regression, we examined the relative contribution of three child maltreatment subtypes identified in above analyses, in predicting self-compassion. We used a hierarchical, stepwise regression with the following four steps: in the first step, we entered the gender, as 1 = male and 0 = female, and youth’s age at two-year point; in the second, third, and fourth steps, we entered emotional abuse, physical abuse, and emotional neglect for all combinations of orders. Here, we present the model where emotional abuse was entered first as this was the only maltreatment subtype that remained significant, when the other two were considered.

To examine the relative contribution of each child maltreatment variable added to the model, we obtained the change in R^2 . Results showed that only emotional abuse, when it was entered first, remained significant in predicting the self-compassion score when compared with alternative entry orders of independent variables. In this model, the unique contribution of physical abuse and emotional neglect were minimal (Table 3 – Regression 1). As shown in Table 3, gender and age accounted for about 10.3%, and childhood emotional abuse accounted for 5.7% of the total variance of adolescent self-compassion scores. At the final step, the childhood emotional abuse score was moderately associated with reduced self-compassion scores ($\beta = -.23$, $p = .074$). All models tested accounted for 16% of the total variance of self-compassion scores.

For the second analysis to examine the relative predictive power of child maltreatment and self-compassion on a maltreatment-related impairment risk score from 0 to 3, we used the same four steps of a hierarchical, stepwise

regression presented in Table 3 – Regression 1 and added the fifth step to enter self-compassion score (Table 3 – Regression 2). As seen in the Table, the contributions of gender and age, emotional abuse, physical abuse, and emotional neglect were non-significant, whereas self-compassion accounted for 10.7% of a maltreatment-related impairment risk score. Reduced self-compassion scores were associated with an increased positive maltreatment-related impairment screening ($\beta = -.36$, $p < .001$). This model accounted for 16.9% of the total variance of a maltreatment-related impairment risk score.

Discussion

Adolescence is a stage for the development, consolidation, reformation of the autonomous self; there is an interest in relationships, exploring relating to self and others in new, developmentally-appropriate ways (Wekerle & Wolfe, 1999). Although self-compassion has been considered within a treatment context for adult problems of self-dysfunction (Neff, 2003; Neff, Rude, & Kirkpatrick, 2007), adolescence may bring with it new opportunities in self-development towards greater self-compassion (Neff & McGehee, 2010). Thus, the development of self-compassion may be well-timed in adolescence, and especially well-suited to recovery from the emotional maltreatment experience. To date, self-compassion has not been considered in a child welfare sample. We examined the relationships between child maltreatment and self-compassion in child welfare-involved adolescents. Among the five subtypes of childhood maltreatment, we found that higher childhood physical abuse, emotional abuse, and emotional neglect were significantly associated with the lower adolescent self-compassion. Physical abuse perpetrated by parental figures is likely emotionally painful to children and youth; in prior work on this sample it co-loaded with emotional maltreatment (Wekerle, Leung, Wall, et al., 2009). Emotional abuse and emotional neglect may be considered indicators of a broader category of emotional maltreatment; however, each may have different influence on youth's non-optimal development of self-compassion. We found that emotional abuse in childhood was uniquely linked with lower self-compassion in late adolescence. In a recent cross-sectional, convenience study of high school students, authors found that self-report of greater maternal support and family functioning were associated with self-compassion (Neff & McGehee, 2010). The present findings add further support to the aversive parenting-low self-compassion linkage.

Our regression analysis indicated the significant association between reduced self-compassion and maltreatment-related impairment screening score, uniquely accounting for about 10% of the variance, controlled for background information and three maltreatment types (physical, emotional abuse, and emotional neglect). There were significantly greater proportions of positive screen among low self-compassion youths for anxiety symptoms, problem drinking, and suicide attempts, with a trend for depressive symptoms. This suggests a possibility that self-compassion may be one means by which negative self-related outcomes are lessened. A few adult studies have suggested the potential use of self-compassion in modifying the negative cognition such as self-criticism and shame to improve psychiatric symptoms (Gilbert & Procter, 2006; Leary, Tate, Adams, Batts, & Hancock, 2007). The strong relationship we found between low self-compassion and maltreatment-related impairment with a minimal influence of childhood maltreatment on this link is somewhat consistent with a report by Neff and McGehee (2010) that a relationship of self-compassion with well-being (depression/anxiety) was not conditioned to family factors, suggesting possibility that self-compassion may be modifiable regardless family background.

Some studies comparing CPS-endorsing youth to non-endorsing youth have found that the CPS youth have reported greater engagement in high school bullying (Mohapatra et al., 2010), as well as poorer mental health outcomes (Hamilton et al., 2011). We further found a potential difference between MAP youth (receiving care for two or more years) and the community sample of CPS-involved youth, with the latter group showing worse outcomes on problem substance and alcohol use, and psychological distress than MAP youth. One possibility of this difference is that the OSDUHS CPS-involved group is capturing more youth sample who received briefer CPS services (e.g., investigation only) and are likely including more non-Crown Wards youths or youths who were not in out-of-home care in comparison with the MAP sample. The MAP sample would reflect long-term case management and resource linkages for youths, and this may not be the case for the OSDUHS CPS-involved youths. This may relate to the finding that youth who returned from foster care to biological families has shown worse functioning and health outcomes than those who remained in foster care (Tausig, Clyman, & Landsverk, 2001).

Limitations

Youth involved with child welfare are a difficult population to study in longitudinal studies. In the MAP study, we followed a participatory action framework (Wekerle et al., 2011) that allowed for some new entry of scales based on trends from the front-line. As such, we obtained self-compassion data at two-year point. Thus, this sample, while unique, remains relatively small to generalize to the broad population of foster care or child welfare youth. Most youth in this sample had their parental rights terminated; therefore it is most applicable to youths who were former Crown Wards (ends at age 18), and those who were approaching the end of their corporate parenting, who continued to be supported by child welfare. The relationship between self-compassion and maltreatment-related impairments is cross-sectional; we cannot support a causal relationship of either direction. We used the CTQ to measure child maltreatment. Among a wide range of acts of emotional maltreatment, it was impossible to examine the effect of some aspects such as corrupting (e.g., encouraging antisocial behaviour), overpressuring, as well as an exposure to adult intimate partner violence at home, the second leading category of reported cases of child maltreatment in Canada (Public Health Agency of Canada, 2010). All the measurements used in this study were self-report, and the amount of variance accounted for in the regression models is considered modest, given possible

common method variance. Screening scales were used to assess mental health and substance use problems, as consistent with epidemiological studies, but do not provide evidence of diagnoses or persistent clinical problems. Epidemiological work that queries on maltreatment and CPS involvement, and database linkages (e.g., health and child welfare) studies can provide an important source on further information on maltreatment, CPS system involvement, and expectable maltreatment-related impairment indices.

CPS-involved youth

Given the novelty of this research question, and the potential for clinical application, further research, especially in the under-researched child welfare adolescents seems worth pursuing. CPS-involved youth are more likely to have multiple types of child maltreatment and out-of-home replacement compared with non-CPS-involved youth (Courtney et al., 2010). Health outcomes of former foster youth, such as a lack of consistent medical provider and a higher risk of laboratory confirmed sexually transmitted infections (Ahrens et al., 2010) may be related to general issues in a lack of self-system (self-care), as well as complex health care needs. It is also documented that maltreated children and youth are at increased risk of aggression towards others as well as revictimization (Gilbert et al., 2009; Perepletchikova & Kaufman, 2010). In their violence prevention strategy, the US Centers for Disease Control and Prevention place priority on the provision of safe, stable, nurturing relationships (see the US Centers for Disease Control and Prevention website: www.cdc.gov/violenceprevention/pdf/CM.Strategic.Direction-OnePager-a.pdf). For the maltreated adolescent, this would generalize to self-nurturance and a stable, positive view of self. It is important to consider whether improved self-compassion would translate into improved self-care and help-seeking behaviors in this vulnerable subgroup, and this requires longitudinal, larger sample study on self-compassion.

Youth transitioning from child welfare to independent living or adult systems of support has very limited research informing practices, despite the number of challenges they likely face. For example, Christian and Schwartz (2011) reviewed the health outcomes of transitioning youth, noting substantial numbers of youths exit CPS care without any sort of family permanency. This population of transitioning youth has seems to be over-represented in homeless young adult groups (e.g., Goldstein, Erickson, & Wekerle, 2009), as well often end up in having renewed engagement with their biological parents (Taussig, Culhane, & Hettleman, 2007). Given the identity reformation and transition to adult roles that likely occur during the late adolescence and emerging adulthood (Arnett, 2000), there is suggested a window of opportunity for corrective work in close relationships (including with the self) (Neff & McGehee, 2010). It would be important to understand how the self-development in the emerging adulthood period transpires for youth at different levels of CPS-involvement.

Emotional maltreatment and the self-system

Normative child development enhances the child's competence, and reliance on self-direction and self-investment (e.g., motivation to learn, master, achieve, affiliate and attach) (Romer, Duckworth, Sznitman, & Park, 2010). Child maltreatment skews social learning and attachment relationships towards survival, which may manifest as vigilance, avoidance, and clinging behaviors (Reyome, 2010; Reyome, Ward, & Witkiewitz, 2010; Wall & McKee, 2002). Especially with emotional maltreatment (e.g., Liu, Alloy, Abramson, Iacoviello, & Whitehouse, 2009; Van Harmelen et al., 2010), individuals may develop a negative schema, template, or self-concept that confers cognitive vulnerability to developing negative affective states (e.g., Calvete, Villardóna, & Estévez, 2008; Haefel et al., 2008). When the self is seen as negative, an on-going contribution to maladaptation may include: (1) over-experiencing negative maltreatment-related self-emotions (e.g., worry, shame, feeling blamed and unworthy); (2) over-engagement in self-punishing behaviors (e.g., harsh, punitive self-talk; self-silencing); and (3) a lack of practice in self-soothing, self-acceptance (or self-compassion) (Neff & McGehee, 2010; Vettese et al., 2011), and appropriate, healthful self-reinforcing behaviors, as would be expected in social learning with positive models (e.g., Wall & McKee, 2002). In normative development, individuals learn from the consistently responsive, sensitive, predictable, and soothing behaviors of caretakers, allowing for the development of effective self-soothing (Schore, 2003). The maltreating environment involves not only the greater application of harmful behaviors, but also the lack of development of calming behaviors and feeling safe (McCoy, Cummings, & Davies, 2009) – these impair the appropriate use of the self and relationships in affect tolerance and management, as well as appropriate risk-taking in the environment.

Implications

Despite the number of youths involved in CPS, there are very few studies on adolescent functioning; exploring what might differentiate CPS youths with and without clinical levels of mental health, substance use problems, and compromised self-system including self-compassion. Increasingly, childhood maltreatment is being viewed along the lines of an acquired neurodevelopmental disability in emotion reactivity and regulation that impact cognitive vulnerabilities with respect to the self, and the associated health risk behaviors (for reviews, see Cicchetti & Rogosch, 2009; McCrory, De Brito, & Viding, 2010). Self-compassion has been considered a potentially a malleable construct for individuals with negative self view (Gilbert & Procter, 2006). Future research should consider the possibility of self-compassion, along with other self-functioning indicators, constituting a potential mediator of later adaptation from historical maltreatment.

Conclusion

This preliminary study encourages further study of self-compassion as it may apply to emotional abuse in particular, and maltreated youth and child welfare samples more generally. Given the early nature of the use of self-compassion, however, there needs to be further research on the psychometric properties of the measurement of this construct. Further investigation to test the validity of SCS in various adolescent populations would promote more studies, including child welfare youth and other samples where maltreatment backgrounds are noteworthy, such as those with corrections, addiction treatment, and self-harm presentations. Self-compassion may be an amenable target that would support the resilience of maltreated youths and may provide a useful complementary approach to current conceptual models informing child welfare practice. Work that supports maltreated youths to obtain greater measures of felt stability and self-compassion is encouraged.

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References

- Ahrens, K. R., Richardson, L. P., Courtney, M. E., McCarty, C., Simoni, J. & Katon, W. (2010). Laboratory-diagnosed sexually transmitted infections in former foster youth compared with peers. *Pediatrics*, *126*(1), e97–e103.
- Allen, J. P., Litten, R. Z., Fertig, J. B. & Babor, T. (1997). A review of research on the Alcohol Use Disorders Identification Test (AUDIT). *Alcoholism: Clinical and Experimental Research*, *21*(4), 613–619.
- Arnett, J. J. (2000). Emerging adulthood: A theory of development from the late teens through the twenties. *American Psychologist*, *55*(5), 469–480.
- Babor, T. F., Higgins-Biddle, J. C., Saunders, J. B. & Monteiro, M. G. (2001). *AUDIT. The Alcohol Use Disorders Identification Test: Guidelines for use in primary health care* (2nd edition). Geneva: Department of Mental Health and Substance Dependence, World Health Organization.
- Bernstein, D. P., 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.
- Berzenski, S. R. & Yates, T. M. (2010). A developmental process analysis of the contribution of childhood emotional abuse to relationship violence. *Journal of Aggression, Maltreatment and Trauma*, *19*(2), 180–203.
- Burns, B. J., Phillips, S. D., Wagner, H. R., Barth, R. P., Kolko, D. J., Campbell, Y. & Landsverk, J. (2004). Mental health need and access to mental health services by youth involved with child welfare: A national survey. *Journal of the American Academy of Child and Adolescent Psychiatry*, *43*, 960–970.
- Calvete, E., Villardóna, L. & Estéveza, A. (2008). Attributional style and depressive symptoms in adolescents: An examination of the role of various indicators of cognitive vulnerability. *Behaviour Research and Therapy*, *46*(8), 944–953.
- Christian, C. W. & Schwartz, D. F. (2011). Child maltreatment and the transition to adult-based medical and mental health care. *Pediatrics*, *127*, 139–145.
- Cicchetti, D. & Curtis, J. W. (2006). The developing brain and neural plasticity: Implications for normality, psychopathology, and resilience. In D. Cicchetti, & D. J. Cohen (Eds.), *Developmental psychopathology, vol. 2. Developmental neuroscience*. Hoboken, NJ, USA: John Wiley & Sons Inc.
- Cicchetti, D. & Rogosch, F. A. (2009). Adaptive coping under conditions of extreme stress: Multilevel influences on the determinants of resilience in maltreated children. In E. A. Skinner, & M. J. Zimmer-Gembeck (Eds.), *Coping and the development of regulation. New Directions for Child and Adolescent Development* (2nd ed., Vol. 124, pp. 47–59). San Francisco: Jossey-Bass.
- Cicchetti, D., Rogosch, F. A., Sturge-Apple, M. & Toth, S. L. (2010). Interaction of child maltreatment and 5-HTT polymorphisms: Suicidal ideation among children from low-SES backgrounds. *Journal of Pediatric Psychology*, *37*(5), 536–546.
- Courtney, M. E., Dworsky, A., Lee, J. S., Raap, M., Cusick, G. R., Keller, T., Havlicek, J., Perez, A., Terao, S. & Bost, N. (2010). *Midwest evaluation of the adult functioning of former foster youth*. Retrieved from: <http://www.chapinhall.org/research/report/midwest-evaluation-adult-functioning-former-foster-youth>
- Egeland, B. (2009). Taking stock: Childhood emotional maltreatment and developmental psychopathology. *Child Abuse & Neglect*, *33*, 22–36.
- Enns, M. W., Cox, B. J., Affifi, T. O., de Graaf, R., ten-Have, M. & Sareen, J. (2006). Childhood adversities and risk for suicidal ideation and attempts: A longitudinal population-based study. *Psychological Medicine*, *32*, 1769–1778.
- Garbarino, J., Guttman, E. & Seeley, J. W. (1986). *The psychologically battered child: Strategies for identification, assessment, and intervention*. San Francisco, CA: Jossey-Bass Inc.
- Gilbert, P. & Procter, S. (2006). Compassionate mind training for people with high shame and self-criticism: A pilot study of a group therapy approach. *Clinical Psychology and Psychotherapy*, *13*, 353–379.
- Gilbert, R., Widom, C. S., Browne, K., Fergusson, D., Webb, E. & Janson, S. (2009). Burden and consequences of child maltreatment in high-income countries. *Lancet*, *373*(9657), 68–81.
- Glaser, D. (2002). Emotional abuse and neglect (psychological maltreatment): A conceptual framework. *Child Abuse & Neglect*, *26*, 697–714.
- Goldberg, D. P. & Blackwell, B. (1970). Psychiatric illness in general practice. A detailed study using a new method of case identification. *British Medical Journal*, *1*, 439–443.
- Golderberg, D. P. & Williams, P. (1988). *A user's guide to the General Health questionnaire*. NFER-Nelson: Windsor, UK.
- Goldstein, A., Wekerle, C., Tonmyr, L., Thornton, T., Waechter, R., Pereira, J., & Chung, R. (2011). The Relationship between post-traumatic stress symptoms and substance use among adolescents involved with child welfare: Implications for emerging adulthood. *International Journal of Mental Health and Addiction* (online first), 1–18.
- Goldstein, A. L., Erickson, P. & Wekerle, C. (2009). Foster care: Extend services, save youth. *Canadian Medical Association Journal*, *181*, 928.
- Gordis, E. B., Feres, N., Olezeski, C., Rabkin, A. & Trickett, P. K. (2009). Skin conductance reactivity and respiratory sinus arrhythmia among maltreated and comparison youth: Relation with aggressive behavior. *Journal of Pediatric Psychology*, *35*(5), 547–558.
- Haeffel, G. J., Gibb, B. E., Metalsky, G. I., Alloy, L. B., Abramson, L. Y., Hankin, B. L., Joiner, T. E., Jr. & Swendsen, J. D. (2008). Measuring cognitive vulnerability to depression: Development and validation of the cognitive style questionnaire. *Clinical Psychology Review*, *28*(5), 824–836.
- Hamarman, S., Pope, K. H. & Czaja, S. J. (2002). Emotional abuse in children: Variations in legal definitions and rates across the United States. *Child Maltreatment*, *7*(4), 303–311.
- Hamilton, H. A., Paglia-Boak, A., Wekerle, C., Danielson, A. M. & Mann, R. E. (2011). Psychological distress, service utilization, and prescribed medications among youth with and without histories of involvement with child protective services. *International Journal of Mental Health and Addiction*, doi:10.1007/s11469-011-9327-4
- Hart, S. N. & Brassard, M. R. (1987). A major threat to children's mental health. Psychological maltreatment. *American Psychologist*, *42*(2), 160–165.

- Hart, S. N., Brassard, M. R., Binggeli, N. J. & Gavidson, H. A. (2002). Psychological maltreatment. In E. B. Meyers (Ed.), *The APSAC Handbook on Child Maltreatment* (pp. 79–103). Thousand Oaks, CA: Sage Publications.
- Jacobson, C. M. & Gould, M. (2007). The epidemiology and phenomenology of nonsuicidal self-injurious behavior among adolescents: A critical review of literature. *Archives of Suicide Research, 11*, 129–147.
- Kessler, R. C., McLaughlin, K. A., Green, J. G., Gruber, M. J., Sampson, N. A., Zaslavsky, A. M., Aguilar-Gaxiola, S., Alhamzawi, A. O., Alonso, J., Angermeyer, M., Benjet, C., Bromet, E., Chatterji, S., de Girolamo, G., Demyttenaere, K., Fayyad, J., Florescu, S., Gal, G., Gureje, O., Haro, J. M., Hu, C. Y., Karam, E. G., Kawakami, N., Lee, S., Lépine, J. P., Ormel, J., Posada-Villa, J., Sagor, R., Tsang, A., Ustün, T. B., Vassilev, S., Viana, M. C. & Williams, D. R. (2010, November). Childhood adversities and adult psychopathology in the WHO World Mental Health Surveys. *British Journal of Psychiatry, 197*, 378–385.
- Knight, J. R., Sherritt, L., Shrier, L. A., Harris, S. K. & Chang, G. (2002). Validity of the CRAFFT substance abuse screening test among adolescent clinic patients. *Archives of Pediatrics and Adolescent Medicine, 156*(6), 607–614.
- Laye-Gindhu, A. & Schonert-Reichl, K. A. (2005). Nonsuicidal self-harm among community adolescents: Understanding the whats and whys of self-harm. *Journal of Youth and Adolescence, 34*(5), 447–457.
- Leary, M. R., Tate, E. B., Adams, C. E., Batts, A. A. & Hancock, J. (2007). Self-compassion and reactions to unpleasant self-relevant events: The implications of treating oneself kindly. *Journal of Personality and Social Psychology, 92*(5), 887–904.
- Liu, R. T., Alloy, L. B., Abramson, L. Y., Iacoviello, B. M. & Whitehouse, W. G. (2009). Emotional maltreatment and depression: Prospective prediction of depressive episodes. *Depression and Anxiety, 26*, 174–181.
- Mann, R. E., Paglia-Boak, A., Adlaf, E. M., Beitchman, J., Wolfe, D., Wekerle, C., Hamilton, H. A. & Rehm, J. (2011). Estimating the prevalence of anxiety and mood disorders in an adolescent general population: An evaluation of the GHQ12. *International Journal of Mental Health and Addiction*, doi:10.1007/s11469-011-9334-5
- McCoy, K., Cummings, E. M. & Davies, P. T. (2009). Constructive and destructive marital conflict, emotional security and children's prosocial behavior. *Journal of Child Psychology and Psychiatry, 50*(3), 270–279.
- McCroy, E., De Brito, S. A. & Viding, E. (2010). Research review: The neurobiology and genetics of maltreatment and adversity. *Journal of Child Psychology and Psychiatry, 51*(10), 1079–1095.
- McLaughlin, K. A., Green, J. G., Gruber, M. J., Sampson, N. A., Zaslavsky, A. M. & Kessler, R. C. (2010, February). Childhood adversities and adult psychiatric disorders in the national comorbidity survey replication II: Associations with persistence of DSM-IV disorders. *Archives of General Psychiatry, 67*(2), 124–132.
- Mohapatra, S., Irving, H., Paglia-Boak, A., Wekerle, C., Adlaf, E. & Rehm, J. (2010). History of family involvement with child protective services as a risk factor for bullying in Ontario Schools. *Child and Adolescent Mental Health, 15*(3), 157–163.
- National Incidence Study of Child Abuse and Neglect (NIS-4) Report to Congress. Retrieved from http://www.acf.hhs.gov/programs/opre/abuse_neglect/natl_incid/nis4_report_congress_full_pdf_jan2010.pdf.
- Neff, K. D. (2003). The development and validation of a scale to measure self-compassion. *Self and Identity, 2*, 223–250.
- Neff, K. D. & McGehee, P. (2010). Self-compassion and psychological resilience among adolescents and young adults. *Self and Identity, 9*(3), 225–240.
- Neff, K. D., Rude, S. S. & Kirkpatrick, K. L. (2007). An examination of self-compassion in relation to positive psychological functioning and personality traits. *Journal of Research in Personality, 41*, 908–916.
- Paglia-Boak, A., Mann, R. E., Adlaf, E. M., Beitchman, J. H., Wolfe, D. & Rehm, J. (2010). *The mental health and well-being of Ontario students, 1991–2009: Detailed OSDUHS findings (CAMH Research Document Series No. 29)*. Toronto, ON: Centre for Addiction and Mental Health. Retrieved from <http://www.camh.net/research/osdus.html>
- Perepletchikova, F. & Kaufman, J. (2010, October). Emotional and behavioral sequelae of childhood maltreatment. *Current Opinion in Pediatrics, 22*(5), 610–615.
- Public Health Agency of Canada; Trocmé, N., Fallon, B., MacLaurin, B., Sinha, V., Black, T., Fast, E., Felstiner, C., Hélie, S., Turcotte, D., Weightman, P., Douglas, J., & Holroyd, J. (2010). Canadian Incidence Study of Reported Child Abuse and Neglect 2008 (CIS-2008): Major findings. Retrieved from <http://www.phac-aspc.gc.ca/nfv-cnivf/pdfs/nfnfs-cis-2008-rprt-eng.pdf>
- Radloff, L. S. (1977). The CSE-D Scale: A self-report depression scale for research in the general population. *Applied Psychological Measurement, 1*, 385–401.
- Raviv, T., Taussig, H. N., Culhane, S. E. & Garrido, E. F. (2010). Cumulative risk exposure and mental health symptoms among maltreated youth placed in out-of-home care. *Child Abuse & Neglect, 34*, 742–751.
- Reyome, N. D. (2010). The effect of childhood emotional maltreatment on the emerging attachment system and later intimate relationships. *Journal of Aggression, Maltreatment & Trauma, 19*(1), 1–4.
- Reyome, N. D., Ward, K. S. & Witkiewitz, K. (2010). Psychosocial variables as mediators of the relationship between childhood history of emotional maltreatment, codependency, and self-silencing. *Journal of Aggression, Maltreatment & Trauma, 19*(2), 159–179.
- Rhodes, A. E., Boyle, M. H., Tonmyr, L., Wekerle, C., Goodman, D., Leslie, B., Mironova, P., Bethell, J. & Manion, I. (2011, June). Sex differences in childhood sexual abuse and suicide-related behaviors. *Suicide and Life-Threatening Behavior, 41*(3), 235–254.
- Romer, N. D., Duckworth, A. L., Sznitman, S. & Park, S. (2010, September). Can adolescents learn self-control? Delay of gratification in the development of control over risk taking. *Prevention Science, 11*(3), 319–330.
- Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton, NJ: Princeton University Press.
- Saunders, J. B., Aasland, O. G., Amundsen, A. & Grant, M. (1993). Alcohol consumption and related problems among primary health care patients: WHO Collaborative Project on early detection of persons with harmful alcohol consumption. I. *Addiction, 88*, 349–362.
- Saunders, J. B., Aasland, O. G., Babor, T. F., de la Fuente, J. R. & Grant, M. (1993). Development of the Alcohol Use Disorders Identification Test (AUDIT): WHO collaborative project on early detection of persons with harmful alcohol consumption. II. *Addiction, 88*, 791–804.
- Schore, A. N. (2003). *Affect regulation and the repair of the self*. New York, NY, USA: W.W. Norton & Co Inc., 363 pp
- Shin, S. H., Edwards, E., Heeren, T. & Amodeo, M. (2009). Relationship between multiple forms of maltreatment by a parent or guardian and adolescent alcohol use. *The American Journal on Addictions, 18*(3), 226–234.
- Stewart, S., McGonnell, M., Wekerle, C., & Adlaf, E. (2011) Associations of personality with alcohol use behaviour and alcohol problems in adolescents receiving child welfare services. *International Journal of Mental Health and Addiction* (online first), 1–15.
- Taussig, H. N., Clyman, R. B. & Landsverk, J. (2001). Children who return home from foster care: A 6-year prospective study of behavioral health outcomes in adolescence. *Pediatrics, 108*(1), E10.
- Taussig, H. N., Culhane, S. E. & Hettelman, D. (2007, September–October). Fostering healthy futures: An innovative preventive intervention for preadolescent youth in out-of-home care. *Child Welfare, 86*(5), 113–131.
- Tonmyr, L., Thornton, T., Draca, J. & Wekerle, C. (2010). A review of childhood maltreatment and adolescent substance use relationship. *Current Psychiatry Reviews, 6*(223–234), 223.
- Trickett, P. K., Mennen, F. E., Kim, K. & Sang, J. (2009). Emotional abuse in a sample of multiply maltreated, urban young adolescents: Issues of definition and identification. *Child Abuse & Neglect, 33*(1), 27–35.
- Trocmé, N., Fallon, B., MacLaurin, B., Daciuk, J., Felstiner, C., Black, T., Tonmyr, L., Blackstock, C., Barter, K., Turcotte, D. & Cloutier, R. (2005). *Canadian incidence study of reported child abuse and neglect – 2003: Major findings*. Minister of Public Works and Government Services Canada.
- Ungar, M. (2007). *Too safe for their own good*. Toronto, ON: McClelland and Stewart.
- Ungar, M. (2008). Resilience across cultures. *British Journal of Social Work, 38*(2), 218–235.
- Van Harmelen, A.-L., De Jong, P. J., Glashouwer, K. A., Spinhoven, Ph., Penninx, B. W. J. H. & Elzinga, B. M. (2010). Childhood abuse and negative explicit and automatic self-associations; the cognitive scars of emotional maltreatment. *Behaviour Research and Therapy, 48*, 486–494.
- Vaughn, M. G., Ollie, M. T., McMillen, J. C., Scott, L., Jr. & Munson, M. (2007). Substance use and abuse among older youth in foster care. *Addictive Behaviors, 32*, 1929–1935.

- Vettese, L. C., Dyer, C., Li, W. & Wekerle, C. (2011). Does self-compassion mitigate the association between childhood maltreatment and later emotion regulation difficulties? A preliminary investigation. *International Journal of Mental Health and Addiction*, doi:10.1007/s11469-011-9340-7
- Vinnerljung, B., Sundell, K., Lofholm, C. A. & Humlesjo, E. (2006). Former Stockholm child protection cases as young adults: Do outcomes differ between those that received services and those that did not? *Children and Youth Services Review*, 28(1), 59–77.
- Wall, A.-M. & McKee, S. A. (2002). Cognitive social learning models of substance abuse and relationship violence. In C. Wekerle, & A.-M. Wall (Eds.), *The violence and addiction equation: Theoretical and clinical issues in substance abuse and relationship violence* (pp. 123–152). Philadelphia, PA: Brunner/Mazel.
- Wekerle, C., Leung, E., Goldstein, A., Thornton, T. & Tonmyr, L. (2009). *Substance use among adolescents in child welfare versus adolescents in the general population: A comparison of the maltreatment and adolescent pathways (MAP) longitudinal study and the Ontario Student Drug Use Survey (OSDUS) Datasets*. London, ON: University of Western Ontario. Free report copies available from National Clearinghouse on Family Violence. Retrieved from <http://www.phac-aspc.gc.ca/nfv-cnivf/pdfs/nfnts-ado-wallmur-eng.pdf>
- Wekerle, C., Leung, E., Wall, A. M., MacMillan, H., Boyle, M., Trocmé, N. & Waechter, R. (2009). The contribution of childhood emotional abuse to teen dating violence among child protective services-involved youth. *Child Abuse & Neglect*, 33(1), 45–58.
- Wekerle, C., Waechter, R., Chen, M., Leung, E., Wall, A.-M., Trocmé, N., Leslie, B., Goodman, D. & Moody, B. (2011). The maltreatment and adolescent pathways project feasibility study: Are youth involved in child protection services a feasible sub-population for study? In S. Léveillé, N. Trocmé, I. Brown, & C. Chamberland (Eds.), *Research-community partnerships in child welfare* (pp. 59–90). Toronto, ON: Centre for Excellence in Child Welfare.
- Wekerle, C., Waechter, R., & Chung, R. Contexts of vulnerability and resilience: Childhood maltreatment, adolescent cognitive functioning and close relationships. In M. Ungar (Ed.), *The social ecology of resilience*. New York, NY: Springer, in press.
- Wekerle, C. & Wolfe, D. A. (1999). Dating violence in mid-adolescence: Theory, significance, and emerging prevention initiatives. *Clinical Psychology Review*, 19, 435–456.
- World Health Organization and International Society for Prevention of Child Abuse and Neglect (WHO/ISPCAN). (2006). *Preventing child maltreatment: A guide to taking action and generating evidence*. Geneva: World Health Organization/International. Retrieved from http://whqlibdoc.who.int/publications/2006/9241594365_eng.pdf
- Yates, T. M. & Wekerle, C. (2009). The long-term consequences of childhood emotional maltreatment on development: (Mal)adaptation in adolescence and young adulthood. *Child Abuse & Neglect*, 33, 19–21.
- Zurbriggen, E. L., Gobin, R. & Freyd, J. J. (2010). Childhood emotional abuse predicts late adolescent sexual aggression perpetration and victimization. *Journal of Aggression, Maltreatment, and Trauma*, 19(2), 204–223.