Child Abuse & Neglect 59 (2016) 1–12

Contents lists available at ScienceDirect

Child Abuse & Neglect

Research article

Childhood emotional maltreatment and mental disorders: Results from a nationally representative adult sample from the United States

Tamara L. Taillieu[a], Douglas A. Brownridge[b], Jitender Sareen[b,c,d], Tracie O. Afifi[b,c,*]

[a] Applied Health Sciences PhD Program, University of Manitoba, Canada
[b] Department of Community Health Sciences, University of Manitoba, Canada
[c] Department of Psychiatry, University of Manitoba, Canada
[d] Department of Psychology, University of Manitoba, Canada

ARTICLE INFO

Article history:
Received 22 January 2016
Received in revised form 14 July 2016
Accepted 18 July 2016
Available online 1 August 2016

Keywords:
Child maltreatment
Emotional maltreatment
Emotional abuse
Emotional neglect
Mental disorders

ABSTRACT

Child maltreatment is a public health concern with well-established sequelae. However, compared to research on physical and sexual abuse, far less is known about the long-term impact of emotional maltreatment on mental health. The overall purpose of this study was to examine the association of emotional abuse, emotional neglect, and both emotional abuse and neglect with other types of child maltreatment, a family history of dysfunction, and lifetime diagnoses of several Axis I and Axis II mental disorders. Data were from the National Epidemiological Survey on Alcohol and Related Conditions collected in 2004 and 2005 ($n = 34{,}653$). The most prevalent form of emotional maltreatment was emotional neglect only (6.2%), followed by emotional abuse only (4.8%), and then both emotional abuse and neglect (3.1%). All categories of emotional maltreatment were strongly related to other forms of child maltreatment (odds ratios [ORs] ranged from 2.1 to 68.0) and a history of family dysfunction (ORs ranged from 2.2 to 8.3). In models adjusting for sociodemographic characteristics, all categories of emotional maltreatment were associated with increased odds of almost every mental disorder assessed in this study (adjusted ORs ranged from 1.2 to 7.4). Many relationships remained significant independent of experiencing other forms of child maltreatment and a family history of dysfunction (adjusted ORs ranged from 1.2 to 3.0). The effects appeared to be greater for active (i.e., emotional abuse) relative to passive (i.e., emotional neglect) forms of emotional maltreatment. Childhood emotional maltreatment, particularly emotionally abusive acts, is associated with increased odds of lifetime diagnoses of several Axis I and Axis II mental disorders.

It is well recognized that child maltreatment constitutes a major public health concern that has devastating consequences for both the individual victim and on society as a whole (Gilbert et al., 2012). However, not all forms of child maltreatment are physical in nature (Miller-Perrin, Perrin, & Kocur, 2009), and non-physical forms of maltreatment are also important to

* Corresponding author at: S113-750 Bannatyne Avenue, Winnipeg, Manitoba R3E 0W5, Canada. Fax: +1 204 789 3905.
E-mail addresses: umtailli@myumanitoba.ca (T.L. Taillieu), Douglas.Brownridge@umanitoba.ca (D.A. Brownridge), sareen@cc.umanitoba.ca (J. Sareen), tracie.afifi@umanitoba.ca (T.O. Afifi).

http://dx.doi.org/10.1016/j.chiabu.2016.07.005

consider. Compared to research on physical and sexual abuse, less is known about the long-term impact of childhood emotional maltreatment on mental health (Ackner, Skeate, Patterson, & Neal, 2013; Bifulco, Moran, Baines, Bunn, & Stanford, 2002). Emotional maltreatment can be broadly defined as "a repeated pattern of caregiver behavior or extreme incident(s) that convey to children that they are flawed, unloved, unwanted, endangered, or of value only in meeting another's needs" (American Professional Society on the Abuse of Children, 1995, p. 2). Researchers have speculated that emotional maltreatment is a core component underlying all forms of child maltreatment that has equivalent, if not greater, developmental consequences than childhood experiences of physical and/or sexual abuse (Chamberland, Fallon, Black, & Trocmé, 2011; Chamberland, Fallon, Black, Nico, & Chabot, 2012; Garbarino, Guttman, & Wilson Seeley, 1986; Gibb, Chelminski, & Zimmerman, 2007; Hart & Brassard, 1987; Kuo, Goldin, Werner, Richard, & Gross, 2011; Rosenkranz, Muller, & Henderson, 2012; Vachon, Krueger, Rogosch, & Cicchetti, 2015). Despite the high rate of co-occurrence with other forms of child abuse (Bifulco et al., 2002; Bruce, Heimberg, Blanco, Schneier, & Liebowitz, 2012; Finza-Dottan & Karu, 2006; Vachon et al., 2015; Waxman, Fenton, Skodol, Grant, & Hasin, 2014), the independent effects of emotional maltreatment on poor mental and physical health outcomes are rarely investigated and not well understood (Miller-Perrin et al., 2009).

Emotional maltreatment is a difficult construct to define and measure (Ackner et al., 2013; Baker, 2009), and many different acts can be considered emotionally abusive. The term emotional maltreatment encompasses both acts of commission (i.e., emotional abuse) and acts of omission (i.e., emotional neglect). However, most studies only examine a single type of emotional maltreatment (Finza-Dottan & Karu, 2006; Gibb, Wheeler, Alloy, & Abramson, 2001; Johnson, Smailes, Cohen, Brown, & Bernstein, 2000; Moran, Vuchinich, & Hall, 2004; Taillieu & Brownridge, 2013), or combine both active (i.e., emotional abuse) and passive (i.e., emotional neglect) forms of emotional maltreatment in their measure (Coates & Messman-Moore, 2014; Ferguson & Dacey, 1997). Further, many studies fail to adjust for the effects of other types of child maltreatment in analyses (Afifi et al., 2011; Coates & Messman-Moore, 2014; Ferguson & Dacey, 1997; Finza-Dottan & Karu, 2006; Hamilton et al., 2013; Kuo et al., 2011).

Diagnoses for mental disorders are often based on the American Psychological Association's Diagnostic and Statistical Manual of Mental Disorders (DSM). In the fourth edition of the DSM (DSM-IV), psychiatric diagnoses are categorized along 5 different dimensions (axes) based on different aspects of the disorder or disability (American Psychiatric Association, 1994). In the DSM-IV, several Axis I (i.e., all psychological disorders except mental retardation and personality disorders) and Axis II disorders (i.e., personality disorders) are assessed.

Axis I disorders include mood (i.e., disorders characterized by a persistent disturbance in a person's emotional state or mood), anxiety (i.e., disorders characterized by excessive and persistent feelings of apprehension accompanied by physical symptoms such as palpitations or sweating), and substance abuse disorders (i.e., recurrent use of alcohol and/or drugs that causes substantial clinical and functional impairment). Mood disorders include major depressive disorder (e.g., persistent low mood, loss of interest in normal activities), dysthymia (e.g., less severe but more chronic depressive symptoms), mania (e.g., heightened mood, increased energy, decreased need for sleep, and hyperactivity that interferes with normal functioning), and hypomania (e.g., less severe manic state, little interference with normal functioning) (American Psychiatric Association, 1994). Anxiety disorders include panic disorder (e.g., unexpected, recurrent, and severe panic attacks), social phobia (e.g., excessive fear of social situations that causes significant distress and functional impairment), specific phobia (e.g., irrational fear of specific objects or situations), generalized anxiety disorder (e.g., excessive, uncontrollable, and/or irrational worry about everyday activities or events), and post-traumatic stress disorder (e.g., development of a range of psychological symptoms after exposure to a traumatic event) (American Psychiatric Association, 1994).

Axis II personality disorders are categorized into three major clusters based on central features related to personality. Cluster A personality disorders are characterized by odd or eccentric behavior, and include paranoid (e.g., distrust of others, irrational suspicions), schizoid (e.g., lack of interest or detachment from social relationships, apathy, restricted emotional expression), and schizotypal (e.g., extreme discomfort with social interaction, distorted cognitions and/or perceptions) personality disorders (American Psychiatric Association, 1994). Cluster B personality disorders are characterized by dramatic, erratic, and/or excessive emotional responses, and include antisocial (e.g., disregard for and violation of the rights of others, lack of empathy, manipulative and/or impulsive behavior), borderline (e.g., extreme instability in interpersonal relationships, sense of self, and emotion regulation; fear of abandonment; impulsivity; self-harming behaviors), histrionic (e.g., excessive attention seeking, excessive emotions), and narcissistic (e.g., feelings of grandiosity, arrogance, excessive need for praise, lack of empathy) personality disorders (American Psychiatric Association, 1994). Cluster C personality disorders are characterized by fear and anxiety, and include avoidant (e.g., feelings of social inhibition and inadequacy, extreme sensitivity to criticism), dependent (e.g., extreme psychological dependence on others), and obsessive–compulsive (e.g., rigid conformity to rules, perfectionism, excessive orderliness) personality disorders (American Psychiatric Association, 1994).

Attachment theory asserts that a secure attachment bond to at least one primary caregiver is critical for development (Bowlby, 1969). Once an attachment pattern is formed, it tends to persist and influences an individual's perceptions of self and others throughout the lifespan (Ainsworth, 1979). Emotional maltreatment likely interferes with the development of a secure attachment bond, and the consequent insecure attachment patterns could help to explain the association between childhood emotional maltreatment and mental disorders. Emotional maltreatment "destroys a child's sense of self and personal security" (Kairys, Johnson, & The Committee on Child Abuse and Neglect, 2002, p. 2), which could manifest as mood, anxiety, and/or substance abuse disorders later in life. Further, Axis II personality disorders are thought to be rooted in early

adverse childhood experiences that form the basis of personality development across the lifespan (American Psychiatric Association, 1994).

Childhood emotional maltreatment has been linked to depression (Bifulco et al., 2002; Ferguson & Dacey, 1997; Gibb, Chelminski, et al., 2007; Hamilton et al., 2013; Kuo et al., 2011), anxiety (Bruce et al., 2012; Ferguson & Dacey, 1997; Gibb, Chelminski, et al., 2007; Hamilton et al., 2013; Kuo et al., 2011; Taillieu & Brownridge, 2013), dissociative symptoms (Ferguson & Dacey, 1997), post-traumatic stress disorder (Gibb, Chelminski, et al., 2007), psychotic disorders (Ackner et al., 2013), substance use problems (Moran et al., 2004; Rosenkranz et al., 2012), several Axis II personality disorders (Afifi et al., 2011; Gibb et al., 2001; Johnson et al., 2000; Lobbestael, Arntz, & Bernstein, 2010; Waxman et al., 2014), as well as lower self-esteem (Kuo et al., 2011; Taillieu & Brownridge, 2013) and decreased quality of life (Bruce et al., 2012). The vast majority of research in this area uses clinical or non-representative samples (Bifulco et al., 2002; Bruce et al., 2012; Coates & Messman-Moore, 2014; Ferguson & Dacey, 1997; Finza-Dottan & Karu, 2006; Gibb et al., 2001; Gibb, Chelminski, et al., 2007; Hamilton et al., 2013; Kuo et al., 2011; Taillieu & Brownridge, 2013), limiting the generalizability of findings. Another limitation of the current literature is that many studies only examine a small number of mental disorders (Bifulco et al., 2002; Coates & Messman-Moore, 2014; Hamilton et al., 2013; Moran et al., 2004; Rosenkranz et al., 2012; Taillieu & Brownridge, 2013).

Finally, little is known regarding how different forms of emotional maltreatment (i.e., active versus passive forms) differentially impact mental health. When investigated, some differences in the effects of emotional abuse compared to emotional neglect have been reported. For example, Hamilton et al. (2013) found that emotional abuse, but not emotional neglect, predicted increases in depression and social anxiety in a convenience sample of adolescents. Kuo et al. (2011) found both emotional abuse and emotional neglect were associated with anxiety and lower self-esteem, but only emotional neglect was associated with depression in a clinical sample of female patients with social anxiety disorder. Lobbestael et al. (2010) found that emotional abuse was associated with paranoid, schizotypal, borderline, and cluster C personality disorders whereas emotional neglect was associated with histrionic and borderline personality disorders in a non-representative sample from the Netherlands and Belgium. Given evidence that emotional abuse and emotional neglect are distinct, but related, components of emotional maltreatment, there is a need to examine the specific effects of both types as each type might predict unique outcomes (Hamilton et al., 2013; Tonmyr, Draca, Crain, & MacMillan, 2011).

Two other studies using data from the National Epidemiologic Survey on Alcohol and Related Conditions (NESARC) examined the relationship between child maltreatment and Axis II disorders. Waxman et al. (2014) found that emotional abuse was related to schizotypal, borderline, and narcissistic diagnoses whereas emotional neglect was related to paranoid, schizoid, and avoidant diagnoses. In contrast, Afifi et al. (2011) reported both similar (i.e., both types were related to schizotypal, antisocial, borderline personality disorders) and unique associations (i.e., emotional abuse was associated with paranoid and narcissistic personality disorders and emotional neglect was associated with schizoid and avoidant personality disorders) based on the type of childhood emotional maltreatment. Neither of these studies examined the effect of multiple categories of emotional maltreatment (i.e., emotional abuse only, emotional neglect only, both emotional abuse and neglect) on mental disorders, the co-occurrence of each of the categories with other forms of child maltreatment and family dysfunction, directly compared active and passive forms of emotional maltreatment, or included Axis I disorders (i.e., mood, anxiety, and substance abuse disorder) as outcomes. As well, the lack of adjustment for confounding due to other forms of child maltreatment (Afifi et al., 2011) or other forms of family dysfunction (Waxman et al., 2014) may have biased results.

The lack of consistency in definition and measurement of emotional maltreatment across extant research and the over-reliance on clinical and non-representative samples make it difficult to generalize, integrate, and apply findings (Baker, 2009). There has also been a lack of research regarding potential moderators of the relationship between childhood emotional maltreatment and later mental health. Sex differences in the prevalence (Black, Slep, & Heyman, 2001; Iwaniec, Larkin, & Higgins, 2006) and effects (Waxman et al., 2014) of childhood emotional maltreatment have been reported in the literature. There is also research suggesting that emotional abuse and emotional neglect may be associated with different long term mental health outcomes (Afifi et al., 2011; Hamilton et al., 2013; Kuo et al., 2011; Lobbestael et al., 2010; Waxman et al., 2014). Thus, it could be that the relationship between emotional maltreatment and later mental disorders is moderated by sex or the type of emotional maltreatment experienced in childhood. Therefore, the purpose of this study is to examine the association of emotional abuse and emotional neglect and lifetime diagnoses of several Axis I and Axis II mental disorders in a nationally representative adult sample from the United States. This research overcomes a number of limitations in the existing body of research by including (and comparing) both active and passive forms of emotional maltreatment, controlling for a number of other forms of child maltreatment and adverse childhood experiences known to be associated with both emotional maltreatment and adverse mental health outcomes, and using a nationally representative general population sample. The overall objectives of this study are to: (a) examine the relationship between emotional abuse, emotional neglect, and both emotional abuse and neglect with other types of child maltreatment and a history of family dysfunction in a nationally representative adult sample from the United States; (b) examine the relationship between childhood emotional abuse, emotional neglect, and both emotional abuse and neglect and lifetime diagnoses of several Axis I and Axis II mental disorders; (c) determine whether active (i.e., emotional abuse) and passive (i.e., emotional neglect) forms of emotional maltreatment differentially impact mental health, and (d) determine whether gender moderates the relationship between categories of emotional maltreatment and adult mental disorders.

1. Method

1.1. Sample

The NESARC is a representative sample of civilian, non-institutionalized adults living in the United States (U.S.). Data from the current study were cross-sectional, and came from the second wave of the NESARC collected between 2004 and 2005. This wave of the NESARC collected information from 34,653 adults aged 20 years and older living in households as well as non-institutionalized group dwellings. The NESARC sample was weighted to adjust for nonresponse, the selection of one person per household, and the oversampling of specific groups. Once weighted, the data were adjusted to be representative of the U.S. population based on several sociodemographic indicators (e.g., region, age, sex, race/ethnicity) based on 2000 U.S. Census data (Grant et al., 2004). Data were collected through face-to-face interviews by trained lay interviewers of the U.S. Census Bureau and the response rate was 86.7%. Additional details of the NESARC have been described elsewhere (Grant et al., 2004, 2003; Ruan et al., 2008).

1.2. Measures

1.2.1. Emotional maltreatment. Emotional abuse and emotional neglect were assessed using questions adapted from the Adverse Childhood Experiences (ACE) Study (Dong, Anda, Dube, Giles, & Felitti, 2003; Dube et al., 2003). Respondents were asked to report on experiences that occurred before the age of 18 years. The emotional abuse items were measured on a 5-point ordinal scale (never, almost never, sometimes, fairly often, and very often). Emotional abuse was defined as having "fairly often" or "very often" experienced a parent or other adult living in the home: (1) swear at or insult the respondent; (2) threaten to hit or throw something at the respondent, but didn't do it; or (3) act in any other way that made the respondent feel afraid. The emotional neglect items were assessed on a similar 5-point ordinal scale (never true, rarely true, sometimes true, often true, and very often true). Emotional neglect in childhood was assessed with the following 5 items: (1) the respondent felt there was someone in the family who wanted them to be a success; (2) someone in the respondent's family made them feel special or important; (3) the respondent's family was a source of strength or support; (4) the respondent felt part of a close knit family; and (5) someone in the respondent's family believed in them. Consistent with past research, these items were reverse-coded and summed; scores of 15 or greater were considered indicative of having experienced emotional neglect in childhood (Afifi et al., 2011; Dong et al., 2003; Dube et al., 2003). Participants were categorized into four groups based on their childhood experiences of emotional maltreatment (i.e., no emotional maltreatment, emotional neglect only, emotional abuse only, and both emotional neglect and emotional abuse).

1.2.2. Other childhood maltreatment. Other forms of child maltreatment, including physical neglect, harsh physical punishment, physical abuse, sexual abuse, and exposure to intimate partner violence were also assessed using questions adapted from the ACE study (Dong et al., 2003; Dube et al., 2003). Respondents were asked to report on child maltreatment experiences that occurred before the age of 18 years. All child maltreatment items were measured on a 5-point ordinal scale (never, almost never, sometimes, fairly often, and very often). Dichotomous coding was used to indicate the presence or absence of each additional type of child maltreatment. Physical neglect was defined as present if the respondent ever (i.e., any response other than "never" on the 5-point ordinal scale) experienced any of the following four items: (1) been left alone or unsupervised before age 10; (2) gone without needed things such as clothes, shoes, or school supplies because a parent or other adult living in the home spent the money on themselves; (3) been made to go hungry or did not have regular meals prepared; and/or (4) had a parent or other adult living in the home ignore or fail to get the respondent medical treatment. Harsh physical punishment was assessed with the question, "As a child, how often were you ever pushed, grabbed, shoved, slapped, or hit by your parents or any adult living in your house?" Participants with a response of "sometimes" or greater to this question were considered as having experienced harsh physical punishment in childhood. Physical abuse was defined as present if the respondent reported having ever (i.e., any response other than "never" on the 5-point ordinal scale) being hit so hard that it left marks, bruises, or caused an injury by a parent or other adult living in the home. Sexual abuse was defined as present if the respondent reported having ever (i.e., any response other than "never" on the 5-point ordinal scale) experienced any unwanted sexual touching or fondling, or any attempted or actual intercourse by an adult or other person that was unwanted or occurred when the respondent was too young to understand what was happening. To determine whether the respondent was exposed to intimate partner violence in childhood, respondents were asked whether their mother's partner had: (1) pushed, grabbed, slapped, or thrown something at their mother, (2) kicked, bit, or hit their mother with a fist or something hard, (3) repeatedly hit their mother for at least a few minutes, or (4) threatened her with a knife or gun, or use a knife or gun to hurt her. Any response of "sometimes" or greater to items 1 or 2, or any response other than "never" to items 3 or 4, was considered indicative of having being exposed to intimate partner violence in childhood. Maternal perpetration of intimate partner violence was not assessed in the survey.

1.2.3. Family history of dysfunction. The family history of dysfunction variable was also based on questions from the ACE study (Dong et al., 2003; Dube et al., 2003). Any respondent reporting that a parent or other adult living in the household

had a problem with alcohol or drugs, went to jail or prison, was treated or hospitalized due to mental illness, attempted or completed suicide was coded as having experienced family dysfunction in childhood.

1.2.4. Mental disorders. Lifetime diagnoses of Axis I and Axis II disorders were made using the Alcohol Use Disorder and Associated Disablities Interview Schedule – Diagnostic and Statistical Manual of Mental Disorders (DSM) – Fourth Edition (AUDADIS-IV; American Psychiatric Association, 1994; Grant et al., 2003; Ruan et al., 2008). Reliability and validity of the AUDADIS-IV have been established (Grant et al., 2004, 2003; Ruan et al., 2008). Axis I disorders included: (1) mood disorders (major depression, dysthymia, mania, and hypomania), (2) anxiety disorders (panic disorder with or without agoraphobia, social phobia, specific phobia, generalized anxiety disorder, post-traumatic stress disorder), and (3) substance use disorders (alcohol abuse or dependence, prescription or illicit drug use or dependence). Axis II disorders included: (1) cluster A personality disorders (paranoid, schizoid, schizotypal), (2) cluster B personality disorders (antisocial, borderline, histrionic, narcissistic), and (3) cluster C personality disorders (avoidant, dependent, obsessive–compulsive).

1.2.5. Sociodemographic covariates. Sociodemographic covariates included sex (male/female), age (years), marital status (married/common-law, separated/divorced/widowed, never married/single), race/ethnicity (American Indian/Alaska Native, Black, Hawaiian/Pacific Islander, Hispanic, White), education (less than high school, high school, some college/university, post-secondary degree), and past year household income ($19,999 or less, $20,000 to $39,999, $40,000 to $69,999, $70,000 or more). Sociodemographic covariates were chosen based on their association with childhood emotional maltreatment (Black et al., 2001; Iwaniec et al., 2006) and/or mental disorders (Baumeister & Härter, 2007; Kessler, Chiu, Demler, & Walters, 2005).

1.3. Data analysis

Statistical weights were applied in all analyses to ensure that the NESARC data were representative of the general U.S. population. To account for the complex sampling design of the NESARC, Taylor series linearization was used as a variance estimation technique using SUDAAN software (Shah, Barnwell, & Biehler, 2004). First, descriptive statistics were computed to examine the distribution of sociodemographic characteristics, other types of child maltreatment, family history of dysfunction, and Axis I and Axis II mental disorders by childhood emotional maltreatment status. Second, logistic regression models were computed to examine the association between emotional maltreatment status and Axis I and Axis II mental disorders. These models compared emotional neglect relative to no emotional maltreatment, emotional abuse relative to no emotional maltreatment, both emotional neglect and emotional abuse relative to no emotional maltreatment, and emotional neglect relative to emotional abuse. Models were first adjusted for sociodemographic covariates (AOR-1), and then further adjusted for other forms of child maltreatment and family history of dysfunction (AOR-2). Finally, sex by emotional abuse and sex by emotional neglect interactions were examined in relation to Axis I and Axis II mental disorders. To protect against potential for error associated with multiple comparisons, results at a p-value of less than .01 (and corresponding 99% confidence intervals) were considered statistically significant.

2. Results

The prevalence of childhood emotional maltreatment was 14.1%; the most prevalent form was emotional neglect only (6.2%), followed by emotional abuse only (4.8%). Experiencing both emotional neglect and emotional abuse was the least common pattern of childhood emotional maltreatment (3.1%). The distribution of sociodemographic characteristics by childhood emotional maltreatment status is provided in Table 1. Experiencing both emotional neglect and emotional abuse was more prevalent among females compared to males (4% vs. 2%, respectively), and all categories of emotional maltreatment were most prevalent among separated, divorced, and widowed individuals as well as among participants self-identifying as American Indian or Alaskan Native. Respondents with higher levels of education and higher past year household incomes were less likely to report childhood emotional maltreatment than respondents with lower levels of education and household income. Childhood emotional maltreatment tended to exhibit high rates of co-occurrence with other forms of child maltreatment (odds ratios [ORs] ranged from 2.1 to 4.0 for emotional neglect only, from 5.0 to 29.6 for emotional abuse only, and from 10.1 to 68.0 for both emotional abuse and neglect) and a family history of dysfunction (ORs ranged from 2.2 to 8.3), particularly among respondents who reported experiencing both emotional neglect and emotional abuse in childhood (Table 2).

The association between childhood emotional maltreatment and Axis I disorders is shown in Table 3. In the models adjusting for sociodemographic covariates, with the exception of the association between emotional neglect only and hypomania and specific phobia, all categories of childhood emotional maltreatment were associated with significantly increased odds of each individual Axis I mental disorder assessed (Adjusted odds ratio [AOR-1] ranged from 1.2 to 2.1 for emotional neglect only; AOR-1 ranged from 1.7 to 4.3 for emotional abuse only; AOR-1 ranged from 1.7 to 4.7 for both emotional neglect and emotional abuse).

Relationships were attenuated after further adjustment for other forms of child maltreatment and family history of dysfunction. However, a substantial proportion of these relationships remained significant in the fully adjusted models.

Table 1
Sociodemographic characteristics by childhood emotional maltreatment status.

Sociodemographic characteristic	Childhood emotional maltreatment status				
	No emotional maltreatment (*N* = 29,134) (85.9%) *n* (%)	Emotional neglect only (*N* = 2227) (6.2%) *n* (%)	Emotional abuse only (*N* = 1726) (4.8%) *n* (%)	Emotional abuse and neglect (*N* = 1173) (3.1%) *n* (%)	χ^2
Sex					
Male	12,437 (86.9)	891 (6.0)	740 (4.9)	340 (2.2)	
Female	16,697 (85.0)	1336 (6.3)	986 (4.7)	833 (4.0)	19.086**
Marital status					
Married/common-law	16,145 (86.6)	1097 (6.0)	864 (4.5)	583 (3.0)	
Separated/divorced/widowed	7324 (81.9)	748 (8.1)	510 (5.6)	422 (4.4)	
Single (never married)	5665 (87.9)	382 (4.8)	352 (5.0)	168 (2.3)	14.844**
Race-ethnicity					
White	17,023 (86.3)	1250 (5.8)	927 (4.6)	756 (3.3)	
Black	5585 (86.0)	363 (5.4)	432 (6.7)	143 (1.9)	
American Indian/Alaskan Native	431 (78.3)	43 (7.1)	47 (7.6)	47 (7.0)	
Asian/Native Hawaiian/Pacific Islander	828 (88.3)	58 (6.7)	35 (3.7)	23 (1.4)	
Hispanic	5267 (83.9)	513 (9.2)	285 (3.8)	204 (3.0)	6.167**
Education					
Less than high school	4283 (80.3)	619 (10.9)	272 (4.9)	219 (3.9)	
High school	7862 (84.3)	697 (7.5)	467 (4.9)	316 (3.2)	
Some college/university	6187 (85.1)	406 (5.5)	464 (6.0)	287 (3.4)	
Post-secondary degree	10,802 (89.8)	505 (3.8)	523 (3.9)	351 (2.5)	14.116**
Past year household income					
$19,999 or less	6309 (81.0)	762 (9.2)	443 (5.6)	360 (4.3)	
$20,000–$39,999	7421 (84.6)	613 (7.0)	447 (5.0)	312 (3.4)	
$40,000–$69,999	7525 (86.4)	523 (6.1)	441 (4.7)	257 (2.8)	
$70,000 or more	7879 (89.6)	329 (3.7)	395 (4.2)	244 (2.5)	14.348**
Age					
Mean (SE)	48.1 (0.18)	50.9 (0.47)	45.3 (0.40)	47.0 (0.51)	

Note. Percentages are based on weighted *N*.
** $p \leq .001$.

Experiencing childhood emotional neglect only was associated with increased odds of major depression (AOR-2 = 1.3; 99% Confidence interval [CI] = 1.1–1.6), dysthymia (AOR-2 = 1.8; 99% CI = 1.3–2.3), any mood disorder (AOR-2 = 1.2; 99% CI = 1.0–1.5), and social phobia (AOR-2 = 1.4; 99% CI = 1.1–1.7). With the exception of hypomania, experiencing childhood emotional abuse only remained significantly associated with all other individual Axis I disorders assessed in the fully adjusted models (AOR-2 ranged from 1.3 to 2.3). Experiencing both emotional neglect and emotional abuse was associated with increased odds of major depression, dysthymia, mania, any mood disorder, panic disorder, social phobia, generalized anxiety disorder, post-traumatic stress disorder, and any Axis I disorder (AOR-2 ranged from 1.4 to 2.2). A direct comparison of emotional abuse only relative to emotional neglect only indicated that childhood emotional abuse was associated with significantly higher odds of a lifetime diagnoses of several specific Axis I mental disorders (i.e., major depression, mania, specific phobia, post-traumatic stress disorder, and alcohol abuse/dependence) relative to experiencing childhood emotional neglect only (AOR-2 ranged from 1.3 to 1.7).

The association between childhood emotional maltreatment and Axis II disorders is shown in Table 4. In the models adjusting for sociodemographic covariates, with the exception of the association between emotional neglect only and obsessive–compulsive personality, all categories of childhood emotional maltreatment were associated with significantly increased odds of each individual Axis II mental disorder assessed (AOR-1 ranged from 1.4 to 2.5 for emotional neglect only; AOR-1 ranged from 2.3 to 4.8 for emotional abuse only; AOR-1 ranged from 2.9 to 7.4 for both emotional neglect and emotional abuse).

After further adjustment for other forms of child maltreatment and family history of dysfunction, experiencing childhood emotional neglect only remained significantly associated with increased odds of schizoid, schizotypal, any cluster A, borderline, avoidant, and any Axis II personality disorder (AOR-2 ranged from 1.2 to 1.8). Experiencing childhood emotional abuse only remained associated with significantly increased odds of 9 of 10 individual (i.e., paranoid, schizotypal, antisocial, borderline, histrionic, narcissistic, avoidant, dependent, and obsessive compulsive) personality disorders assessed (AOR-2 ranged from 1.4 to 2.8) and experiencing both emotional neglect and emotional abuse in childhood remained associated with significantly increased odds of 6 of 10 individual (i.e., paranoid, schizoid, antisocial, borderline, avoidant, obsessive–compulsive) personality disorders assessed (AOR-2 ranged from 1.5 to 3.0). A direct comparison of emotional abuse only relative to emotional neglect only indicated that childhood emotional abuse was associated with significantly higher odds of a lifetime diagnoses borderline personality disorder (AOR-2 = 1.6; 99% CI = 1.1–2.4), narcissistic personality disorder (AOR-2 = 1.5; 99% CI = 1.1–2.2), any cluster B disorder (AOR-2 = 1.4; 99% CI = 1.1–1.9), obsessive–compulsive personality disorder (AOR-2 = 1.5;

Table 2
Co-occurrence of childhood emotional maltreatment with other forms of maltreatment and family history of dysfunction.

Childhood maltreatment	Childhood emotional maltreatment status			
	No emotional maltreatment (*N* = 29,134)	Emotional neglect only (*N* = 2227)	Emotional abuse only (*N* = 1726)	Emotional abuse and neglect (*N* = 1173)
Prevalence, *n* (%)				
Harsh physical punishment				
No	25,901 (89.5)	1714 (76.7)	462 (27.2)	174 (14.5)
Yes	3226 (10.5)	511 (23.3)	1264 (72.8)	995 (85.5)
Physical abuse				
No	28,237 (97.3)	1992 (89.9)	933 (54.6)	391 (34.4)
Yes	889 (2.7)	234 (10.1)	792 (45.4)	773 (65.6)
Sexual abuse				
No	26,680 (92.4)	1851 (85.2)	1185 (70.6)	593 (54.5)
Yes	2376 (7.6)	362 (14.8)	525 (29.4)	566 (45.5)
Exposure to IPV				
No	27,033 (93.8)	1820 (82.1)	1016 (60.1)	527 (47.8)
Yes	2050 (6.2)	395 (17.9)	701 (40.0)	638 (52.2)
Physical neglect				
No	23,399 (80.9)	1335 (60.3)	727 (42.9)	227 (19.6)
Yes	5688 (19.1)	880 (39.7)	993 (57.1)	943 (80.4)
Family history of dysfunction				
No	22,385 (77.4)	1351 (61.2)	765 (43.3)	333 (29.2)
Yes	6706 (22.6)	866 (38.8)	956 (56.7)	836 (70.8)
Odds ratio [99% CI]				
Harsh physical punishment	1.0	2.6 [2.2, 3.1]**	22.7 [18.9, 27.3]**	49.9 [38.5, 64.7]**
Physical abuse	1.0	4.0 [3.1, 5.2]**	29.6 [24.5, 35.9]**	68.0 [53.5, 86.5]**
Sexual abuse	1.0	2.1 [1.7, 2.6]**	5.0 [4.2, 6.1]**	10.1 [8.2, 12.5]**
Exposure to IPV	1.0	3.3 [2.7, 4.0]**	10.0 [8.4, 11.9]**	16.4 [13.1, 20.5]**
Physical neglect	1.0	2.8 [2.3, 3.3]**	5.7 [4.8, 6.7]**	17.4 [13.8, 22.0]**
Family history of dysfunction	1.0	2.2 [1.8, 2.6]**	4.5 [3.8, 5.3]**	8.3 [6.8, 10.1]**

Note. Percentages are based on weighted *N*. IPV, intimate partner violence; CI, confidence interval.
** $p \leq .001$.

99% CI = 1.0, 2.1), and any Axis II disorder (AOR-2 = 1.4; 99% CI = 1.1, 1.8) relative to experiencing childhood emotional neglect only.

Finally, all sex by emotional maltreatment status interaction terms were non-significant at $p < .01$, indicating that childhood experiences of emotional maltreatment have similar effects on both men and women.

3. Discussion

This study contributes to the existing literature on the childhood emotional maltreatment in several ways. First, 14% of the U.S. general population reported experiencing emotional maltreatment from a parent or other caregiver living in the home before the age of 18 years. The most prevalent form of child maltreatment was emotional neglect only (6.2%), followed by emotional abuse only (4.8%). The least prevalent pattern was experiencing both childhood emotional abuse and neglect (3.1%). Second, childhood emotional maltreatment, particularly among participants experiencing both emotional abuse and emotional neglect, exhibited a high rate of co-occurrence with other forms of child maltreatment (ORs ranged from 2.1 to 68.0). Of particular note is the relationship between emotional abuse only and both emotional abuse and neglect with harsh physical punishment (ORs of 22.7 and 49.9, respectively) and physical abuse (ORs of 29.6 and 68.0, respectively). Third, all categories of emotional maltreatment were associated with increased odds of several Axis I and Axis II mental disorders independent of sociodemographic characteristics, other forms of child maltreatment, and a family history of dysfunction. Finally, the effects of childhood emotional abuse appeared to be stronger than the effects of childhood emotional neglect for many outcomes.

The finding that 14% of the U.S. adult population reported experiencing childhood emotional maltreatment is similar to prevalence estimates from other representative samples (Afifi et al., 2011; Finkelhor, Turner, Ormrod, & Hamby, 2010; Johnson et al., 2000; Waxman et al., 2014). However, across the literature, prevalence estimates vary widely due to differences in sample characteristics, how emotional maltreatment is defined, the specific type of emotional maltreatment assessed, and the operationalization of emotional maltreatment constructs. For example, of child maltreatment cases reported to the National Child Abuse and Neglect Data System (NCANDS) in the U.S., the mean number of child emotional abuse victims was 11.7 per 10,000 children 0 to 18 years old (Hamarman, Pope, & Czaja, 2002). It is significant to note that there was more than a 300-fold variation in rates of emotional abuse among the 43 states reporting emotional abuse to NCANDS (Hamarman et al., 2002). To date, no uniform legal definition of what constitutes emotional maltreatment exists, there is a lack of consensus regarding the definition and measurement of emotionally abusive and neglecting parental actions, and a "gold standard"

Table 3
The association between emotional maltreatment and Axis I mental disorders.

Axis I mental disorder	Childhood emotional maltreatment status				
	No emotional maltreatment	Emotional neglect only	Emotional abuse only	Emotional abuse and neglect	Emotional neglect[a] vs. emotional abuse
AOR-1[c] [99% CI]					
Mood disorders					
Major depression	1.0	1.6 [1.4, 1.9]**	3.0 [2.5, 3.5]**	4.2 [3.4, 5.3]**	1.8 [1.4, 2.3]**
Dysthymia	1.0	2.1 [1.6, 2.8]**	3.2 [2.4, 4.1]**	4.6 [3.5, 5.9]**	1.5 [1.1, 2.1]*
Mania	1.0	1.7 [1.2, 2.2]**	4.3 [3.4, 5.4]**	4.3 [3.3, 5.6]**	2.6 [1.8, 3.7]**
Hypomania	1.0	1.0 [0.7, 1.3]	1.7 [1.3, 2.4]**	1.7 [1.2, 2.5]**	1.8 [1.2, 2.8]**
Any mood disorder	1.0	1.5 [1.3, 1.8]**	3.1 [2.6, 3.7]**	4.2 [3.4, 5.2]**	2.0 [1.6, 2.5]**
Anxiety disorders					
Panic disorder[b]	1.0	1.5 [1.2, 1.9]**	2.9 [2.2, 3.7]**	3.8 [2.9, 4.8]**	1.9 [1.4, 2.6]**
Social phobia	1.0	1.6 [1.3, 2.0]**	2.5 [1.9, 3.1]**	3.6 [2.8, 4.7]**	1.5 [1.1, 2.1]**
Specific phobia	1.0	1.2 [1.0, 1.4]	2.3 [1.9, 2.7]**	2.0 [1.6, 2.6]**	1.9 [1.5, 2.5]**
GAD	1.0	1.5 [1.2, 1.9]**	2.8 [2.2, 3.5]**	4.1 [3.2, 5.2]**	1.9 [1.3, 2.7]**
PTSD	1.0	1.4 [1.0, 1.9]*	3.5 [2.7, 4.4]**	4.7 [3.7, 5.9]**	2.4 [1.7, 3.6]**
Any anxiety disorder	1.0	1.4 [1.2, 1.6]**	2.7 [2.3, 3.3]**	3.5 [2.8, 4.4]**	2.0 [1.6, 2.5]**
Substance use disorders					
Alcohol abuse/dependence	1.0	1.2 [1.0, 1.5]*	2.2 [1.9, 2.6]**	1.9 [1.5, 2.4]**	1.8 [1.4, 2.2]**
Drug abuse/dependence	1.0	1.5 [1.1, 1.9]**	2.7 [2.1, 3.3]**	2.8 [2.2, 3.5]**	1.8 [1.3, 2.5]**
Any substance use disorder	1.0	1.3 [1.1, 1.6]**	2.4 [2.0, 2.8]**	2.1 [1.7, 2.7]**	1.8 [1.4, 2.2]**
Any Axis I disorder	1.0	1.4 [1.2, 1.7]**	3.5 [2.8, 4.4]**	3.8 [2.9, 5.1]**	2.5 [1.9, 3.2]**
AOR-2[d] [99% CI]					
Mood disorders					
Major depression	1.0	1.3 [1.1, 1.6]**	1.7 [1.4, 2.1]**	1.9 [1.4, 2.5]**	1.3 [1.0, 1.7]*
Dysthymia	1.0	1.8 [1.3, 2.3]**	1.9 [1.4, 2.7]**	2.2 [1.5, 3.2]**	1.1 [0.8, 1.6]
Mania	1.0	1.3 [1.0, 1.8]	2.3 [1.6, 3.1]**	1.7 [1.1, 2.4]**	1.7 [1.1, 2.6]**
Hypomania	1.0	0.8 [0.6, 1.2]	1.1 [0.8, 1.6]	0.9 [0.5, 1.5]	1.4 [0.9, 2.2]
Any mood disorder	1.0	1.2 [1.0, 1.5]*	1.7 [1.4, 2.1]**	1.8 [1.3, 2.3]**	1.4 [1.1, 1.8]**
Anxiety disorders					
Panic disorder[b]	1.0	1.3 [1.0, 1.6]	1.7 [1.2, 2.3]**	1.8 [1.3, 2.5]**	1.3 [1.0, 1.9]
Social phobia	1.0	1.4 [1.1, 1.7]*	1.7 [1.3, 2.4]**	2.2 [1.5, 3.1]**	1.3 [0.9, 1.8]
Specific phobia	1.0	1.0 [0.8, 1.2]	1.5 [1.3, 1.9]**	1.2 [0.9, 1.5]	1.5 [1.2, 2.0]**
GAD	1.0	1.2 [0.9, 1.6]	1.6 [1.2, 2.2]**	1.9 [1.3, 2.6]**	1.4 [0.9, 2.0]
PTSD	1.0	1.1 [0.8, 1.4]	1.7 [1.3, 2.3]**	1.7 [1.2, 2.2]**	1.6 [1.1, 2.4]*
Any anxiety disorder	1.0	1.1 [1.0, 1.3]	1.6 [1.3, 2.0]**	1.6 [1.2, 2.0]**	1.4 [1.1, 1.8]**
Substance use disorders					
Alcohol abuse/dependence	1.0	1.0 [0.9, 1.2]	1.4 [1.1, 1.7]**	0.9 [0.7, 1.2]	1.3 [1.1, 1.7]*
Drug abuse/dependence	1.0	1.1 [0.9, 1.5]	1.3 [1.0, 1.7]*	1.0 [0.7, 1.3]	1.2 [0.8, 1.7]
Any substance use disorder	1.0	1.1 [0.9, 1.3]	1.4 [1.1, 1.7]**	1.0 [0.8, 1.3]	1.3 [1.0, 1.7]*
Any Axis I disorder	1.0	1.1 [1.0, 1.3]	1.9 [1.5, 2.4]**	1.4 [1.0, 2.0]*	1.7 [1.3, 2.2]**

Note. GAD, generalized anxiety disorder; PTSD, post-traumatic stress disorder; AOR, adjusted odds ratio; CI, confidence interval.

[a] Emotional neglect is the reference category with an odds of 1.0.

[b] Panic disorder with or without agoraphobia.

[c] AOR-1 = odds ratios adjusted for sex, age, race, marital status, education, and income.

[d] AOR-2 = odds ratios adjusted for sociodemographics listed above (AOR-1) as well as childhood physical neglect, harsh physical punishment, physical abuse, sexual abuse, exposure to intimate partner violence, and family history of dysfunction.

* $p \leq .01$.

** $p \leq .001$.

measure of emotional maltreatment has yet to be developed (Baker, 2009; Glaser, 2011; Hamarman et al., 2002; Tonmyr et al., 2011; Trocmé et al., 2011). Resolving these issues will help integrate findings across studies and advance the body of knowledge on emotional maltreatment (Baker, 2009).

Within the child welfare system, emotional maltreatment tends to be more chronic than other forms of maltreatment substantiated by child protective organizations (Chamberland et al., 2012). However, cases of emotional maltreatment, especially in a single form, are less visible, less prioritized, and less subject to protective service intervention (Chamberland et al., 2011). For example, emotional maltreatment represents the primary type of substantiated maltreatment in only 9% of all cases investigated by child welfare agencies in Canada (Public Health Agency of Canada, 2010). In this study, we found that respondents were slightly more likely to report experiencing emotional neglect than emotional abuse in childhood, and there is evidence suggesting that emotional neglect is less likely to come to the attention of child welfare agencies than emotional abuse. Data from the Canadian Incidence Study of Reported Child Abuse and Neglect indicate that reports of emotional abuse were almost 2.5 times more frequent than reports of emotional neglect across child welfare agencies in Canada (Chamberland et al., 2011). The decreased detection of, and intervention with, cases of emotional neglect could be because acts of omission (e.g., emotional neglect) are more difficult to identify than acts of commission (e.g., emotional abuse)

Table 4
The association between emotional maltreatment and Axis II mental disorders.

Axis II mental disorder	Childhood emotional maltreatment status				
	No emotional maltreatment	Emotional neglect only	Emotional abuse only	Emotional abuse and neglect	Emotional neglect[a] vs. emotional abuse
AOR-1[b] [99% CI]					
Cluster A disorders					
Paranoid PD	1.0	1.6 [1.1, 2.2]*	3.2 [2.5, 4.2]**	4.8 [3.5, 6.5]**	2.1 [1.4, 3.2]**
Schizoid PD	1.0	2.0 [1.4, 2.9]**	2.4 [1.6, 3.5]**	4.8 [3.4, 6.7]**	1.2 [0.7, 2.0]
Schizotypal PD	1.0	2.1 [1.5, 2.8]**	4.7 [3.7, 6.1]**	5.0 [3.7, 6.7]**	2.3 [1.5, 3.4]**
Any Cluster A PD	1.0	1.9 [1.5, 2.3]**	3.7 [3.1, 4.5]**	5.0 [3.9, 6.4]**	2.0 [1.5, 2.6]**
Cluster B disorders					
Antisocial PD	1.0	1.6 [1.1, 2.3]*	3.9 [2.8, 5.3]**	7.4 [5.4, 10.2]**	2.4 [1.6, 3.8]**
Borderline PD	1.0	1.8 [1.4, 2.5]**	4.8 [3.8, 6.0]**	5.8 [4.5, 7.3]**	2.6 [1.8, 3.7]**
Histronic PD	1.0	2.1 [1.3, 3.4]**	3.8 [2.5, 5.6]**	3.3 [2.1, 5.2]**	1.8 [1.0, 3.3]*
Narcissictic PD	1.0	1.4 [1.1, 1.8]*	3.1 [2.5, 3.8]**	3.4 [2.5, 4.5]**	2.2 [1.6, 3.1]**
Any Cluster B PD	1.0	1.6 [1.3, 2.1]**	3.8 [3.2, 4.6]**	5.5 [4.5, 6.8]**	2.3 [1.8, 3.1]**
Cluster C disorders					
Avoidant PD	1.0	2.1 [1.4, 3.1]**	2.7 [1.8, 4.0]**	5.4 [3.8, 7.7]**	1.3 [0.8, 2.0]
Dependent PD	1.0	2.5 [1.2, 5.4]*	3.9 [1.6, 9.5]**	3.8 [1.7, 8.4]**	1.6 [0.6, 4.3]
Obsessive–compulsive PD	1.0	1.2 [0.9, 1.6]	2.3 [1.9, 2.9]**	2.9 [2.3, 3.8]**	1.9 [1.3, 2.7]**
Any Cluster C PD	1.0	1.4 [1.1, 1.7]*	2.4 [1.9, 2.9]**	3.6 [2.9, 4.5]**	1.8 [1.3, 2.4]**
Any Axis II disorder	1.0	1.6 [1.3, 1.9]**	3.4 [2.9, 4.0]**	5.2 [4.3, 6.3]**	2.2 [1.7, 2.7]**
AOR-2[c] [99% CI]					
Cluster A disorders					
Paranoid PD	1.0	1.3 [0.9, 1.8]	1.9 [1.3, 2.6]**	2.2 [1.4, 3.3]**	1.4 [0.9, 2.2]
Schizoid PD	1.0	1.7 [1.1, 2.5]**	1.5 [1.0, 2.5]	2.6 [1.7, 4.0]**	0.9 [0.5, 1.6]
Schizotypal PD	1.0	1.5 [1.1, 2.1]**	2.1 [1.5, 2.9]**	1.5 [1.0, 2.3]	1.4 [0.9, 2.1]
Any Cluster A PD	1.0	1.5 [1.2, 1.9]**	2.0 [1.5, 2.5]**	2.1 [1.5, 2.9]**	1.3 [1.0, 1.8]
Cluster B disorders					
Antisocial PD	1.0	1.2 [0.8, 1.7]	1.5 [1.0, 2.2]*	2.0 [1.4, 3.1]**	1.3 [0.8, 2.1]
Borderline PD	1.0	1.4 [1.0, 1.9]*	2.2 [1.6, 3.0]**	1.8 [1.3, 2.6]**	1.6 [1.1, 2.4]*
Histronic PD	1.0	1.7 [1.0, 2.9]	2.2 [1.3, 3.7]**	1.5 [0.8, 2.7]	1.3 [0.7, 2.5]
Narcissictic PD	1.0	1.1 [0.8, 1.5]	1.7 [1.3, 2.3]**	1.4 [1.0, 2.1]	1.5 [1.1, 2.2]*
Any Cluster B PD	1.0	1.2 [1.0, 1.6]	1.8 [1.4, 2.3]**	1.8 [1.4, 2.4]**	1.4 [1.1, 1.9]*
Cluster C disorders					
Avoidant PD	1.0	1.8 [1.2, 2.8]**	1.8 [1.1, 3.0]*	3.0 [1.8, 5.1]**	1.0 [0.6, 1.7]
Dependent PD	1.0	2.2 [1.0, 4.8]	2.8 [1.1, 7.0]*	2.3 [0.8, 6.5]	1.3 [0.5, 3.7]
Obsessive–compulsive PD	1.0	1.0 [0.7, 1.3]	1.4 [1.1, 1.9]**	1.5 [1.1, 2.1]*	1.5 [1.0, 2.1]*
Any Cluster C PD	1.0	1.1 [0.9, 1.4]	1.5 [1.1, 1.9]**	1.9 [1.4, 2.5]**	1.3 [1.0, 1.9]
Any Axis II disorder	1.0	1.2 [1.0, 1.5]*	1.7 [1.4, 2.2]**	2.0 [1.6, 2.5]**	1.4 [1.1, 1.8]**

Note. PD, personality disorder; AOR, adjusted odds ratio; CI, confidence interval.

[a] Emotional neglect is the reference category with an odds of 1.0.

[b] AOR-1 = odds ratios adjusted for sex, age, race, marital status, education, and income.

[c] AOR-2 = odds ratios adjusted for sociodemographics listed above (AOR-1) as well as childhood physical neglect, harsh physical punishment, physical abuse, sexual abuse, exposure to intimate partner violence, and family history of dysfunction.

* $p \leq .01$.

** $p \leq .001$.

(Chamberland et al., 2011). Recognizing and responding to emotional maltreatment in all its forms remains an important public health priority.

Researchers have speculated that emotional maltreatment is a core component of all forms of child maltreatment (Garbarino et al., 1986; Hart & Brassard, 1987), and the high rate of co-occurrence of emotional maltreatment with other forms of child maltreatment and family dysfunction found in this study lends support to this assertion. While emotional maltreatment can occur in the absence of other maltreatment, the reverse is less common (Chamberland et al., 2011; Gibb, Chelminski, et al., 2007). The specific effects of emotional maltreatment are often confounded by the high association between different types of abuse (Bifulco et al., 2002), and the failure to account for co-occurring forms of child maltreatment in analyses may lead to biased estimates of the association between childhood emotional maltreatment and adult mental health. Emotional maltreatment has also been found to co-occur with other dysfunctional parenting practices (Bifulco et al., 2002; Taillieu & Brownridge, 2013). Given the high correlation between childhood emotional maltreatment, other forms of child abuse, and dysfunctional family environments reported in this study and elsewhere (Bifulco et al., 2002; Bruce et al., 2012; Finza-Dottan & Karu, 2006; Taillieu & Brownridge, 2013; Vachon et al., 2015; Waxman et al., 2014), the presence of emotional maltreatment should alert professionals to the possibility of other forms of maltreatment and dysfunctional parenting occurring in the family.

Disentangling the specific effects of various forms of child maltreatment has important implications for intervention and treatment strategies. If specificity of effects are noted (i.e., specific types of maltreatment are associated with specific disorders) then researchers can focus on identifying potential mediators (Gibb, Chelminski, et al., 2007). However, if effects

are non-specific (i.e., specific types of maltreatment are associated with a variety of different disorders), then researchers should focus on moderators, and factors contributing to development of one disorder relative to another become more important (Gibb, Chelminski, et al., 2007). In this study, the relationship between emotional maltreatment and mental disorders appeared to be somewhat contingent on the type of emotional maltreatment (abuse vs. neglect) experienced in childhood.

Childhood emotional neglect was associated with lifetime diagnoses of specific mental disorders (i.e., major depression, dysthymia, social phobia, as well as schizoid, schizotypal, borderline, and avoidant personality disorders). These disorders seem to suggest social withdrawal and avoidance of, or difficulty with, interpersonal relationships. The lack of love, affection, and support that characterizes emotional neglect likely compromises a child's ability to form a secure attachment with caregivers (Ainsworth, 1979), which is hypothesized to provide the foundation for later individual differences in personality development and psychopathology (Bowlby, 1973). Once an attachment pattern is formed, it tends to endure and forms the basis of attachment patterns through the development of internal representations, or "working models" of self and others throughout the lifespan (Ainsworth, 1979). Therefore, the mechanism linking childhood emotional neglect to specific disorders could be through its impact on early attachment processes. Other potential mediators of the relationship between childhood emotional maltreatment (primarily emotional abuse) and later mental health problems that have received some support in the literature include emotional dysregulation (Coates & Messman-Moore, 2014), immature coping styles and low self-esteem (Finza-Dottan & Karu, 2006), hopelessness (Hamilton et al., 2013), and negative automatic thoughts (Gibb, Benas, Crossett, & Uhrlass, 2007; van Harmelen et al., 2010).

In contrast, the effects of childhood emotional abuse appeared to manifest across a broad spectrum of mental disorders across the lifespan. This could be evidence for the non-specificity of effects of childhood emotional abuse on adult mental health. While emotional neglect is a more singular construct (e.g., denying emotional responsiveness to the child), emotional abuse encompasses a variety of different parental actions (e.g., threats, belittling, degradation, hostility) and it could be that specific types of emotional abuse have specific effects on mental health. For example, terroristic types of behavior likely generate fear and threats to physical safety whereas spurning might have more of an impact on self-esteem and self-acceptance (Chamberland et al., 2012). Future research examining specific subtypes of emotional abuse may help to clarify the relationship between childhood emotional abuse and adult mental health.

This study also found that childhood experiences of emotional abuse appear to be particularly damaging to long-term mental health, and emotional abuse was more strongly associated with many of the mental disorders in this study than emotional neglect. Emotional abuse may be particularly harmful to long-term mental health because negative cognitions are directly given to child (e.g., you are worthless), whereas for other forms of maltreatment, including emotional neglect, the child has to find their own attributions regarding the cause (Gibb, 2002). That is not to say that emotional neglect is not harmful; it was clearly associated with poor mental health outcomes in this study. It could also be that emotional neglect is more strongly associated with more externalizing problem behaviors (e.g., criminality, aggression, impulsivity) that were not assessed in this study. There is evidence suggesting that parental rejection and low parental warmth and responsiveness are associated with externalizing problem behaviors among children and adolescents (Muris, Meesters, & van den Berg, 2003; Roelofs, Meesters, ten Huurne, Bamelis, & Muris, 2006; White & Renk, 2012), and it could be that childhood emotional neglect manifests as externalizing problem throughout the lifespan.

Strengths of this study include the inclusion and comparison of both active (i.e., emotional abuse) and passive (i.e., emotional neglect) forms of emotional maltreatment, the assessment of a broad range of mental disorders, and the use of a nationally representative dataset. This study is also subject to a number of limitations that should born in mind when extrapolating from results. First, the data were cross-sectional, which precludes establishment of the temporal sequence of constructs and makes inferences about causality impossible. Second, the retrospective nature of the data collection introduces the possibility of recall bias. It is important to note that participants were asked to report on childhood experiences that may have occurred decades earlier, and the time interval between when child maltreatment occurred and the data were collected varied substantially across participants. In addition, current mental health status may have influenced perceptions of childhood experiences. However, there is evidence supporting the validity of accurate recall of adverse childhood events (Hardt & Rutter, 2004). Third, although mental disorder diagnoses were made by a reliable structured interview conducted by trained lay interviews, this assessment approach may not match the accuracy of an experienced clinician. Fourth, the assessment of emotional abuse and emotional neglect were limited to variables available in the dataset. It is widely accepted that five main types of emotional maltreatment exist: spurning, terrorizing, corrupting/exploiting, isolating, and denying emotional responsiveness (American Professional Society on the Abuse of Children, 1995; Hart & Brassard, 1987). Although we were able to tap into (albeit limited) aspects of spurning, terrorizing, and denying emotional responsiveness in this study, measures of corrupting/exploiting and isolating components of emotional maltreatment were not assessed in the dataset. More comprehensive assessments of all components of emotional maltreatment are an important avenue for future research. As well, the failure to collect information of intimate partner violence perpetrated by female caregivers represents an important source of bias in this study. Finally, proposed mechanisms linking childhood emotional maltreatment to adult mental disorders were not considered in this study. Longitudinal data are required to better understand the influence of early childhood experiences on subsequent functioning and behavior.

Given the high prevalence of childhood emotional maltreatment reported in this study and its association with other forms of child maltreatment and compromised adult mental health, parents and other caregivers need to be made aware of the harmful effects that emotional maltreatment has on long-term mental health. However, a review of universal

evidenced-based parenting programs found that most contained no content specific to emotional maltreatment (Baker, Brassard, Schneiderman, Donnelly, & Bahl, 2011). The only type of emotional maltreatment that was consistently addressed in all of the programs reviewed was spurning/belittling. This is concerning given a growing body of research linking childhood experiences of emotional maltreatment to a variety of adverse outcomes. A focus on the reduction of non-physical forms of parental aggression needs to be integrated into both efforts to promote positive parenting and to reduce child maltreatment.

4. Competing interests

None to declare.

References

Ackner, S., Skeate, A., Patterson, P., & Neal, A. (2013). Emotional abuse and psychosis: A recent review of the literature. *Journal of Aggression, Maltreatment, & Trauma*, *22*(9), 1032–1049. http://dx.doi.org/10.1080/10926771.2013.837132

Afifi, T. O., Mather, A., Boman, J., Fleischer, W., Enns, M. W., MacMillan, H., et al. (2011). Childhood adversity and personality disorders: Results from a nationally representative population-based study. *Journal of Psychiatric Research*, *45*, 814–822. http://dx.doi.org/10.1016/j.jpsychires.2010.11.008

Ainsworth, M. D. S. (1979). Infant-mother attachment. *American Psychologist*, *34*(10), 932–937.

American Professional Society on the Abuse of Children. (1995). *Psychosocial evaluation of suspected psychological maltreatment in children and practice guidelines*. Chicago, IL: American Professional Society on the Abuse of Children.

American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, DC: American Psychiatric Association.

Baker, A. J. L., Brassard, M. R., Schneiderman, M. S., Donnelly, L. J., & Bahl, A. (2011). How well do evidence-based parenting programs teach parents about psychological maltreatment? A program review. *Child Abuse & Neglect*, *35*, 855–865. http://dx.doi.org/10.1016/j.chiabu.2011.05.013

Baker, A. J. L. (2009). Adult recall of psychological maltreatment: Definitional strategies and challenges. *Children and Youth Services Review*, *31*, 703–714. http://dx.doi.org/10.1016/j.childyouth.2009.03.001

Baumeister, H., & Härter, M. (2007). Prevalence of mental disorders based on general population surveys. *Social Psychiatry and Psychiatric Epidemiology*, *42*(7), 537–546.

Bifulco, A., Moran, P. M., Baines, R., Bunn, A., & Stanford, K. (2002). Exploring psychological abuse in childhood: II. Association with other abuse and adult clinical depression. *Bulletin of the Menninger Clinic*, *6*(3), 241–258.

Black, D. A., Slep, A. M. S., & Heyman, R. E. (2001). Risk factors for psychological abuse. *Aggression and Violent Behavior*, *6*, 189–201.

Bowlby, J. (1969). *Attachment and loss: Volume 1. Attachment*. New York: Basic Books.

Bowlby, J. (1973). *Attachment and loss: Volume 2. Separation: Anxiety and anger*. London: The Hogworth Press.

Bruce, L. C., Heimberg, R. G., Blanco, C., Schneier, F. R., & Liebowitz, M. R. (2012). Childhood maltreatment and social anxiety disorder: Implications for symptom severity and response to pharmacotherapy. *Depression and Anxiety*, *29*, 131–138. http://dx.doi.org/10.1002/da.20909

Chamberland, C., Fallon, B., Black, T., Nico, T., & Chabot, M. (2012). Correlates of substantiated emotional maltreatment in the second Canadian incidence study. *Journal of Family Violence*, *27*, 201–213. http://dx.doi.org/10.1007/s10896-012-9414-8

Chamberland, C., Fallon, B., Black, T., & Trocmé, N. (2011). Emotional maltreatment in Canada: Prevalence, reporting and child welfare responses (CIS2). *Child Abuse & Neglect*, *35*, 841–854. http://dx.doi.org/10.1016/j.chiabu.2011.03.010

Coates, A. A., & Messman-Moore, T. L. (2014). A structural model of mechanisms predicting depressive symptoms in women following childhood psychological maltreatment. *Child Abuse & Neglect*, *38*, 103–113. http://dx.doi.org/10.1016/j.chiabu.2013.10.005

Dong, M., Anda, R. F., Dube, S. R., Giles, W. H., & Felitti, V. J. (2003). The relationship of exposure to childhood sexual abuse to other forms of abuse, neglect, and household dysfunction during childhood. *Child Abuse & Neglect*, *27*(6), 625–639. http://dx.doi.org/10.1016/S0145-2134(03)00105-4

Dube, S. R., Felitti, V. J., Dong, M., Chapman, D. P., Giles, W. H., & Anda, R. F. (2003). Child abuse, neglect, and household dysfunction and the risk of illicit drug use: The adverse childhood experiences survey. *Pediatrics*, *111*(3), 564–572. http://dx.doi.org/10.1542/peds.111.3.564

Ferguson, K. S., & Dacey, C. M. (1997). Anxiety, depression, and dissociation in women health care providers reporting a history of childhood psychological abuse. *Child Abuse & Neglect*, *21*(10), 941–952.

Finkelhor, D., Turner, H., Ormrod, R., & Hamby, S. L. (2010). Trends in childhood violence and abuse exposure: Evidence from 2 national surveys. *Archives of Pediatric and Adolescent Medicine*, *164*(3).

Finza-Dottan, R., & Karu, T. (2006). From emotional abuse in childhood to psychopathology in adulthood: A path mediated by immature defense mechanisms and self-esteem. *The Journal of Nervous and Mental Disease*, *194*(8), 616–621. http://dx.doi.org/10.1097/01.nmd.0000230654.49933.23

Garbarino, J., Guttman, E., & Wilson Seeley, J. (1986). *The psychologically battered child*. San Francisco, CA: Jossey-Bass Inc.

Gibb, B. E. (2002). Childhood maltreatment and negative cognitive styles: A quantitative and qualitative review. *Clinical Psychology Review*, *22*, 223–246.

Gibb, B. E., Benas, J. S., Crossett, S. E., & Uhrlass, D. J. (2007). Emotional maltreatment and verbal victimization in childhood: Relations to adults' depressive cognitions and symptoms. *Journal of Emotional Abuse*, *7*(2), 59–73. http://dx.doi.org/10.1300/J135v07n02_04

Gibb, B. E., Chelminski, I., & Zimmerman, M. (2007). Childhood emotional, physical, and sexual abuse, and diagnoses of depressive and anxiety disorders in adult psychiatric outpatients. *Depression and Anxiety*, *24*, 256–263. http://dx.doi.org/10.1002/da.20238

Gibb, B. E., Wheeler, R., Alloy, L. B., & Abramson, L. Y. (2001). Emotional, physical, and sexual maltreatment in childhood versus adolescence and personality dysfunction in young adulthood. *Journal of Personality Disorders*, *15*(6), 505–511.

Gilbert, R., Fluke, J., O'Donnell, M., Gonzalez-Izquierdo, A., Brownell, M., Janson, S., et al. (2012). Child maltreatment: Variations in trends and policies in six developed countries. *Lancet*, *379*, 758–772. http://dx.doi.org/10.1016/S0140-6736(11)61087-8

Glaser, D. (2011). How to deal with emotional abuse and neglect: Further development of a conceptual framework (FRAMEA). *Child Abuse & Neglect*, *35*, 866–875. http://dx.doi.org/10.1016/j.chiabu.2011.08.002

Grant, B. F., Dawson, D. A., Stinson, F. S., Chou, P. S., Kay, W., & Pickerling, R. P. (2003). The alcohol use disorder and associated disabilities interview schedule-iv (AUDADIS-IV): Reliability of alcohol consumption, tobacco use, family history of depression, and psychiatric diagnostic modules in a general population sample. *Drug and Alcohol Dependence*, *17*, 7–16.

Grant, B. F., Stinson, F. S., Dawson, D. A., Chou, P., Dufour, M. C., Compton, W., et al. (2004). Prevalence and co-occurrence of substance use disorders and independent mood and anxiety disorders: Results from the national epidemiological survey on alcohol and related conditions. *Archives of General Psychiatry*, *61*, 807–816.

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. http://dx.doi.org/10.1177/107755902237261

Hamilton, J. L., Shapero, B. G., Stange, J. P., Hamlat, E. J., Abramson, L. Y., & Alloy, L. B. (2013). Emotional maltreatment, peer victimization, and depressive versus anxiety symptoms during adolescence: Hopelessness as a mediator. *Journal of Clinical Child & Adolescent Psychology*, *42*(3), 332–347. http://dx.doi.org/10.1080/15374416.2013.777916

Hardt, J., & Rutter, M. (2004). Validity of adult retrospective reports of adverse childhood experiences: Review of the evidence. *Journal of Child Psychology and Psychiatry*, *45*(2), 260–273. http://dx.doi.org/10.1111/j.1469-7610.2004.00218.x

Hart, S. N., & Brassard, M. R. (1987). Psychological maltreatment: A major threat to children's mental health. *American Psychologist*, *42*(2), 160–165.

Iwaniec, D., Larkin, E., & Higgins, S. (2006). Research review: Risk and resilience in cases of emotional abuse. *Child and Family Social Work*, *11*, 73–82.
Johnson, J. G., Smailes, E. M., Cohen, P., Brown, J., & Bernstein, D. P. (2000). Associations between four types of childhood neglect and personality disorder symptoms during adolescence and early adulthood: Findings of a community-based longitudinal study. *Journal of Personality Disorders*, *14*(2), 171–187.
Kairys, S. W., Johnson, C. F., & The Committee on Child Abuse and Neglect. (2002). The psychological maltreatment of children: Technical report. *Pediatrics*, *109*(4), 1–3.
Kessler, R. C., Chiu, W. T., Demler, O., & Walters, E. E. (2005). Prevalence, severity, and comorbidity of 12-month DSM-IV disorders in the National Comorbidity Survey Replication. *Archives of General Psychiatry*, *62*(6), 617–627. http://dx.doi.org/10.1001/archpsych.62.6.617
Kuo, J. R., Goldin, P. R., Werner, K., Richard, G., & Gross, J. J. (2011). Childhood trauma and current psychological functioning in adults with social anxiety disorder. *Journal of Anxiety Disorders*, *25*, 467–473. http://dx.doi.org/10.1016/j.janxdis.2010.11.011
Lobbestael, J., Arntz, A., & Bernstein, D. P. (2010). Disentangling the relationship between different types of childhood maltreatment and personality disorders. *Journal of Personality Disorders*, *24*(3), 285–295.
Miller-Perrin, C. L., Perrin, R. D., & Kocur, J. L. (2009). Parental physical and psychological aggression: Psychological symptoms in young adults. *Child Abuse & Neglect*, *33*, 1–11. http://dx.doi.org/10.1016/j.chiabu.2008.12.001
Moran, P. B., Vuchinich, S., & Hall, N. K. (2004). Associations between types of maltreatment and substance use during adolescence. *Child Abuse & Neglect*, *28*, 565–574. http://dx.doi.org/10.1016/j.chiabu.2003.12.002
Muris, P., Meesters, C., & van den Berg, S. (2003). Internalizing and externalizing problems as correlates of self-reported attachment style and perceived parental rearing in normal adolescents. *Journal of Child and Family Studies*, *12*(2), 171–183.
Public Health Agency of Canada. (2010). *Canadian incidence study of reported child abuse and neglect – 2008: Major findings*. Ottawa, ON: Public Health Agency of Canada.
Roelofs, J., Meesters, C., ten Huurne, M., Bamelis, L., & Muris, P. (2006). On the links between attachment style, parental rearing behaviors, and internalizing and externalizing problems in non-clinical children. *Journal of Child and Family Studies*, *15*(3), 331–344. http://dx.doi.org/10.1007/s10826-006-9025-1
Rosenkranz, S. E., Muller, R. T., & Henderson, J. L. (2012). Psychological maltreatment in relation to substance use problem severity among youth. *Child Abuse & Neglect*, *36*, 438–448. http://dx.doi.org/10.1016/j.chiabu.2012.01.005
Ruan, W. J., Goldstein, R. B., Chou, S. P., Smith, S. M., Saha, T. D., Pickering, R. P., et al. (2008). The alcohol use disorder and associated disabilities interview schedule IV (AUDADIS-IV): Reliability of new psychiatric diagnostic modules and risk factors in a general population sample. *Drug and Alcohol Dependence*, *92*, 27–36. http://dx.doi.org/10.1016/j.drugalcdep.2007.06.001
Shah, B. V., Barnwell, B. G., & Biehler, G. S. (2004). *SUDAAN user's guide manual: Release [9.0]*. Triangle Park, NC: Research Triangle Institute.
Taillieu, T. L., & Brownridge, D. A. (2013). Aggressive parental discipline experienced in childhood and internalizing problems in early adulthood. *Journal of Family Violence*, *28*(445), 458. http://dx.doi.org/10.1007/s10896-013-9513-1
Tonmyr, L., Draca, J., Crain, J., & MacMillan, H. L. (2011). Measurement of emotional/psychological child maltreatment: A review. *Child Abuse & Neglect*, *35*, 767–782. http://dx.doi.org/10.1016/j.chiabu.2011.04.011
Trocmé, N., Fallon, B., MacLaurin, B., Chamberland, C., Chabot, M., & Esposito, T. (2011). Shifting definitions of emotional maltreatment: An analysis child welfare investigation laws and practices in Canada. *Child Abuse & Neglect*, *35*, 831–840. http://dx.doi.org/10.1016/j.chiabu.2011.05.015
Vachon, D. D., Krueger, R. F., Rogosch, F. A., & Cicchetti, D. (2015). Assessment of the harmful psychiatric and behavioral effects of different forms of child maltreatment. *JAMA Psychiatry*, *72*(11), 1135–1142. http://dx.doi.org/10.1001/jamapsychiatry.2015.1792
van Harmelen, A., de Jong, P. J., Glashouwer, K. A., Spinhoven, P., Penninx, B. W. J. H., & Elzinga, B. M. (2010). Child abuse and negative explicit and automatic self-associations: The cognitive scars of emotional maltreatment. *Behavior Research and Therapy*, *48*, 486–494. http://dx.doi.org/10.1016/j.brat.2010.02.003
Waxman, R., Fenton, M. C., Skodol, A. E., Grant, B. F., & Hasin, D. (2014). Childhood maltreatment and personality disorders in the USA: Specificity of effects and the impact of gender. *Personality and Mental Health*, *8*(1), 30–41. http://dx.doi.org/10.1002/pmh.1239
White, R., & Renk, K. (2012). Externalizing behavior problems during adolescence: An ecological perspective. *Journal of Child and Family Studies*, *21*, 158–171. http://dx.doi.org/10.1007/s10826-011-9459-y