K.L. Falb

displac agains Fourt

2.2.

T Opportu objective program provider

Rescue ( **IRC** encouras with mo question sensitive

All ca provided Health, (

2.3. Mec

2.3.1. 0 Outc

towards sexual to (Center f operation **ISPCAN** UNICEF acceptab without

2.3.2. In

Parei which ca higher so as a big

Care norms. T (Cronbac (Cronbac have mo with the indicates

Eleve "They [c summed Dem

2.4. And

Using demogra To accou and adju with the with sign



Contents lists available at ScienceDirect



Child Abuse & Neglect

arch article

## unpacking the impact of adverse childhood experiences on adult mental health☆



Melissa T. Merrick<sup>a,\*</sup>, Katie A. Ports<sup>a</sup>, Derek C. Ford<sup>a</sup>, Tracie O. Afifi<sup>b</sup>, Elizabeth T. Gershoff<sup>c</sup>, Andrew Grogan-Kaylor<sup>d</sup>

- a Division of Violence Prevention, National Center for Injury Prevention and Control, Centers for Disease Control and Prevention, Atlanta, GA, United States
- b Departments of Community Health Sciences and Psychiatry, University of Manitoba, Canada
- <sup>c</sup> Department of Human Development and Family Sciences, University of Texas at Austin, United States
- <sup>d</sup> School of Social Work, University of Michigan, United States

## ARTICLE INFO

Article history: Received 7 October 2016 Received in revised form 10 March 2017 Accepted 23 March 2017 Available online 15 April 2017

Keywords: **ACEs** Adverse Childhood Experiences Spanking Depression Suicide Adult mental health

## ABSTRACT

Exposure to childhood adversity has an impact on adult mental health, increasing th for depression and suicide. Associations between Adverse Childhood Experiences and several adult mental and behavioral health outcomes are well documented in th erature, establishing the need for prevention. The current study analyzes the relation between an expanded ACE score that includes being spanked as a child and adult tal health outcomes by examining each ACE separately to determine the contribution each ACE. Data were drawn from Wave II of the CDC-Kaiser ACE Study, consisting of adult members of Kaiser Permanente in southern California. Dichotomous variables responding to each of the 11 ACE categories were created, with ACE score ranging for to 11 corresponding to the total number of ACEs experienced. Multiple logistic regres modeling was used to examine the relationship between ACEs and adult mental health  $comes\ adjusting\ for\ sociode mographic\ covariates.\ Results\ indicated\ a\ graded\ dose-results\ for\ sociode mographic\ covariates\ for\ sociode mographic\ for\ sociode\ fo$ relationship between the expanded ACE score and the likelihood of moderate to drinking, drug use, depressed affect, and suicide attempts in adulthood. In the adju models, being spanked as a child was significantly associated with all self-reported managed as a child was significantly associated with all self-reported managed as a child was significantly associated with all self-reported managed as a child was significantly associated with all self-reported managed as a child was significantly associated with all self-reported managed as a child was significantly associated with all self-reported managed as a child was significantly associated with all self-reported managed as a child was significantly associated with all self-reported managed as a child was significantly associated with all self-reported managed as a child was significantly as a child was a child with a child was health outcomes. Over 80% of the sample reported exposure to at least one ACE, signif the potential to capture experiences not previously considered by traditional ACE in The findings highlight the importance of examining both cumulative ACE scores and vidual ACEs on adult health outcomes to better understand key risk and protective fac for future prevention efforts.

© 2017 Published by Elseviel

Exposure to early adversity can compromise lifelong and even intergenerational health and wellness (Schofield, La Merrick, 2013). The relationship between childhood adversity and mental health is of particular interest to the field of pull health due to both the magnitude and effects of mental illness in adulthood. For example, depression is a large contrib

http://dx.doi.org/10.1016/j.chiabu.2017.03.016 0145-2134/© 2017 Published by Elsevier Ltd.

<sup>†</sup> The findings and conclusions in this paper are those of the authors and do not necessarily represent the official position of the Centers for Dis Control and Prevention.

Corresponding author at: Division of Violence Prevention, Centers for Disease Control and Prevention, 4770 Buford Highway, Mail Stop F-63. All GA 30341, United States.

E-mail addresses: mmerrick@cdc.gov (M.T. Merrick), kports@cdc.gov (K.A. Ports), wsn4@cdc.gov (D.C. Ford), tracie.afifi@umanitoba.ca (T.O. liz.gershoff@austin.utexas.edu (E.T. Gershoff), agrogan@umich.edu (A. Grogan-Kaylor).