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Sarah Cooper April 14, 2023

How Childhood Sexual Abuse Relates to Major Depressive Disorder in Pre and Post-Partum Women—A Systematic Review

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a thesis submitted to the Faculty of Emory College of Arts and Sciences
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Abstract

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Objective: Depression is extremely common in women during the perinatal period and in women who have experienced childhood sexual abuse. This study reviews studies of the role of childhood sexual abuse in the subsequent development of major depressive disorder in perinatal women, including postpartum women and prepartum women and the psychosocial mechanisms by which early stressors may contribute to adult-onset depression in women, specifically during the perinatal period.

Methods: The terms “Major Depressive Disorder,” “Childhood Sexual Abuse,” and “Women” were searched within PubMed and resulted in 312 articles. Duplicates were eliminated using the software Sci-wheel and articles were manually sorted by their titles and abstracts for relevance to the topic. This resulted in a set of seven articles spanning the years of 1995 to January 2023. Data was then extracted from each of the 7 articles that remained after this process. This data was put in the table to show pre partum or postpartum status, location, study design, major findings, the year of the study, and comments on the relevance of the findings to my research.

Results: Six out of six studies contained studies based on measuring depression in postpartum women while two out of two studies included prepartum women in their depression measurements. Data consisted of thousands of questionnaires that were filled out by mail and in person at clinical institutions across the world. This highlights the significance of the impact of childhood sexual abuse on the risk of depression during both prepartum and postpartum periods. Demographic backgrounds were diverse and included women from different races, socioeconomic levels and urban and suburban lifestyles.

Discussion: The findings emphasize the value of determining the long-term impacts of childhood sexual abuse on perinatal depressive symptoms in order to guide the creation of treatments for women from all backgrounds. Future research should further evaluate this research question by controlling for demographic differences and determining the effect of external life stressors and a history of childhood sexual abuse in previous generations.

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Literature Review

I conducted this study because childhood sexual violence affects a large percentage of the United States population. *Childhood sexual abuse* is any interaction between a child and an adult, or another child, where the child is used for the sexual pleasure of the perpetrator (Peterson, 2018). As defined by the American Academy of Pediatrics, childhood sexual abuse occurs when a person, who may be an adult or child, takes advantage of a child in a sexual way. Usually, the abuser is someone the child knows (Child Sexual Abuse, 2007). An abuser may use force, bribes, threats, or tricks to trap a child and to keep a child from telling anyone. Childhood sexual abuse is a prevalent issue that impacts individuals into adulthood. When considering the how frequently childhood sexual abuse occurs in communities, the data shows that 28 to 33% of girls may have experienced sexual abuse (Trickett et al., 2013). This study by Trickett examined the effects of intrafamilial sexual assault on female development over the course of a 23-year longitudinal study. The conceptual framework combined theories about psychological adjustment and potential developmental effects of psychobiological variables (Trickett et al., 2013).

About one in four girls in the United States experience childhood sexual abuse (Anon, 2022). These statistics may underreport the number of victims. Many victims might be hesitant to talk about their experiences, even in anonymous surveys. Moreover, victims have reported only 1/3 of their sexual assaults to law enforcement (Snyder, 2000). These facts suggest that this issue is even more widespread than the data represents.

The long-term effects of childhood sexual abuse are multifaceted and devastating. Childhood sexual abuse in girls impacts the development of women biologically, and can result in lower resting levels of cortisol, asymmetrical stress responses, and abnormal physical development, including increased rates of obesity and earlier onset of puberty (Trickett et al., 2013). There are also cognitive deficits in fluid and crystallized abilities. Victims of childhood sexual abuse are also more likely to view sex differently than other individuals, to experience depression or PTSD, to be revictimized, to be a teen mother, and to deliver a baby prematurely (Trickett et al., 2013). Specifically, the amount and severity of depression symptoms are greater in victims of childhood sexual abuse. Because sexual abuse dramatically impacts development, I chose to focus on its impact on mental health in adulthood. Moreover, because major depressive disorder (MDD) may have a correlation with women who have experienced childhood sexual abuse, I chose to specifically study the relationship between childhood sexual abuse and major depressive disorder.

Major depressive disorder is a psychiatric disorder that impacts mood, cognition, behavior, and adaptive functioning (Park et al., 2019). Symptoms usually include changes in sleep, appetite, activity, and loss of concentration, energy, and interest, but in severe cases can lead to physical aches and pains and suicidal thoughts (Anon, 2023). Causes of major depressive disorder include trauma, genetics, life circumstances, brain changes, drug and alcohol misuse, and other medical conditions (Anon, 2023). Major depressive disorder also includes interpersonal difficulties and coping deficits (Park et al., 2019). Trauma, especially when experienced at an early age, can cause long-term changes in how brains respond to fear and stress, which may lead to depression (Anon, 2023). Childhood sexual abuse is studied as a

subset of trauma, leading me to focus on the relationship between childhood sexual abuse and major depressive disorder.

I chose to focus on women in the prepartum and postpartum period because of the large body of literature that focuses on how childhood sexual abuse, and more broadly, adverse childhood experiences, impact major depressive disorder in pregnant women and new mothers. Focusing on women during the perinatal period will also allow a deeper look into how childhood sexual abuse impacts specific experiences later in life. It will also help us to identify what is known about pregnant survivors regarding their mental health. Outside of the research on pregnant survivors and major depressive disorder, pregnant survivors of childhood sexual abuse have an increased probability of a high-risk pregnancy compared with women with adult abuse trauma or women with no sexual abuse trauma (Yampolsky et al., 2010). Pregnant survivors also suffer from higher distress levels (which includes stress and depression) than women without sexual abuse trauma (Yampolsky et al., 2010). This provides the critical context that childhood sexual abuse influences pregnant survivors in several ways.

Another motivation for this study was my experience working with the Family Protection Center-ACC SANE in Athens, GA, a forensic sexual assault examination clinic. I worked as an examination assistant for childhood and adult woman examinations. This experience offered a perspective on the potential for a long-term effect of repeated abuse on individuals. Anecdotally reported evidence suggests that some children who come to the clinic are as young as infancy and some women who come directly after an assault have experienced abuse since childhood. This range of patients allows professionals at the Family Protection Center, which includes advocates such as myself, nurses, and therapists, to anecdotally assess

the real-time effects of childhood abuse on women's adulthood and biological-female experiences such as pregnancy.

Professionals I work with at the clinic have observed that pregnant women who have been repeatedly abused as a child are prone to struggling throughout their pregnancy and postpartum period. Anecdotal evidence from healthcare workers would suggest that there is a correlation between these two factors and perhaps even a causal link, which could be psychological, physiological, or a combination of both. Some of these professionals believe this is because having a child can often prompt individuals to think back to their own traumatic childhood. It can also arouse fears in the mother that once their child is born, the child may experience the same trauma. Repeated doctor visits and vaginal examinations can influence this struggle as well, as it may trigger childhood abuse victims who underwent examinations as children after their assaults. Witnessing this distress in pregnant women at the Family Protection Center ultimately led me to ask, "What is the relationship between childhood sexual abuse and major depressive disorder in pregnant women and new mothers?" It also led me to hypothesize that experiencing childhood sexual abuse results in increased rates of major depressive disorder in pregnant women and new mothers.

A search of previous literature showed that there were no recent systematic reviews analyzing the relationship between childhood sexual abuse and major depressive disorder in women during their pre- and post-natal period. However, a systematic review analyzed early life stress's role in adult psychiatric disorders. This study by Carr is ten years old and looked at the impact of early life stress, including childhood sexual abuse, in adult psychiatric disorders, including major depressive disorder (Carr et al., 2013). The review examined 44 articles that

met the criteria. A pie chart showed the distribution of these articles as they related to outcome variables of psychotic, mood, anxiety, substance abuse, personality, and eating disorders. This study by Carr et al., included articles that had at least one of the following types of Early Life Stress (ELS) to be considered for this review: emotional abuse, physical abuse, sexual abuse, emotional neglect, and physical neglect. This study used keywords such as: child abuse or maltreatment, or early life stress, and psychiatric disorders, or psychopathology, or mental disease. This review includes individuals ages 15 to 74. Studies that focused on only other forms of stressful events in childhood, including separation, death, or illness of family members, were excluded. The researchers also excluded articles that did not associate ELS with a psychiatric disorder. Only ten research articles included a purely female sample; most of these studies had both male and female participants. The Childhood Trauma Questionnaire was the ELS assessment tool that was most frequently utilized, appearing in 11 articles. The Structured Clinical Interview (SCID-I and SCID-II) was the instrument most frequently employed to evaluate mental diagnosis, appearing in 15 papers. Sample sizes ranged from the hundreds to the thousands and demonstrated diversity in the demographics of the sampled populations.

This systematic literature review's results showed that all but one study found a significant association between sexual abuse and the onset, duration, and severity of depression. They also showed that sexual abuse is linked to bipolar disorder, which can sometimes be mistaken for major depression as it includes depression symptoms. This suggests that research linking major depressive disorder could be flawed if it is not differentiating between the symptoms of major depressive disorder and bipolar disorder. This

study provides substantial support that there is a relationship between childhood sexual abuse and depression symptoms later in life.

Sexual abuse was also associated with anxiety disorders, schizophrenia, substance-abuse disorders, eating disorders, disruptive personality disorders, and mood disorders, which include major depression, and personality disorders (Carr et al., 2013). Furthermore, many of these disorders are linked to depression on their own and often occur alongside depression in many patients (Carr et al., 2013). These results suggest that childhood sexual abuse and mental health problems involve multiple disease states and not just depression. Therefore, these comorbidities are important to include in my research because they are potentially part of the causal relationship that my research question is addressing.

This review included multiple mental health outcomes such as schizophrenia and generalized anxiety disorder (Carr et al., 2013). However, only four studies found an association of sexual abuse with schizophrenia, and eight studies were found associating eating disorders with sexual abuse (Carr et al., 2013). Additionally, twenty studies were found for the association of sexual abuse with anxiety disorders, and fourteen studies found associations between sexual abuse and substance-abuse orders. Each of these studies found significant associations in at least one of their primary endpoints.

When looking at this study as background for my research, it should be noted that this effect caused by ELS may only be compounded by the stresses experienced during pregnancy, which may, thereby leading to more depression and potentially confounding my study (Carr et al., 2013). However, this study cannot prove causality in any case. Unfortunately, causality is

difficult to establish without randomization, and in this case, obvious ethical violations prevent any childhood sexual abuse study from conducting such a "randomized" study.

This study's limitations are based on the foundational definitions for Early Life Stress, which is a subjective experience that can be measured but there may be a permanent lack of consensus on the definition (Carr et al., 2013). There is also a wide range of instruments used to measure ELS, in the hopes that this optionality will help better measure the issue at hand, especially when discussing the differences between physical and emotional abuse, which could be considered two completely separate phenomena. A disparity also exists between the amount of research conducted on physical and emotional abuse, casting doubt on whether they should be categorized under ELS. Data collected on ELS are usually collected retrospectively which could be affected by errors in memory caused by the ELS. Early life is another term that is not properly defined due to the lack of clarity in what classifies early life and where the boundary exists between childhood and adolescence. The event that causes the stress could have occurred in childhood, but the response may only manifest in adolescence, which may confound these studies. Also, because the researchers excluded articles that did not associate ELS with a psychiatric disorder, there are other non-mental illness links to ELS that were not discussed in this study.

This literature provided the background for this systematic review and was mentioned in the literature review. The literature that was focused on and cited the most includes Middlebrooks et al., 2008, Chartier et al., 2010, and Tafoli et al., 2011. These pieces of literature are influential on subsequent research and therefore provide important context to my study as well as the literature review. The Middlebrooks study has been cited 467 times. The

Chartier study has been cited 585 times. Lastly, the Tafoli study has been cited 79 times. The number of citations was provided by Google Scholar and demonstrates how influential each of these publications has been in the field of study.

The study by Middlebrooks and others asked what the relationship was between childhood stressors and adult health (Middlebrooks et al., 2008). A retrospective analysis was used by the CDC and Kaiser Permanente on more than 17,000 questionnaires in San Diego which were representative of the population, and which tracked the long-term and short-term outcomes of adverse childhood experiences on health-related comorbidities. The findings of the study showed that the short- and long-term outcomes of ACEs include a multitude of health problems. As the number of ACEs increases, the likelihood of poor health outcomes also increases, which can include depression. Childhood stress can also lead to health problems later in life, such as alcoholism, depression, eating disorders, heart disease, cancer, and other chronic diseases. This study was limited by potential issues with questionnaires in general, such as under-reporting or over-reporting, and was not randomized to any degree. By confirming that there is a relationship between ACEs and long-term mental and physical health, this study supports my study's hypothesis that childhood sexual abuse can impact long-term health, specifically major depressive disorder later in life.

The study by MJ Chartier and others looked at the cumulative effects of adverse childhood experiences on adult health and healthcare system utilization (Chartier et al., 2010). This study attempts to show a positive correlation between these variables using data from the Ontario Health Survey, which consisted of over 9,000 respondents who were 15 years of age or older living in Ontario. This study uses logistic regression and

odds ratios to show that physical and sexual abuse had a stronger effect than other adverse experiences in a statistically significant way. This study provides the basis for the overall question of whether or not sexual abuse is associated with major depressive disorder by showing that ACEs, including childhood sexual abuse, may be the strongest influencing factor compared to income, race, and educational background.

The study by SMC Tafoli and others in 2011 asked if there is a connection between depression, the hypothalamic-pituitary-adrenal axis, and early stress as a risk factor for dysregulation of this axis. Background literature in this study discusses how humans and animals respond to environmental perturbations by activating a stress response, which allows physiological adaptation to the stressor and the maintenance of homeostasis. They define the hypothalamic-pituitary-adrenal axis as a neuroendocrine mechanism that mediates the effects of stressors and regulates physiological processes, including metabolism, immune responses, and the autonomic nervous system. It also contains a series of endocrine pathways that respond to negative feedback loops in the hypothalamus, anterior pituitary gland, and adrenal gland. They go on to explain that a disruption in the development of the HPA axis can result from prenatal exposure of the offspring to excessive levels of fetal glucocorticoid hormones or environmental disturbances, such as stressors from the mother. This could be harmful to the developing fetus because it raises the chance of adult disease by causing aberrant physiological function in adults. This demonstrates that childhood sexual abuse influences depression in pregnant women, which can then influence multi-generational health concerns.

Literature from this study was later examined in order to elucidate whether or not there was an elevated risk of depression in adolescence and adulthood for those who had

experienced maltreatment as a child, which includes sexual abuse. It was found that early life stress could permanently alter the HPA axis and therefore cause depression later in life. Other studies have tried to show a direct causal link between early life stress, such as sexual abuse and depression later in life. However, this study suggested there was an intermediate step whereby neurons and neurotransmitters were altered by the early life stress and this abnormal biochemical change caused depression as a result. However, this study was limited by the quality of the literature that it examined.

The three studies discussed above (Middlebrooks et al., 2008), (Chartier et al., 2010), and (Tafoli, 2011) provide essential context for literature being emphasized in the past on the relationship between childhood sexual abuse and major depressive disorder. These past studies focused on the setting of the patient population, such as urban and suburban settings, and their respective demographic data. The demographic data included young and old age groups, male and female gender groups, and Hispanic and African-American ethnicities. The study looked at how these demographics affected depression in adults who experienced adverse childhood experiences. The studies also focused on questionnaires and self-reporting and did not include physician followup. They were all based in the United States but did not cover much area outside of the major population centers (cities and suburban strongholds).

Three older studies include Felitti et al., 1998, Chapman et al., 2004, and Anda et al., 2006. I went on to check how often these studies have been used in other studies and found that the study by Felitti, et al., has been cited by 18,121 studies. This demonstrates that it is one of the most influential studies on childhood sexual abuse currently. Moreover, the 2004 Chapman study has been cited by 2,566. Lastly, the study by Anda and others in 2006 has been

cited 5,111 times. These studies are all currently influential and therefore demonstrate the focus of current research.

Felitti et al., 1998 was carried out via mailed questionnaires to those who were a part of an HMO. Childhood abuse and dysfunction in the home are linked to increased healthcare utilization in adulthood. A questionnaire about adverse childhood experiences was sent to 13,494 adults throughout the U.S., and 9,508 (70.5%) responded. This questionnaire assessed psychological, physical, and sexual abuse as well as violence against the mother and in-home maltreatment from substance abusers. The individual's psychological and criminal history were also investigated. SAS (Statistical Analysis System) was used to analyze data. Logistic regression analysis was also used to account for the potential confounding effects of age, gender, race, and educational attainment on the link between the number of childhood exposures and health issues.

This study (Felitti et al., 1998) tested for a dose-response relationship to health issues and found that more than half of the respondents reported one or more types of childhood exposures, and one-fourth reported two or more. There was a staggered relationship between the number of categories of childhood exposure and each of the examined adult health risk behaviors and diseases (Felitti et al., 1998). Those who had four or more categories of childhood exposure were four to twelve times more likely to develop alcoholism, drug abuse, depression, and suicidal ideation than those who had none. According to the findings, these adverse childhood experiences have a significant and cumulative effect on adult health status, including depression. The data on negative childhood experiences is self-reported, and it can only demonstrate relationships between early exposures and adult health-risk behaviors, health

conditions, and diseases. Second, depending on their risky behaviors or conditions, some persons may have been either more or less likely to report traumatic childhood experiences. This study is still limited by the retrospective nature of the study design that memories may be biased by current experiences. Some participants may have forgotten adverse childhood experiences that they actually had, and some participants may not have any distress but may report false memories (Felitti et al., 1998). Other factors could allow for a confounding variable that affects health outcomes, such as environmental or genetic factors prevalent throughout the population.

From this Felitti study, it appears that there may also be a confounding variable present in my systematic review since not all of the background research controls for other variables. Perinatal depression and ACEs may show a correlation that is actually caused by an environmental pathogen or genetic disorder and is not a direct linkage between ACEs and perinatal depression (Felitti et al., 1998).

The study by Chapman and others in 2004 utilized a cumulative stressor model to analyze the association between the overall number of adverse childhood experiences (ACEs) and the incidence of depressive disorders. The study evaluated the relationship between each of these ACEs and the lifetime risk of depressive disorders. The study population consisted of adult Kaiser Health Plan members who received a standardized medical and biopsychosocial evaluation at Kaiser's Health Appraisal Center in San Diego, California. Annually, more than 50,000 members are evaluated, and 81% of all adult members had one within any 4-year span. Between August 1995 and March 1996, the Kaiser Health Appraisal Center recruited 13,494 members in a row for the ACE Study, with a response rate of 70% (n = 9508). Two weeks after

their assessment, each ACE Study participant received a questionnaire in the mail asking about ACEs, such as abuse (emotional, physical, or sexual), dysfunction in the home, and health-related behaviors from adolescence to adulthood.

The connections between each category of ACE and the risk of depressive disorders were evaluated using adjusted odds ratios and 95% confidence intervals from logistic regression models, which were all computed using SAS. Given that the median age of the respondents was 57, the significant association between the ACE score and recent depressive symptoms suggests that ACEs have long-lasting effects. A higher likelihood of lifetime and present-day depressive illnesses in adults is directly linked to adverse childhood experiences. The number of ACEs and both present and enduring depressive diseases also demonstrated a strong graded association in both men and women.

For my study, sexual abuse is fairly straightforward to define and, unlike the term "dysfunctional home," is not a subjective experience. The World Health Organization defines sexual abuse as "the involvement of dependent, developmentally immature children and adolescents in sexual activities which they do not fully comprehend, to which they are unable to give consent, or that violate the social taboos of family roles" (Gonzalez et al., 2022). They also state that cases of sexual abuse do not need to involve any kind of penetration and include exposure to "sexually explicit materials, oral-genital contact, genital-to-genital contact, genital-to-anal contact, and genital fondling**"** (Gonzalez et al., 2022).

The 2006 study by Anda and others looked at the impact of childhood maltreatment on physical and mental health. This study focuses on changes in the brain's structure and function and the stress-responsive neurobiological systems. Two weeks after their evaluation at the

Kaiser Permanente Health Appraisal Center in 1997, patients answered questionnaires about ACEs including sexual abuse, witnessing domestic violence, and serious household dysfunction as well as health-related behaviors from adolescence to adulthood. This article's literature review discusses the way that the human brain is influenced by a person's environment, which influences the expression of the genome. It also emphasizes the sensitivity of the brain to abnormal levels of stress during early life development. It goes on to discuss that research suggests early life stress, including childhood sexual abuse, causes long-term changes within the brain (Anda et al., 2006).

This study hypothesized that the negative effects of adverse childhood experiences would affect anxiety, sleep disturbances, substance abuse, sexuality, and hyperarousal or aggression. Moreover, they predicted that these effects would all have a cumulative relationship with the number of ACEs. It would also depend on the number of comorbidities, or the mean number of impacted human behaviors and functions, which corresponds theoretically to the number of damaged brain systems and related functions (Anda et al., 2006).

Questions were asked to determine if any and how much sexual abuse occurred. These questions asked if an adult or older person had ever touched them in a sexual way or attempted any sort of intercourse. These questions also asked if any household members experienced mental illness. To determine if an individual was depressed, they were asked about how often they felt down. Adjusted odds ratios were calculated using logistic regression and multiple linear regression was used to estimate the number of comorbid outcomes by ACE score. As the number of negative experiences increased, the risk of depression also increased 3.6-fold. Sleep disturbances, a common symptom of depression, increased 2.1 times for those who had experienced four or more ACEs (Anda et al., 2006).

Persons with four ACEs had a 4.4-fold increased risk of impaired childhood memory. Impaired childhood memory was defined as A “yes” to the question, “Are there large parts of your childhood after age 4 that you can’t remember?”, and as the ACE score increased, so did the number of age periods affected by memory disturbances. This has implications for my study as it suggests that those who are experiencing childhood sexual abuse could have issues remembering the abuse and reporting it, which implies that the results for all of these studies face an issue of patients underreporting. This underreporting is not a result of social stigma but can actually be a result of the abuse itself as the act of abuse can alter learning pathway development in the brain and impair memory (Anda et al., 2006).

There are several potential limitations to this study, including retrospective reporting of childhood experiences and self-reporting of outcome measures. Respondents may have struggled to recall specific childhood events or may have chosen not to disclose certain experiences or personal behaviors. Difficulty recalling childhood events may have resulted in misclassification, or classifying people who were truly exposed to ACEs as unexposed. This may have influenced the results, resulting in an underestimation of the true strength of the relationships between ACEs and the 18 outcomes that were examined (Anda et al., 2006).

Overall, the strengths of these studies are the large sample size from the Kaiser data and the fact that all of them show a correlation between depression and childhood sexual abuse. This was done to specifically determine if a history of childhood sexual abuse relates to major depressive disorder in perinatal women. Considering these factors, and their manifestation in prepartum and postpartum women, leads to my research question, “What is the relationship between childhood sexual abuse and major depressive disorder in pregnant women and new

mothers?" More recent studies can potentially offer a new sociological perspective on childhood sexual abuse, major depressive disorder, and perinatal women.

Methods

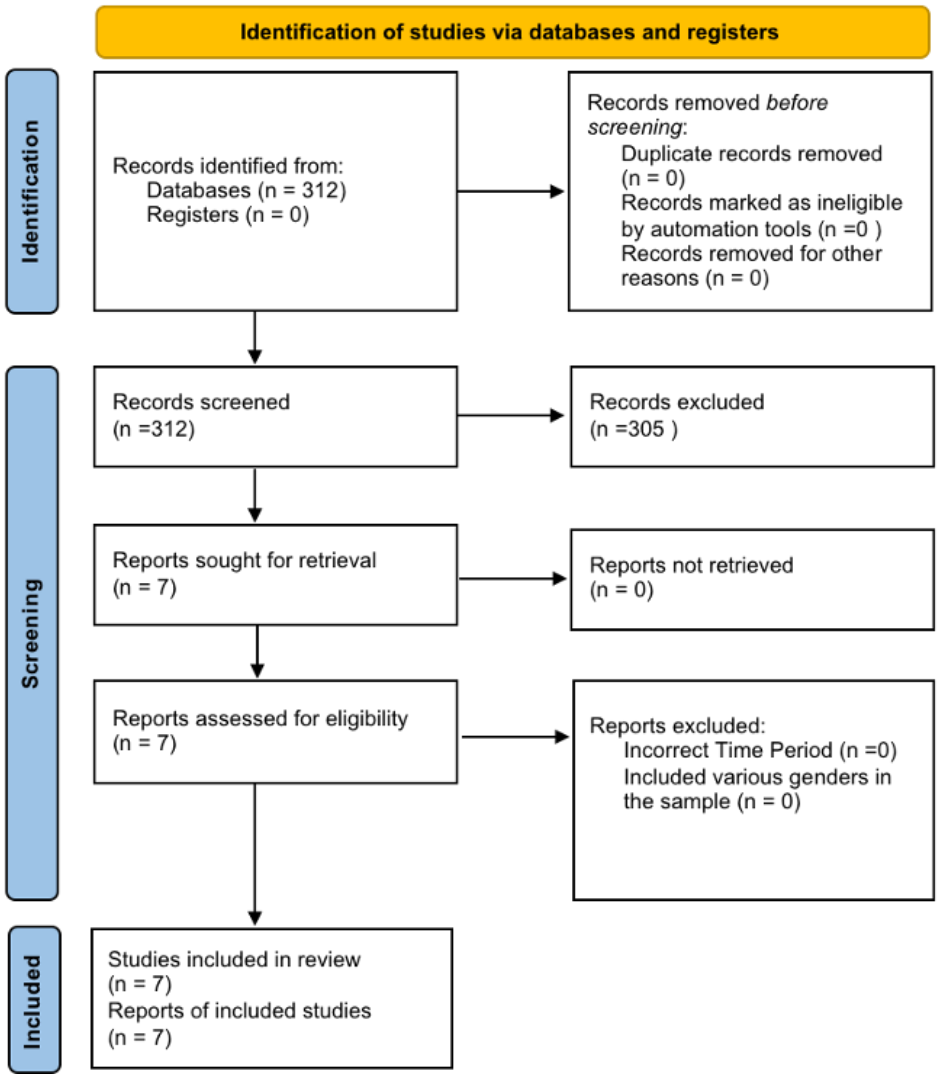
I initiated the research process with a general search of the terms "childhood sexual abuse" and "major depressive disorder" within Pubmed. I looked through many of the articles and their different populations and found that research conducted on this topic focuses on several demographics, including LGBT individuals, pregnant women, and new mothers. Because of my interest in women's health, I focused my attention on the research looking at the effects of childhood sexual abuse in pregnant women and new mothers across various racial groups. While reading through the literature, I found that the research on this topic conducted on pregnant women and new mothers can be divided into three categories: women during their prenatal period (0-9 months of pregnancy), women during their postnatal period (up to a year after childbirth occurs), and studies that focus on the entire perinatal period. I then decided to look at literature that focuses on all three-time frames related to a woman's pregnancy and the experience of major depressive disorder for women who were sexually abused as children. Looking at all three time frames would allow for comparisons on the severity of depressive symptoms and allow for an evaluation of how symptoms develop and progress alongside a pregnancy and change once childbirth occurs.

I used keywords to search in the database Pubmed; the keywords and constraints used included "childhood sexual abuse," "major depressive disorder," and "women." These keywords were obtained through looking at previous study's keywords and combining them in such a way as to isolate the childhood sexual abuse and major depressive disorder parameters. These

previous studies include the ones done by Chartier and Tafoli. The search resulted in 312 articles that were manually sorted through and screened to find only studies that included childhood sexual abuse, depression, and women in the perinatal period. I first screened for duplicates using the software Sciwheel; this entailed selecting all of the articles and entering them into the Sciwheel system. I was then able to click “search for duplicates' ' and found that there were zero. This was expected as I was only using one database. I manually sorted through every article by reading the titles and abstracts.

The vast majority of articles were excluded due to having no relevance to my topic at all. This is because many articles showed through their abstract that they only looked at major depression disorder or childhood sexual abuse, not both. Moreover, many of the articles were completely unrelated or were not women-specific studies or focused on the perinatal period. I got rid of three-hundred and five articles in total by manually sorting through titles and abstracts. This left me with seven articles. The earliest article published from this set of articles was published in 1995; therefore, my data spans the years of 1995 to January 2023. I then manually checked my accessibility to each of these articles through my institution; I had access to all of them.

Data was extracted from all seven of these articles and put in a table to include the year, articles’ title, author, research question, data collection method, primary finds, prepartum/postpartum status, location, and comments on the article’s relevance to my study. The data was then critically analyzed and categorized by these parameters in order to complete my review. This project was initiated in August 2022 and completed in March 2023 at Emory University in Atlanta, Georgia.



Results:

I organized each of the seven articles into an Excel spreadsheet and created a table that categorized the studies by title, year of the study, the focus of the study, the main results of the study, the location, and any comments I had about the study as well as measurements used in the study, and the specific period being studied - the prepartum period, the postpartum period, or both. I chose to lay this information out in a table so that it would be easier to analyze and compare the studies to one another. Including the year will allow me to see the direction this

area of research is taking, and the prepartum and postpartum columns will allow me to compare these types of studies more easily. By looking at the results for prepartum and postpartum, a correlation can be found between prepartum depression and childhood sexual abuse and postpartum depression and childhood sexual abuse.

The research questions asked in the studies I identified focus on the association of depression with depression in perinatal women but not the cause. Further, the majority do not specify childhood sexual abuse but tend to include all forms of child maltreatment. In addition, the history of sexual abuse in patients was not necessarily in childhood - one study evaluated women with a general history of sexual abuse, and another honed in on patients with a history of only pre-adolescent sexual abuse. The results that include women with a general history of sexual abuse and not specifically childhood sexual abuse may not be relevant to my research question - these results were not included, but self-reported data are prone to this error as not all participants are aware of the cutoff of adulthood from childhood at 18. The research questions asked in the literature all mention symptomatology, albeit in different ways - hyperthyroidism, self-reported depression scale scores, and questionnaires administered by health care personnel. While depression has a specific definition as per the DSM-V criteria, its specific symptoms are not a part of my research question and therefore, all of these symptom measurements are relevant.

Measures

The studies used a variety of different scales to measure depression, and one study also measured thyroid antibodies as a secondary endpoint. The only depression scale to be used in multiple studies was the Hamilton Depression Rating Scale (Hamilton, 1960). This is the most frequently used clinician-administered depression evaluation scale. It is commonly known as the

Ham-D, and originally included 17 items relating to recent depressive symptoms. It was initially created for hospital inpatients, which explains its focus on melancholy and somatic depressive symptoms. However, it was expanded to include 21 items. Unfortunately, the Ham-D is unable to assess atypical symptoms of depression, such as hypersomnia and hyperphagia, which means that atypical depression is not a part of my research question. The scoring methodology differs depending on the version. Usually, a score is calculated from these responses on an interval scale. A score of 20 or more (showing at least severe severity) is typically necessary for entry into a clinical study, while a score of 0-7 on the 17-item version is typically deemed to be within the normal range (or in clinical remission). Typical questions include those about insomnia in the middle of the night, difficulty at work, and suicidal thoughts.

For my research question, this may mean that the available literature does not cover atypical symptoms of depression, and therefore atypical depression may not be included in the results even though it could be considered a part of major depressive disorder, which is in the scope of my research question. The inclusion of a study that assessed depression as well as thyroid antibodies suggests that my research may apply to psychological issues (major depressive disorder) as well as physiological changes. Also, the fact that several studies only tested certain demographic subsets suggests that my research question may have a racial or demographic bias to its premise. It could be that perinatal major depressive disorder may be linked to childhood sexual abuse only in women of a certain demographic subset.

The majority of the data collection methods are meant to assess depression in those who are already exhibiting symptoms. However, some of the prepartum women may not have been in the depressive state at the time of data collection. This means there may be a latency in the effect seen in prepartum women and perhaps a causal relationship only exists between childhood

sexual abuse and MDD in postpartum women. The scales used in data collection are prone to errors in underreporting and overreporting, as it is likely that not all who are given the questionnaires are fully medically literate, which could skew the accuracy of these studies.

One of the scales that overlapped in multiple studies was the Edinburgh Postnatal Depression Scale (EPDS) (Cox et al., 1987). The Edinburgh Postnatal Depression Scale (EPDS) was created to help general practitioners identify moms who are experiencing postpartum depression (PPD). It comprises ten brief sentences that describe the mother's mood throughout the course of the previous week. The EPDS results must be interpreted with clinical judgment because they may not adequately reflect a woman's mental health. A total score of 13 or more is regarded as a red warning for further investigation of potential depressive symptoms (Cox et al., 1987).

Results

While two out of two research included prepartum women in their depression measurements, six out of six studies focused on evaluating depression in postpartum women. Thousands of questionnaires filled out in person and by mail at clinical institutes throughout the world made up the data. This emphasizes how important it is to consider how childhood sexual abuse affects the likelihood of developing depression both before and after childbirth. Women of different races, socioeconomic statuses, and urban and suburban lifestyles made up the demographic backgrounds.

Each study helped substantiate my research question with positive associations. Results from all but one investigation showed results that were consistent with a positive and statistically significant relationship between prenatal depression or depressed symptoms and maternal history of CSA. Specifically, the main conclusions of the thyroid study by Plaza, were that among

women with postpartum severe depression, a history of childhood sexual abuse raised the probability of thyroid disorder (TD), positive thyroid antibodies, or hyperthyroidism (HPTD) by at least a factor of two (Plaza et al., 2010). In this group, the prevalence of childhood sexual abuse was comparable to that in major depressive women. The study's findings are consistent with numerous research on childhood sexual abuse and the HPT axis in premenstrual dysphoric disorder and posttraumatic stress disorder. The researchers found no evidence of a connection between current life events and postpartum HPTD or positive thyroid antibodies, or a connection between current life events and depression scores. This may support the idea that early life experiences, particularly childhood sexual abuse, contribute to postpartum depressed women's higher risk of developing HPTD. In this study, the likelihood of thyroid autoantibody positivity was four times higher when childhood sexual abuse was present. Early stress and childhood maltreatment have been found to be a separate risk factor for inflammation, which is accompanied by an increase in pro-inflammatory cytokines in adults.

In Buist et al., 2001, women having a history of childhood sexual abuse had longer length hospitalizations, greater Beck Depression Inventory scores, and more damaged mother-infant interactions. Women who had experienced childhood sexual abuse were more severely depressed at the 3-year follow-up, and their depression levels had not decreased as much as those of the comparison group. This study recommends that future research should include follow-up periods and the research question should be extended to include these follow-up periods as a sustained prevalence of depression may be more indicative of a widespread sociological effect compared to the incidence of depression, which was the focus of my study. Whereas emotional and childhood sexual abuse and emotional neglect were only associated with an elevated risk of prepartum depression, women who had physical neglect, one kind, or two or more types of

childhood maltreatment had a higher chance of experiencing both antepartum and postpartum depression. Compared to women who did not report past childhood sexual abuse, those who had reported it experienced higher levels of depressive symptomatology in terms of more occurrences of reported symptoms and a greater average severity level of symptoms reported (Buist et al., 2001).

Samples

The locations of these studies ranged from China to the US to Europe and Australia, spanning four continents. The fact that they all show a positive correlation between childhood sexual abuse and depression in perinatal women suggests that my research question is not limited to a specific nationality or geographic area. In addition, the studies had participant totals ranging from 56 to 17,000, and across all of these different sample sizes, a similar association was still observed.

Study designs

The length of the timeframes as well as the periods of follow-up for these studies also varied, as some were only one-time questionnaires while others were longitudinal in nature and included follow-up from healthcare professionals extending up to four weeks postpartum. The studies were not designed to control for demographic factors such as race, marital status, income level and educational background.

Ultimately, the evidence suggests that prepartum depression may not be linked to childhood sexual abuse as strongly as postpartum depression is linked to childhood sexual abuse. Two out of two studies (Li et al., 2017) and (Benedict et al., 1999) found an association between prepartum depression and a history of childhood sexual abuse while six out of six studies found an association between postpartum depression and a history of childhood sexual

abuse. There is strong evidence that postpartum depression can be linked to childhood sexual abuse. Other factors such as ethnic background and income level may affect prepartum depression more so than a history of childhood sexual abuse. However, those factors are not as strongly associated with postpartum depression as childhood sexual abuse is associated with postpartum depression.

A clinical study in China by Li and others had issues spanning the following: First, in a prenatal care clinic, pregnant women without a history of psychiatric illnesses were chosen for most of the analyzed samples (Li et al,, 2017). The majority of participants were married or in relationships with partners, had middle to high incomes, and resided in urban areas across the world. As a result, the sample from those who are less disadvantaged is less likely to experience severe depressive symptoms, which contributes to the small proportion of women who are at risk for chronic depression. The results might not apply to all pregnant women, particularly those who are underprivileged. Second, it is challenging to draw definitive conclusions about the distinct correlations between childhood maltreatment types and risks for both antepartum and postpartum depression because of the very low frequencies of childhood maltreatment for the majority of kinds. Like in all trauma research, childhood maltreatment was retrospectively assessed using a self-report measure, which may contribute to the recall bias. Nonetheless, based on earlier data, retroactive reports of childhood treatment are still reliable.

The Adverse Childhood Experiences (ACE) study by Felitti and others, which included 658 participants, showed that retrospective reports of ACEs were consistent for more than a year (Felitti et al., 1998). The results of retrospective research on the results of childhood maltreatment on health are in agreement with those of prospective research. The actual experiences of the childhood maltreatment may have been considerably understated by the

information the childhood maltreatment acquired from some objective sources, such as child protection records. Both prenatal depression and childhood maltreatment were measured at the same time. Retrospective descriptions of the experience of childhood maltreatment may be impacted by the existence of current depressive symptoms, perhaps more so in domains with more subjective components. To investigate the relationship between maternal histories of childhood maltreatment and depression at follow-up, future studies that exclude pregnant women with depression at baseline are required.

Additional limitations of the ACE study include the fact that the self-rating depression scale was used to calculate the risk of prenatal depression. The intensity of the depression symptoms may be understated due to the lack of a professional diagnosis. Nonetheless, the self-rating depression scale, which has been shown to have strong reliability and validity, was the most often used screening tool to assess prenatal depression. Also, the researchers identified individuals at risk for depression by using a cautious cutoff score of 12 or higher. The risk of depression was also assessed at the end of pregnancy, in the first week after delivery, and in the fourth. It is unclear if childhood maltreatment had a significant effect on depression risk at early pregnancy or postpartum 4 weeks later due to the short follow-up period, which may make it difficult to establish differential connections between different childhood maltreatment types and pre- and post-natal depression. Further research is required to evaluate depression from the first trimester of pregnancy to the first postpartum year in order to better understand the relationship between childhood maltreatment and depression across the entire perinatal period (Felitti et al., 1998).

With the Buist 2001 study, this is the only study that included research on partners and children, partners were included where possible, although the small number of respondents

makes it difficult to draw any firm conclusions (Buist, 2001). The loss of 11 women from the initial sample of 56 women restricts the generalizability of some of the findings, but the second phase still offers a useful body of knowledge on a subject that has not yet received much attention (Buist, 2001). In Phase One, the women with a history of childhood sexual abuse were different from the comparison group primarily due to their longer length of hospitalizations, greater depression, and more impaired mother-infant contact. Women who had experienced childhood sexual abuse scored more severely depressed at the 3-year follow-up, and their depression levels had not decreased as much as those of the comparison group. They may continue to struggle because of their fear for, and need to shield their toddler from, the abuse they endured.

Although no conclusions can be drawn from this because these controls were not standardized under the same conditions as this study, this could be a fascinating and significant subject for additional research. Also, the test was extremely difficult for five of the kids to complete or take. A handful of the moms in the index group purposefully prevented their child from participating by making intrusive remarks or glances that threatened the child's sense of security and readiness to separate. To evaluate the more subtle effects of a history of maternal abuse, a thorough video analysis of this interaction may be required.

Year	Title	Author	Research Question	Data Collection Method	Primary Findings	Pre-Partum or Post-Partum	location	Comments
1995	Childhood Sexual Abuse: a Risk Factor for Postpartum Depression?	Anne Buist, B. Barnett	Is there a link between childhood sexual abuse and postpartum depression?	• A case study of 50 women who were admitted to a postpartum clinic were questioned about a history of childhood sexual abuse	• The cases reviewed showed that a significantly higher proportion of abused than non-abused women suffered with postpartum depression	Postpartum	Small Hospital in Australia	• This study evaluates my research question from the opposite directionality in terms of causality; instead of sampling perinatal mothers and testing for a history of sexual abuse as well as symptoms of depression, the sampled population was already confirmed to have postpartum depression and this population was tested for a history of childhood sexual abuse
1998	Childhood Abuse, Postpartum Depression and Parenting Difficulties: A Literature Review of Associations	Anne Buist	What are the links between maternal postpartum depression, poor parenting and child abuse, and the subsequent development of adult psychopathology in children?	• A literature review of studies on postpartum depression looking at parental childhood abuse, parenting and child outcomes, and childhood abuse and its association with adult depression and parenting abilities	• Considerable overlap was noted between the factors of major depression, postpartum depression, inadequate parenting, and child abuse	Postpartum	Victoria, Australia	• The literature review found that an intergenerational continuous transfer of abuse and the associated symptoms of perinatal depression may be occurring and could be initiated in women who sustain childhood sexual abuse without a parent who also experienced this type of abuse
1999	The Association of Childhood Sexual Abuse with Depressive Symptoms During Pregnancy, and Selected Pregnancy Outcomes	M I Benedict , L L Paine, L A Paine, D Brandt, R Stallings	What is the association of sexual abuse before the age of 18 with depressive symptomatology in pregnancy?	• The Center for Epidemiologic Studies Depression Scale and the Life Events Questionnaire were used to question patients	• Women who had reported past sexual abuse had higher levels of depressive symptomatology than women who did not report past sexual abuse • Negative life events and payment source (the proxy for socioeconomic status) had much stronger associations with depressive symptoms	Prepartum	Large, University-based hospital	• Focused on the issue of prepartum depression only, which suggests my research question may have to be bi-furcated and focus on effects from prepartum and postpartum and how they vary • The study controlled for other factors and therefore helped to make my research more robust
2001	Childhood Sexual Abuse, Parenting and Postpartum Depression—a 3-Year Follow-up Study	Anne Buista, Helen Jansonb	What is the association between women with a history of sexual abuse and their have more impaired mother-infant interactions and depression scale scores?	• The Hamilton Depression Rating Scale and Beck Depression Inventory depression scales were used as well as the Speilberger State/Trait Anxiety Scale in addition to the Coopersmith Self-Esteem Inventory	• Women with a history of sexual abuse had a more impaired mother-infant interaction, higher BDI, and longer length admissions • At the 3-year follow-up, women with a Childhood Sexual Abuse history had higher depression scores, and had not improved as much over time as the other group	Post-Partum	Australia	• This study offered a baseline assessment of the correlation studied in my research questionlso provided follow-up that determined how conditions worsen over time and how the presence of depression symptoms becomes exacerbated by life stresses over time, which suggests that time is a factor in my research
2009	Childhood Sexual Abuse and Hypothalamus-Pituitary-Thyroid Axis in Postpartum Major Depression	Anna Plaza, Lluïsa Garcia-Esteve, Carlos Ascaso, Purificación Navarro, Estel Gelabert,Irene Halperin, Manuel Valdés, Rocío Martín-Santos	What is the association between early life events and hyperthyroidism in postpartum major depression?	• The DSM-IV, the Edinburgh Postnatal Depression Scale, the Hamilton Depression Rating Scale, the State Trait Inventory-State and the Risk Suicide Scale, as well as the Spanish validated version of The Early Trauma Inventory Self Report, The Saint-Paul-Ramsey Questionnaire, and the Martial Adjustment Test were used • Thyrotropin, thyroid autoantibodies antithyroperoxidase and antithyroglobulin were measured to assess hyperthyroidism stages	• The main findings of this study were that a history of childhood sexual abuse increased at least two times the risk of TD, positive thyroid antibodies or HPTD in women with postpartum major depression	Post-Partum	Barcelona, Spain	• This study effectively proved that there is a correlation between thyroid issues and childhood sexual abuse

Year	Title	Author	Research Question	Data Collection Method	Primary Findings	Pre-Partum or Post-Partum	location	Comments
2017	Maternal History of Child Maltreatment and Maternal Depression Risk in the Perinatal Period: A Longitudinal Study	Yang Lia, Zhouting Longa, Danfeng Caob, Fenglin Caoa,	What is the risk of depression throughout the perinatal period as a function of maternal child maltreatment history and does it differ from pregnancy to postpartum?	• The prenatal assessment (T1) with regard to sociodemographic characteristics, CM history, and depression risk was administered • The second postpartum depression assessment (T3) was conducted at 4 weeks postpartum	• Women who experienced physical neglect, one type, or two or more types of CM had a greater risk of developing both antepartum and postpartum • Emotional and sexual abuse and emotional neglect were only related with an increased risk of antepartum depression	Prepartum and postpartum	Shandong, China	• The only longitudinal study of its kind and suggests a long-term bias for the effects being studied in my research question
2021	The Price of Pre-adolescent Abuse: Effects of Sexual Abuse on Perinatal Depression and Anxiety	Tanitoluwa Demilade Akinbode, Cort Pedersen, Sandraluz Lara-Cinisomo	What are the associations between childhood sexual abuse and depression during the perinatal period in a racially and ethnically diverse sample of women?	• Participants completed the Edinburgh Postnatal Depression Scale and the State Trait Anxiety Inventory questionnaire	• There was a significant and positive association between childhood sexual abuse and depression and anxiety symptoms over time	Post-Partum	Raleigh, NC	• This study suggested that demographic factors may also play a role in the severity or reporting of depression symptoms in women

Discussion:

Limitations

Only one database was used to conduct the literature review in this study, which is the primary limitation of my study given that it significantly limits the amount of literature I am assessing. However, my systematic review may be limited by other constraints due to its inherent design. One such limitation is the fact that there may be a dearth of high-quality studies. My study is only as reliable as the studies that they include and if there are only a few high-quality studies on a particular topic, the results of the review may be less reliable. In addition, my study could fall victim to publication bias. Publication bias can occur when unfruitful studies with negative or non-significant results are less likely to be published, which can lead to a skewing of the actual valid results. Studies included in my study also differ in terms of study design, participants, interventions, and outcomes detected, which helps in combining the results into a useful summary. This can include inherent biases in the demographics of patients studied.

When it comes to the interpretation of results, my research may provide a summary of the evidence, but the interpretation of the results and their application to clinical practice requires

additional expertise and knowledge. Another problem plaguing studies such as this one is the fact that the included studies can span decades in time elapsed.

As usual with all systematic reviews, my systematic review was susceptible to limitations such as publication bias, outdated results, and low quality of studies. My study did not have a single significant potential confounder prevalent across all the literature in my review due to the fact that the studies I identified had different confounders and covariates.

Further research is needed to elicit the true relationship between prepartum depression, postpartum depression, and a history of childhood sexual abuse in women, as there may be a causative relationship between prepartum depression and postpartum depression and between a history of childhood sexual abuse and postpartum depression, but no linkage between prepartum depression and a history of childhood sexual abuse.

It could be argued that the advent of prepartum depression predisposes women to be more likely to experience postpartum depression, which means that this could be another confounding variable in my research. It could be a summative effect whereby childhood sexual abuse predisposes a pregnant woman to experience prepartum depression, and then the history of abuse and initial occurrence of prepartum depression culminate in postpartum depression. This could account for the greater abundance of evidence linking postpartum depression to a history of childhood sexual abuse, and should be the focus of future research in this area.

Although the consideration of how symptoms of major depressive disorder in perinatal women fluctuate over time is not included in my research, one study (Buist and Janson, 2001) did find that over time, depressive symptoms worsen in perinatal women. The reasons for this may vary, as depressive symptoms generally worsen in patients if left untreated, either by prescription medications, cognitive behavioral therapy, or lifestyle changes in diet and physical

activity. If depressive symptoms did not worsen, it would be likely that some patients did experience perinatal depression but were treated and rendered symptom-free before the data could be recorded. However, as this is not the case, this suggests that there is a very low likelihood that my review missed participants who had a history of childhood sexual abuse, perinatal depression, and were treated before symptoms could be recorded in the questionnaires. This makes my research more robust as it minimizes the possibility of false negatives. In addition, one study showed that the more life stresses experienced, the greater the severity of the depression symptoms reported by perinatal women. Therefore, it could be entirely possible that the history of childhood sexual abuse causes the depression, and then the extra life stresses directly affect the severity level; however, this is not in the scope of my research.

Similarly, the other factors whose associations with perinatal depression were measured, such as general childhood maltreatment and physical neglect, may have a convoluted relationship with childhood sexual abuse. It could be that childhood maltreatment and physical neglect co-occur naturally with childhood sexual abuse, making it difficult to elucidate a causal relationship between any of these experiences and perinatal depression. The possibility exists that once a child experiences maltreatment and neglect, it leads to childhood sexual abuse, or the effect could have the opposite directionality. Future studies will need to control for these factors and evaluate subpopulations with childhood sexual abuse reported only vs physical neglect only reported against a control group.

The majority of the data collection methods are meant to assess depression in those who are already exhibiting symptoms. However, some of the prepartum women may not have been in the depressive state at the time of data collection. This means there may be a latency in the effect seen in prepartum women and perhaps a causal relationship only exists between childhood

sexual abuse and MDD in postpartum women. The scales used in data collection are prone to errors in underreporting and overreporting, as it is likely that not all who are given the questionnaires are fully medically literate, which could skew the accuracy of these studies.

In general, most depression studies in my research studied other comorbidities alongside depression but some did not. Therefore, because untreated depression and anxiety lengthen the course of illness, and because some studies did not specifically gather data on therapy for these conditions, there is a need for additional research that does. In one study by Buist and Barnett, the researchers retrospectively assessed childhood abuse in their sample after gathering information on depression and anxiety (Buist and Barnett, 2005). Particularly during pregnancy or the postpartum period, collecting abuse data may bring recall bias or recall inaccuracies into the sample. Also, although the abuse measure assesses the severity and frequency of abuse, the majority of women claimed that the abuse only happened once or that they did not get serious injuries as a result of the abuse, which was not included in the analyses.

The research presented could mean that when a greater history of childhood sexual abuse exists, a greater severity, duration, or quantity of depression symptoms may manifest in perinatal women, to the point where future guidelines should include childhood sexual abuse as a known risk factor for perinatal depression. Future research should gather information to make sure that the full scope of childhood maltreatment is considered in relation to perinatal depression and anxiety. One study, by Akinbode and others, also concentrated on abuse that happened to women who were 13 years old or younger (Akinbode et al., 2021). Future research should take into account include abuse that took place after the age of 13, as sexual abuse can happen to anyone at any time. Furthermore, the very small sample size, which should be addressed in future studies, limits the generalizability of the findings.

For the Plaza study, which measured physiological changes, the retrospective evaluation of early life events leaves room for memory bias. The researchers were unable to determine the association's cause thanks to the design. These women's current psychological profile has not been previously evaluated which could have predisposed them and act as a confounding variable (Plaza et al., 2010).

Only a single study, by Buist and Barnett in 1995, evaluated my research question from the opposite directionality in terms of causality. Instead of sampling perinatal mothers and testing for a history of childhood sexual abuse as well as symptoms of depression, the sampled population was already confirmed to have postpartum depression and this population was tested for a history of childhood sexual abuse. The cases reviewed showed that among women who have postpartum depression, a significantly higher proportion of abused women suffered psychiatric disorders (such as depression) than non-abused women did.

Interesting information about some potential reasons for increased parenting stress is also revealed by regression analyses. Despite the fact that it is obvious that the models cannot account for all score variation, the research found a strong correlation between child outcomes and mood and stress. Women in the index group were more likely to have higher depression scores, pointing to a postpartum phase with reduced mother-infant relationship. Higher depression scores three years later were predicted by these high scores. The women who had more postpartum parental stress maintained their high scores at the follow-up. Less postpartum support and more stress were also significant outcome predictors. At the follow-up, there were more life pressures in the study group. This may be related to other variables that women with a history of childhood sexual abuse may be prone to, such as inferior choices and coping methods, which becoming a parent may aggravate, as well as the greater levels of distress at follow-up.

Relevance

In regards to the clinical and societal relevance of these studies and the implications for future studies, these results highlight the significance of raising awareness of the impact of child abuse on the risk of depression during the prenatal period. However, it is challenging to draw definite findings due to the studies' limitations, which include the brief assessment period, very low frequencies for most childhood maltreatment sub-types such as childhood sexual abuse, and a high co-occurrence of non sexual-abuse childhood maltreatment types. The findings have ramifications for future research into the differences between each form of childhood maltreatment's separate impact on antepartum and postpartum depression. Further research is required to confirm these findings with a representative population, a sufficient sample size, acceptable childhood sexual abuse and depression measures, and a follow-up period from early pregnancy through the first postpartum year. There are still some clinical implications for this study. In prenatal clinics, routine testing for antepartum depression and maternal childhood maltreatment history is required to identify women who are at risk. Implementing therapeutic interventions that would prevent unfavorable pregnancy outcomes could be made easier with early depression detection. Women with a history of childhood sexual abuse may benefit from trauma-specific interventions within a trauma-informed maternity care system to lessen antepartum and postpartum depression.

With regards to ongoing clinical recommendations, it is important to assess the psychosocial risk factors for prenatal depression, including history of depression, intimate partner abuse, and low income and single marital status. In addition, the way that mental health services are given and administered by mental health care practitioners contributes to the difficulties that women of color who have experienced childhood abuse face in accessing mental

health services. To ensure that these women receive ongoing, appropriate support and treatment to prevent and lessen the potential long-term negative effects of childhood sexual abuse, practitioners working with perinatal women of color should provide counseling about the risk that childhood sexual abuse poses to women's mental health.

With regard to social relevance, there are racial implications. For female POC (people of color), determining the presence of risk variables may be particularly important. According to recent recommendations, it is important to assess the psychosocial risk factors for prenatal depression, including history of depression, intimate partner abuse, and low income and single marital status. Practitioners should focus on a full behavioral health assessment that takes into account childhood sexual abuse in order to provide evidence-based trauma-informed care. The findings of this study also demonstrate how prenatal anxiety is impacted by childhood sexual abuse. Health service providers should be aware of this since a history of childhood sexual abuse increases the chance of anxiety during the perinatal period. Practitioners should take additional effort to address this sort of abuse during the perinatal period in order to make sure that female POC get the support they require to prevent and/or treat anxiety before and after childbirth.

When it comes to racial disparities, the score on some scales may be affected by the woman's comprehension of the language used, her skepticism of mainstream services, or her fear of the negative effects of depression being recognized. It has been discovered that translations created in collaboration with women from Aboriginal communities detect a slightly larger percentage of women exhibiting depressive symptoms. Different emotional reserves and the perceived level of stigma associated with depression, as well as cultural norms like attending the consultation with a family member, may potentially affect how well the EPDS works. The

demographic insufficiencies of this test may lend a bias to my research question and provide a racial skew that is not within the scope of my research.

A history of childhood sexual abuse is likely to disadvantage such a woman on a number of levels, rendering her and her child susceptible to such poor outcomes, even if the interactions between these factors are undoubtedly complex. Further research on postpartum depression is required, including an examination of parenting and interpersonal styles as well as past histories of physical, sexual, and emotional abuse of mothers. Even more crucially, therapists must address these parenting issues in their patients right away. Past studies have found that a history of abuse increases the risk of developing depression. For the women in this study who experienced postpartum depression, the condition is probably more severe and likely to last longer, having an effect on parenting that is still noticeable three years later. This implies that while postpartum sequelae from childhood issues may be similar, the history of childhood sexual abuse may have longer-lasting repercussions.

Based on the findings from this review, future studies must focus on addressing the causality, and not just the correlation of childhood sexual abuse and major depressive disorder in perinatal women. To establish causality you must establish that the cause came before the effect, you must show (usually with statistical significance) that it is highly unlikely that chance alone could account for the correlation seen between the cause and effect, and you must eliminate alternate causes and maintain that no other intervening or unaccounted for variable can be responsible for the correlation between the cause and effect. Future studies can do this by "blinding" clinicians who conduct questionnaires, and being transparent about potential confounding variables in populations. This research is well poised to establish causality as childhood sexual abuse, usually, occurs before the perinatal period or pregnancy-related

depression. There are also sufficient data points to establish a clinical population large enough to show robust statistical significance in the relationship between childhood sexual abuse and perinatal depression. This means that a future study with enough participants can provide more evidence that the relationship between childhood sexual abuse and perinatal depression is real, and not just the result of randomness in data.

Moreover, this study was unable to evaluate the effects of childhood sexual abuse on mothers who are not female. Future studies should include transgender and non-binary mothers as well to determine if the effect can be seen across all gender identities. There should also be a future study that directly compares populations where the perinatal mother is married, cohabitating, or single. By separating study participants based on these factors, future researchers will be able to determine if the effect of childhood sexual abuse on major depressive disorder is more profoundly felt by mothers who are married, cohabitating, or single, or if one of these populations is free from this effect.

As this study only focused on depression, future studies should expand to include postpartum psychosis in women. Postpartum psychosis could manifest in postpartum women experiencing depression, as depression is a risk factor for psychosis. Mothers who are experiencing psychosis may be at an increased risk of committing child maltreatment. This childhood abuse could then cause perinatal depression in the child when they become a pregnant adult and could perpetuate the cycle to all future offsprings of the initial mother. A phenomenon such as this that spans multiple decades would need a large-scale healthcare organization to study it and follow a cohort of patients throughout their life with frequent physician follow up. I think this is an area of study worth pursuing, as there is also reason to believe that women who

experience psychosis may identify with the label of "postpartum depression," due to less stigmatization.

Future studies can also investigate and consider that some women with a history of childhood sexual abuse may already be experiencing depression before they become pregnant. A future study should evaluate women with a history of childhood sexual abuse before they become pregnant for depression, and then reevaluate them once they enter the perinatal period to determine if the advent of pregnancy exacerbates or ameliorates the depressive state in these women with a history of childhood sexual abuse.

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