Running Head: DEPRESSION 1	
The Association Between Emotional Abuse and Depression	Commented [1]: you need to be much more specific
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1. Background

Since the 1990's, there has been a considerable amount of literature regarding the negative effects of childhood maltreatment (e.g. emotional abuse) such as depression (Felitti et al., 1998;

Trickett, Negriff, Ji, & Peckins, 2011). Negative psychological effects, and biological effects, have been linked to early mortality rates (Brown et al., 2009), meaning, those who have experienced childhood maltreatment are at a significantly higher risk of dying early. This can be due to many reasons from risky behavior to suicide to health complication (Brown et al., 2009; Felitti et al., 1998).

Depression can produce more generations of abused individuals causing biological disturbances in stress response and psychopathology (i.e. development of mental illness) (Berzenski, Madden, & Yates, 2018; Laurent et al., 2013). Research indicates a strong association between childhood emotional abuse and developing depression (Shapero et al., 2014). Research continues to track the effects of maltreatment and provide supporting evidence of important findings. It is important for research to be supported by multiple studies, therefore, this study aims to investigate these findings further with a new nationally representative sample. In this study, the research question being explored follows: Is emotional abuse associated with depression?

2. Methods

2.1. Sample Description: The data is provided by the National Longitudinal Study of Adolescent to Adult Health (Add Health). The study was a longitudinal study with a nationally representative sample of adolescents in grades 7-12 in the United States during the 1994-95 school year. The data was collected using in-home, self-administered surveys. The data continued to be collected into young adulthood with four in-home interviews, the most recent in 2008, when the sample was aged 24-32. A follow up interview was conducted in 2016-2018 on the cohort members in the fifth wave of data collection. Topics of data collection included social, environmental, behavioral, and biological data with

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which to track the emergence of chronic disease as the cohort moves through their fourth decade of life. Data was collected using surveys and biological markers.

2.2 Measures: Variables being looked at include, frequency of emotional abuse before the age of 18, age of first emotional abuse incident, and frequency of feeling depressed in the last week.

2.2.1 Frequency of Emotional Abuse

The frequency of emotional abuse was measured through a survey asking, "Before your 18th birthday, how often did a parent or other adult caregiver say things that really hurt your feelings or made you feel like you were not wanted or loved?". Options were on a 6-point Likert-Scale which included: one time, two times, three to five times, six to ten times, more than ten times, this never happened and refused to answer. Based on initial exploration of this item, this variable was recoded to collapse some categories resulting in responses of this never happened to me (n=2668), one to two times (n=987), three to five times (n=537), and more than six times (n=842). Responses that refused to answer were coded to be missing. There was a total n=1470 missing data and a total of n=5114 usable data points. Missing data consisted of 22% of the total data in this variable.

2.2.2 Age of First Emotional Abuse Incident

The age in which someone first experienced emotional abuse was measured through a survey question as well that asked participants, "How old were you the first time this happened?" Options were continuous from ages 0 to 17 years. The average age was 11.42 with a standard deviation of 4.21 years. Those who had never been abused or refused to answer were coded to be missing data. There was a total of n=4328 missing data and a total of n=2176 usable data points. Missing data accounted for 66% of the total data in this variable.

2.2.3 Depression in the Last Week

Depression in the last week was also a survey question that asked participants to respond to a statement, "During the past seven days you have felt depression". Response options were on a 4-point Likert-Scale that included never or rarely, sometimes, a lot of the time and refused to answer. Based on initial exportation of this item, this variable was recoded, and response options were collapse into the following options: no (n=3616) and yes (n=1497). Those who refused to answer were coded as missing data. There was a total of n=1391 missing values and n=5113 of usable data. Missing data accounted for 21% of the total data.

3. Predicted Results

It is predicted that those who have experienced a high frequency of emotional abuse from an earlier age will be significantly more likely to have felt depressed in the last year. It is predicted that the frequency of emotional abuse will be associated with the age in which the abuse began. Additionally, those who have been abused starting at a younger age will be associated with feeling depressed in the last week.

4. Implications

While this study is not a replication, these results will provide additional support for the existing literature regarding emotional abuse and depression. It is important that research findings be reproduced to verify the information found in other studies. Maltreatment is often observed as a whole (Meng, Fleury, Xiang, Li, & D'Arcy, 2018), however, it is important to identify the outcomes of specific forms of maltreatment. These findings could be used to better inform practices and extend educational programs regarding the topic.

If our data does not support the findings of other studies, depending on how they are not supported, more investigation of the dataset will need to be done so that we can fully understand how childhood maltreatment is related to depression, early mortality and generational abuse.

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