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Developmental Effects Due to Childhood Sexual Abuse

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Developmental Effects Due to Childhood Sexual Abuse

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Abstract

Childhood development is a crucial component in the life of any individual. Any disturbances or abnormalities present during childhood may cause adverse outcomes later in life. Nurses play a pivotal role as the patient's advocate and even more importantly, they are the last line of defense in all aspects of care. Therefore, gaining deeper insight into the patient's histories is vitally important to nurses as they work to ensure the best health outcomes.

For this investigation, nursing science students focused on the detrimental effects that childhood sexual abuse has on the mental and physical development throughout the aging process. After conducting a literature review, the researchers discerned the lack of evidence on childhood sexual abuse and males. Due to this observation, a pilot study focusing on males aged six to 16 and the early timing of puberty is proposed.

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Introduction

Childhood sexual abuse is a topic that needs to be addressed more in society. Childhood sexual abuse is defined by many types of abusive acts towards children, that include sexual assault, rape, incest, and the commercial exploitation of children (Murray et. al, 2015). The reason why childhood sexual abuse is such an important topic of discussion is simply because it violates Maslow's second Hierarchy of Needs which is safety. Childhood sexual abuse also goes against basic human rights. Every nine minutes there is evidence of a child sexual abuse that is found. However, all of these cases are not talked about in the media so there is little awareness about the worldwide issue. "One in nine girls and one in fifty-three boys under the age of 18 experience sexual abuse or assault at the hands of an adult. 82% of all victims under 18 are female" (Children and Teens, 2018).

Sexual abuse causes trauma to the affected person and may stunt normal developmental growth in addition to causing different psychological problems in adulthood. Due to this observation, nurse scientists want to find out how sexual abuse during childhood effects a child's development. This review of the research literature will be fundamental because children are the next generation. The environment and the way they are brought up influences the way they will function in the future society. Therefore, nurses and other healthcare providers need to be more educated about this problem in order to provide the correct interventions.

Literature Review

This literature review is organized in two categories. The first category focuses on research that pertains to the effects of childhood sexual abuse while the participants are in their early stages of life. The second category encompasses research that focuses on the effects of

childhood abuse while participants are in later stages of life. This section describes the purpose, sample, design, and results from research articles gathered. Some implications for further research will also be discussed in particular articles. The information gathered from these research articles will provide a framework of studies relating to childhood sexual abuse and its adverse outcomes in the psychological and physical aspect.

Search Methods

We reviewed literature from the databases provided by Dominican University of California such as PsychINFO, CINAHL, and PubMed to find articles that had sufficient clinical research associated with our topic. The search terms were “childhood sexual abuse”, “developmental issues”, “sexual trauma”, “mental health”, “adverse childhood experiences”, as well as “psychological effects”. We found a total of twelve articles that were relevant to our study. We chose the articles based on the effectiveness of the study and whether or not the language was clear enough to analyze into our composition. See the Appendix at the end of this thesis for a Literature Review Table that provides a brief summary of each article.

Adverse Outcomes in Early Stages of Life

The article *Characteristics of Child Physical and Sexual Abuse as Predictors of Psychopathology* by Adams et al (2018) examined the relationship between physical and sexual abuse characteristics along with mental health outcomes and if these relationships differed by sex. The sample size was 1,270 late adolescents and emerging adults and the mean age was 19 while 51% of participants were female. The design of the study was cross-sectional with a diverse community sample self-reporting the onset, duration, and severity of physical and sexual abuse, as well as their symptoms of depression, anxiety, and PTSD symptoms.

Physical and sexual abuse sub-scales of the Childhood Trauma Questionnaire were used to assess the type and severity of abuse. Items on the abuse scales were averaged to determine severity scores. For psychological symptoms different scales were used for depression, anxiety, and PTSD such as the Diagnostic Interview Schedule for Children Predictive Scale, Revised Children's Manifest Anxiety Scale, and The Child PTSD Symptom Scale. The findings of this study suggest that abuse occurring after the age of five yields the most detrimental impact on mental health. Males were also found to be more physically abused while females were more prone to sexual abuse in early childhood and adolescence. Tukey post-hoc tests revealed that non-victims showed fewer depressive symptoms than childhood-onset sexual abuse victims as well as adolescence-onset victims. This was the same for anxiety symptoms and PTSD. Females also reported more symptoms of depression than males.

The article *Cognitive-Behavioral Interventions for Children Who Have Been Sexually Abused* by Macdonald et al (2012) explored the efficacy of cognitive behavioral approaches on children and young adults up to the age of 18. The sample size of the study was 847 children participants under the age of 18 participating in cognitive-behavioral therapy (CBT) due to sexual abuse compared with treatment with or without placebo control. The design of the study was random allocation or quasi-random allocation. The first protocol stated that abuse should have occurred in the 12 months before referral however, that restriction was subsequently removed.

This study included 10 trials in which all the studies examined CBT programs provided to children. A limitation of this study was that the reporting of studies were poor making the drawing of conclusions difficult. Although not statistically significant, data suggested that CBT

may have a positive impact on the consequences of child sexual abuse. The strongest evidence for positive effects of CBT is reducing the symptoms of PTSD, anxiety, and depression. This study is significant to our research study because of how widely used cognitive behavioral therapy is used to treat sexual abuse victims. This study gives validity to the assumption that this treatment generally works, however there are implications for more research on this topic.

The article *Childhood Sexual Abuse and Early Timing of Puberty* by Noll et al (2017) examined whether the timing of puberty was earlier for sexually abused females compared with a matched comparison group of non-abused females. The design of the study was longitudinal and cohort with a total of 173 participants. 84 sexually abused participants were referred by Child Protective Services (CPS) in Washington, DC with a comparison group of 89 participants who were not sexually abused and comparable in terms of age, ethnicity, income level, family constellation, and zip codes. Eligibility criteria included being age six to 16 at the time of the study, participation within six months of disclosure of the abuse, substantiated sexual abuse, perpetration by a family member, and participation of a non-abusing caregiver. A comparison group was recruited with factors such as having no previous contact with CPS agency and being demographically similar to a same-aged abused female.

Puberty was measured by using the Tanner staging in a clinical setting. Research nurses conducted physical examinations and provided detailed training to participants about how to assess their development for breast growth and presence of pubic hair. Results of this study showed that sexually abused females entered the stage of puberty approximately one year earlier for pubic hair development and eight months earlier for breast development than their non-abused peers. In relation to our study, this research is relevant as it shows there are

developmental physical effects from sexual abuse. However, there is indication for research on male counterparts.

In the article *The Relationship between Childhood Maltreatment and Non-Suicidal Self-Injury* by Klonsky et al (2008), a thorough search of the four major electronic databases such as PubMed, Scopus, Science Direct, and PsychINFO was conducted. The study aimed to systematically explore the association between child maltreatment and non-suicidal self-injury in adolescence and early adulthood. Child maltreatment can be divided into the following domains: physical abuse, emotional abuse, sexual abuse, emotional neglect, and physical neglect.

The studies included in this analysis were those explicitly mentioning the association between child maltreatment and non-suicidal self-injury in childhood, adolescence, or adulthood. The sample consisted of 20 cross-sectional studies including 22,517 participants, three longitudinal studies including 1,728 participants, and three retrospective studies including 62,089 individuals. Clinical samples included predominantly patients with NSSI and one of the following psychiatric diagnoses: major depressive disorder, bipolar disorder, substance use disorder, eating disorder, personality disorder or other psychiatric disorders.

The results of the meta-analysis study states that the experience of child maltreatment can increase the likelihood of adverse outcomes later in life. In addition, the research showed that sexual abuse can be a significant indicator for both suicidal behaviors and non-suicidal self-injury. Only one study reviewed did not have a correlation between child maltreatment and non-suicidal self-injury. This study supports the association between these two factors and sheds light on what future research should explore such as the role of vulnerability and protective factors.

The article *Enduring Neurobiological Effects of Childhood Abuse and Neglect* by Teicher et al (2016) aimed to synthesize neuroimaging findings in children who have experienced caregiver neglect as well as studies in children, adolescents, and adults who have experienced physical, sexual, and emotional abuse. This provided answers to questions related to the importance of the type and timing of exposure to abuse, gender differences, reversibility, and the relationship between developmental brain changes and psychopathology. This review examined the extensive body of research about potential neurobiological deficits of childhood abuse and neglect and encompasses the most significant findings. The analysis included 255 studies that presented a statistical analysis on the association between childhood maltreatment and brain measures of structure, function, or connectivity. The review categorized these 255 studies by the different parts of the brain.

This comprehensive review was able to conclude that childhood maltreatment significantly influences brain development, as evidenced by psychiatric neuroimaging studies. These changes in brain development can be attributed to adaptive responses by the human brain to facilitate survival and reproduction when the child was faced with hardship. Parental verbal abuse, witnessing domestic violence and sexual abuse appear to specifically target different brain regions and pathways. These brain regions include the auditory, visual, and somatosensory cortex. There is evidence that these regions and pathways have sensitive exposure periods where they are most vulnerable to adverse development. Psychiatric illnesses that are related to structural and functional abnormalities of the brain are a more direct outcome of childhood abuse. The review proposed that mechanisms that enhance resilience should be a focus in future studies.

Adverse Outcomes in Later Stages of Life

In the article *The Association Between Historical Childhood Sexual Abuse and Later Parenting Stress* by Hugill M, Berry K, and Fletcher I (2017), studies that investigated the associations between earlier childhood sexual abuse and later parenting stress to determine the size and consistency of the effects were reviewed. The purpose of this was to identify any mediators and moderators of the relationship and to assess the quality of the evidence base. This review gathered studies from PsycINFO, Academic Search Complete, CINAHL, MEDLINE, Web of Science, PubMed, and PILOTS. The sample included participants from 14 studies who have experienced childhood sexual abuse and are now parents. The design of the study includes cross-sectional, case-control comparison group design, prospective design, and secondary data analysis from a cross-sectional prospective study.

This systemic review found significant associations between childhood sexual abuse and later parenting stress. The results suggest that this effect is brought about by depression. Other variables that may also mediate or moderate this relationship are attachment or abuse severity. However, there are implications that suggest that their role in childhood sexual abuse and later parenting stress relationship needs to be explored in future research. There are certain clinical implications that arise from this review that include the importance of training staff to ask about earlier life experiences in mothers who are struggling and the importance of offering interventions to address parenting stress.

The next article is titled *Using Path Analysis to Examine the Relationship Between Sexual Abuse in Childhood and Diabetes in Adulthood* by Campbell et al (2018). This study was conducted to understand the mechanisms underlying the relationship between adverse childhood

experiences such as sexual abuse and diabetes in adulthood. The sample consisted of non-institutionalized adults who were 18 years of older in the United States. 506,467 participants completed the 2011 Behavioral Risk Factor Surveillance System (BRFSS) survey while 48,526 participants completed the Adverse Childhood Experiences (ACE) module across five states. The design of the study was longitudinal and cross-sectional.

The ACE survey consists of 11 items where respondents were asked if they ever experienced sexual, physical, or verbal abuse, or family dysfunction during their childhood prior to the age of 18. The onset of diabetes was self-reported, and depression was assessed by a self-report measure. Obesity was assessed using the Body Mass Index (BMI) being over or equal to 25. The results of the study indicated that in some individuals, diabetes may be the outcome of childhood sexual abuse. Furthermore, the occurrence of diabetes may be due to depression and obesity resulting from that abuse.

In the article *Childhood Physical and Sexual Abuse Experiences Associated with Post-Traumatic Stress Disorder Among Pregnant Women* by Sanchez S. et al (2017), the extent to which childhood physical and or sexual abuse history is associated with post-traumatic stress disorder (PTSD) during early pregnancy was evaluated. The purpose of this study was also to explore the extent to which the childhood abuse-PTSD association is mediated through or modified by adult experiences of intimate partner violence. The study collected in-person interviews regarding history of childhood abuse and intimate partner violence from 2,982 women. These participants were aged 18-49 years old and were 16 weeks prior to gestation. PTSD was assessed using the PTSD Checklist-Civilian Version (PCL-C).

Compared to women who have not experienced childhood abuse, the odds of PTSD were

increased compared to those women who reported physical abuse and sexual abuse. The odds of PTSD were increased 4.31-fold for women who experienced only physical abuse, 5.33-fold for women who experienced only sexual abuse, and 8.03-fold for women who experienced both physical and sexual abuse. The study was able to conclude that childhood abuse is associated with increased odds of PTSD during early pregnancy. The odds of PTSD were particularly elevated for women who had a history of childhood abuse. The study stated that more efforts should be made to prevent childhood abuse to better the quality of women's mental health.

The next article is titled *Childhood Sexual Abuse and Bulimic Behavior In A Nationally Representative Sample* by Wonderlich SA et al. The purpose of this study was to examine whether or not childhood sexual abuse is a risk factor for the development of bulimic behavior in women. The study addresses this issue by using detailed, structured questions that assesses the history of childhood sexual abuse and certain bulimic behaviors in women from the US general population. The researchers proposed a hypothesis that childhood sexual abuse is a risk factor for the development of bulimic behavior. This led to four predictions: sexually abused women will be more likely to report binge eating behavior, to express excessive concern about body image, to combine binge eating and purging behaviors, and to display all three bulimic behaviors listed. The participants included 1,099 US women who were interviewed about their childhood sexual experiences and their lifetime prevalence of bulimic behavior.

The study found that victims of childhood sexual abuse were significantly more likely to display bulimic behavior. Therefore, it can be concluded that childhood sexual abuse is a significant risk factor for the development of bulimic behavior. The results found that between one-sixth and one-third of the cases of bulimic behavior could be linked to the history of

childhood sexual abuse. Binge eating was two or more times more prevalent in women who had experienced childhood sexual abuse compared to woman who did not. However, concerns about body image could not be strongly related to a history of childhood sexual abuse.

The article *Child Physical and Sexual Abuse: A Comprehensive Look at Alcohol Consumption Patterns, Consequences and Dependence From the National Alcohol Survey* by Lown E et al (2011), elaborates on previous research on the relationship between child sexual abuse and alcohol dependence. The study provides a comprehensive description of lifetime and past year alcohol consumption patterns, consequences and dependence among women who reported either childhood physical abuse or childhood sexual abuse. Participants included 3,680 women who were a part of the 2005 U.S. National Alcohol Survey. Information on physical and sexual child abuse endured by participants were assessed in relation to eight past year and lifetime alcohol consumption measures.

Results concluded that both childhood physical abuse and childhood sexual abuse were associated with past year and lifetime alcohol consumption measures. Multivariate analyses were used to control for age, marital status, employment status, education, ethnicity, and parental alcoholism or problem drinking. Women who reported childhood physical or sexual abuse had an increased likelihood to report past year heavy episodic drinking, alcohol dependence, and alcohol consequences. The presence of childhood sexual abuse was associated with an increased number of past year drinks, lifetime alcohol related consequences, and alcohol dependence. The final conclusion is that both childhood physical and sexual abuse can be linked to alcohol outcomes in adult women. This study brings light to the need for treatment of underlying issues that results from childhood abuse, especially in an alcohol treatment setting.

The article *Sexual Abuse in Childhood and Adolescence and the Risk of Early Pregnancy Among Women Ages 18-22* by Young et al (2011), investigates the relationship between previous sexual abuse and early pregnancy. The design of the study is cross-sectional. The sample consisted of 1,790 women aged 18 to 22. Purposive sampling was used in this study to ensure socioeconomic, ethnic, and regional diversity in the sample group. Participants were recruited at different sites such as health and family planning clinics, universities, community colleges and vocational schools, social service agencies and other community sites.

The study procedure included a staff person at each site recruiting participants to take a 30-45 minute survey either in English or Spanish. Questions about sexual and reproductive history, sexual risk behaviors, sexual abuse history, and pregnancy were asked to the participants. Once completed, participants received \$15.00 in addition to a list of community referrals.

The measures being tested was the period of sexual abuse, most severe type of sexual abuse, pregnancy, covariates, and mediators. An adapted version of the Sexual Experiences Survey was used to measure the history of sexual abuse, which included about 17 unwanted sexual events and the age at which each one first occurred. Participants were organized into four distinct categories: sexual abuse exclusive in childhood (before age 12), sexual abuse in childhood and adolescence, sexual abuse exclusive in adolescence, and no abuse. Participants reported if they had been previously pregnant and their ages at their first and second pregnancies. Participants were excluded from the analysis if the first pregnancy was before or at the age of 22. The mediator assessed the age at first intercourse and was measured using one item and was treated as a continuous variable.

The results showed that a history of sexual abuse at any period of development was associated with an indication of early pregnancy. Women who experienced sexual abuse only in childhood had a 20 percent greater risk of pregnancy compared to women with no history of sexual abuse; women who experienced sexual abuse only in adolescence had a 30 percent greater risk of pregnancy; and women who experienced sexual abuse in both childhood and adolescence had an 80 percent greater risk of pregnancy.

Mental Health Among Help-Seeking Urban Women: The Relationships Between Adverse Childhood Experiences, Sexual Abuse, and Suicidality by Hamdullahpur K. et al (2018), investigated adverse childhood experiences and adult mental health in urban Aboriginal and non-Aboriginal women. The study associated childhood sexual abuse with a poor home environment, teenage pregnancy, lifetime suicide attempts, and treatment seeking. The sample of this study included 172 women who were 16 years or older, 83 Aboriginal women, and a comparison group of 89 non-Aboriginal women. The design of this study is cross-sectional. This allowed the researchers to examine the differences in adverse childhood experiences between Aboriginal and non-Aboriginal women who have similar life histories at a similar point in time. Interviews were conducted using the Addiction Severity Index (ASI). The ASI collects a wide range of information that includes sociodemographic and problem severity in seven categories: alcohol use, drug use, family and social functioning, medical status, employment, legal status, and psychological status.

The results of this study indicate that childhood sexual abuse rarely occurs in isolation, and that multiple adverse childhood experiences are strongly associated with suicide attempts and treatment seeking in adulthood. It was also found that Aboriginal women with childhood

sexual abuse witnessed higher levels of physical and sexual abuse of family members. The severity of their current psychological distress was correlational to the history of childhood neglect. Women who reported childhood sexual abuse also reported a higher rate of parental psychological problems, and parental drug and alcohol abuse. Further research that needs to be done should focus on how childhood sexual abuse effects suicidality, as well as familial, community, and cultural protective factors.

Conclusion of Literature Review

The first category of research articles that describe the effects of childhood sexual abuse while participants were in their early stages of life found connections between childhood sexual abuse and the development of mental illness. Cognitive-behavioral approaches to the treatment of these mental illnesses were also researched. It was also found that women who experienced childhood abuse entered the early stages of puberty before women who did not experience abuse. Functional and structural brain development was also compared between children who have endured abuse and those who did not. The second category of research articles encompassed the effects of childhood sexual abuse while participants were in their later stages in life. It established a relationship between later parenting stress and childhood abuse, PTSD in pregnant women, development of diabetes, risk for early pregnancy, bulimic behaviors, and alcohol consumption.

The strengths of the research that was found was commonly the large sample sizes, the unique and various methods used, originality, reliability, and consistency. Large sample sizes of the research provided increased significance to the research. This also assisted the evidence to be reliable and consistent. Originality of the research helped the researchers gather more evidence

about the effects of childhood sexual abuse on development of child. The unique and various methods that were used produced more multidimensional results. The limitations of the research included the use of retrospective research, poor reporting, the use of self-reporting measures, and premature conclusions. Retrospective research and the use of self-reporting measures may make the evidence the research was based on unreliable because some participants may have trouble recalling.

Further research that was implied in the articles the researchers found include the need for more interventions and the need for earlier screening of developmental problems. More clinical interventions should be provided to healthcare providers in order to intercept these developmental issues that arise in children who have experienced childhood sexual abuse.

Theoretical Framework

Normal physical sexual maturation in a young adolescent is called puberty. Puberty encompasses rapid and complex changes in regard to hormonal changes, physical characteristics, and cognitive development. The tool used in this research study, Tanner Staging, is an objective classification system used to document and track the development of secondary sexual characteristics in children during puberty. Tanner Staging, also known as Sexual Maturity Rating (SMR), was developed by James Tanner, a British pediatrician, in 1969 after a two-decade long study that followed the physical changes in young girls during puberty.

According to a study done in 1993 by Trickett and Putnam, early sexual contact or intercourse, or childhood sexual abuse, may stimulate the hypothalamic-pituitary-gonadal axis. This results in growth of secondary sexual characteristics (Trickett and Putnam, 1993). There is also evidence that strongly suggests stress exposure in a child's early life can affect maturation

by increased activity of the hypothalamic-pituitary-adrenal (HPA) axis. The heightened activity causes an imbalance of hormones and can influence the rate of growth and timing of sexual maturation (Noll et al., 2017).

Research Study Design

This paper has determined with strong evidence that childhood sexual abuse adversely affects human development in physical and psychological aspects. The trauma that arises from sexual abuse brings increased the possibility of mental illness and accelerated physical maturation. The bulk of the research, however, investigated sexually abused females and how they are affected mentally and physically. One article specifically talked about how females achieved puberty earlier than their peers who have not been sexually assaulted. Could this possibly be the same for males as well?

There is substantial evidence of the ways childhood sexual abuse is detrimental to female's development, however, what research has discovered so far is not conclusive to all genders requiring further study. Therefore, our new research question for this proposal is:

How does childhood sexual abuse affect males, in particular?

Primary Research Aims:

- To identify if childhood sexual abuse triggers early puberty in males like it does in females
- To compare the physical differences in effects of childhood sexual abuse between males and females

The design of this study will be longitudinal and mixed-methods, quantitative and qualitative. Quantitative data will include demographics, survey questions about the participant's perception of severity of the abuse (using a five-point Likert Scale), and physical exams. The qualitative data will include interviews with open-ended questions in which the participants will have an opportunity to describe the abuse and their on-going feelings.

Ethical Considerations

Ethical issues that must be considered for this study would be that participants will need to allow researchers access to their sensitive, personal information and history. Parental consent and the child's assent form must be obtained. The matter that the researchers are dealing with are most likely traumatizing incidents that people have gone through. Researchers need to be delicate while obtaining informed consent from participants. It is important to reassure participants that they will remain anonymous and their information will remain confidential. This is essential due to the fact that participants may be still afraid of their abusers and they may not want anyone to know about their past abuse. Counseling and/or legal resources will be provided, as appropriate. The researchers are nurses who are mandated reporters, so all potential participants will be provided with that information as well.

Approval from the appropriate Internal Review Board(s) will be obtained from all institution(s) involved in conducting this study.

Data Collection

The recruitment process of this proposed study would be to first identify victims of sexual abuse during childhood. Inclusion criteria include children between the ages of six to 16, male gender, living within the California, and English speaking who experienced childhood sexual

abuse. Collaboration will be sought from the California State Child Protective Services (CCPS) in order to identify potential participants for this study. In addition, healthcare providers will be contacted to ask for assistance with recruitment by approaching eligible participants. A flyer describing the research with the investigators contact information will be sent to CCPS and providers to give to clients or patients. Parents and children who are interested in participating in the research will be provided with the researchers contact information.

After potential participants contact the researchers, they will need to be identified as eligible for the study. The researcher or clinician will explain the study process to the child and parent, and obtain assent and consent for participation. The population that the sample represents will be adolescent boys who are victims of sexual abuse during childhood years. The sample size would include 100 sexually assaulted adolescent males as well as a matched comparison group of non-abused males. Participants will be instructed by a research nurse in a clinical setting to properly assess puberty by using the Tanner staging. In addition, a routine physical health examination will be included in the study.

Participants will be given an initial interview using a semi-structured interview guide when the study begins and then they will be given an annual interview for six years (for a total of six interviews).

Data Analysis

During the six-year period, the researchers will analyze the data as it's being collected. The quantitative data includes the Likert Scale survey and the physical exams. The qualitative data includes the open-ended interviews. The researchers will examine for correlations between the perceived severity of abuse and the physical exams. This data will also be compared to the

non-abused peers' physical exams which will be of importance in determining if there is an association between childhood sexual abuse and the early timing of puberty. The data will be analyzed with multiple regression to determine if there are any significant relationships between these factors.

The qualitative data will be analyzed using content analysis. The researchers will look for themes. The researchers will also look for differences between the abused group and the non-abused group.

After all of the data has been processed, this will help the researchers understand the correlation between early timing of puberty in males and the incidence of childhood sexual abuse. In addition, researchers will better understand the teenagers' perception of their abuse.

Conclusion

The process of this research proposal has taught the authors that there is still a lot to learn about the effects of childhood sexual abuse on the mental and physical development of children. In particular, males should be focused on just as much as the female population for adverse effects of childhood trauma. The researchers have learned that there is substantial evidence that proves there are multiple adverse mental and physical effects of childhood sexual abuse.

Nurses can apply this research to clinical practice by learning of the signs that a child or adolescent has been sexually abused. This can help the nurse create a better environment for the patient or client and provide more effective patient-centered care.

This proposed research will advance the field of nursing by raising more awareness about the global issue of childhood sexual abuse. Nurses should become more aware of the warning signs that a child may be experiencing abuse, and how to better help children in those situations.

Nurses can also benefit by learning about new ways to properly intervene earlier when a child has been abused to help lessen the effects of the trauma. By learning about the potential outcomes of childhood sexual abuse, nurses and healthcare providers can be more knowledgeable about the ways to prevent and treat all these adverse effects.

This review of the research literature and proposed study are steps in the right direction to guide nurses and other healthcare providers in understanding the potential ways they can better help patients who have experienced childhood sexual abuse, there is still a great deal more to learn. In order to effectively help people who have endured childhood sexual abuse, screening tools and other ways to assess the risk of adverse outcomes early need to be researched as well. This approach will help ensure all those who have suffered childhood sexual abuse receive the best possible care and overcome trauma as they grow into adulthood.

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APPENDIX

Literature Review Table

Author (date)	Purpose	Design/ Sample	Strengths	Weaknesses	Results/ Key Findings
Adams J, Mrug S, Knight DC. Characteristics of child physical and sexual abuse as predictors of psychopathology. <i>Child Abuse Negl.</i> 2018;86:167-177. doi:10.1016/j.chiabu.2018.09.019	Examined the correlation between physical and sexual abuse traits and mental health effects and whether these relationships differed by gender	Sample: late adolescents and emerging adults (N = 1270; mean age = 19.68; 51% female) Design: cross-sectional	The larger sample size permits the incidence of increased significance in the research. Gave reliable results for depiction of the effects of abuse traits	The study was not able to consider the outcomes of other maltreatment, such as emotional abuse and bodily neglect. It was not able to take into account the number of perpetrators, victim's relationship to abusers, and victims' emotional status directly after abuse	Suggested that abuse that occurred after the age of five may have the most harmful influence on mental health. Males have a higher probability of being abused physically than females. Females encounter more sexual abuse than males during early childhood. Females reported more symptoms of depression than male counterparts.

<p>Hamdullahpur, K., Jacobs, K. J., & Gill, K. J. (2018). Mental Health Among Help-Seeking Urban Women: The Relationships Between Adverse Childhood Experiences, Sexual Abuse, and Suicidality. <i>Violence Against Women</i>, 24(16), 1967–1981. https://doi-org.dominican.idm.oclc.org/10.1177/1077801218761602</p>	<p>Investigated adverse childhood experiences such as sexual abuse with adult mental health in a sample of urban Aboriginal and non-Aboriginal women</p>	<p>Sample: 172 women aged 16 years and older. 83 Aboriginal women and a comparison group of 89 non-Aboriginal women</p> <p>Design: cross-sectional</p>	<p>This is the first study of its kind that targets urban Aboriginal and non-Aboriginal women in association with the seeking of help from childhood sexual abuse.</p>	<p>This study did not establish specific factors that protect against the adverse outcomes both physical and mental associated with childhood sexual abuse</p>	<p>Multiple adverse childhood experiences are associated with suicidality and the seeking of treatment in adulthood. Also indicated that childhood sexual abuse rarely occurs in isolation.</p>
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<p>Campbell JA, Farmer GC, Nguyen-Rodríguez S, Walker RJ, Egede LE. Using path analysis to examine the relationship between sexual abuse in childhood and diabetes in adulthood in a sample of US adults. <i>Prev Med.</i> 2018;108:1-7. doi:10.1016/j.ypmed.2017.12.013</p>	<p>Investigated the relationship between childhood sexual abuse and the incidence of diabetes in adulthood.</p>	<p>Sample: non-institutionalized adults, 18 years or older in the United States. Participants completed the 2011 BRFSS survey: 506,467 with 48,526 participants completing the Adverse childhood experience (ACE) module across 5 states.</p> <p>Design: longitudinal</p>	<p>With the use of path analysis, researchers were able to understand the correlation between sexual abuse and diabetes in adulthood. The large data set is also a strength in the research.</p>	<p>The BRFSS survey does not shed light on the differentiation between diabetes types. The measures used in this analysis were self-reported which may be influenced by the participants recall bias.</p>	<p>This study found that the pathway was fully mediated by depression and obesity. There is a relationship between sexual abuse and the development of diabetes.</p>
<p>Hugill, M., Berry, K., & Fletcher, I. (2017). The association between historical childhood sexual abuse and later parenting stress: a systematic review. <i>Archives of women's mental health</i>, 20(2), 257–271. https://doi.org/10.1007/s00737-016-0708-3</p>	<p>Review studies that investigated associations between childhood sexual abuse and later parenting. Determined the size and consistency of the effects, identified any mediators and moderators and assessed the quality of the evidence base.</p>	<p>Sample: participants are parents from 14 studies who have experienced childhood sexual abuse</p> <p>Design: cross-sectional, case-control comparison group design, prospective design, secondary data analysis from a cross-sectional prospective study.</p>	<p>This is the first systemic review to explore the association between childhood sexual abuse and later parenting stress. The review was conducted transparently which allows readers to assess the quality of the review and replicate the search. Studies included were assessed for quality which strengthened the evidence.</p>	<p>There is an absence of a shared definition of childhood sexual abuse. Also a lack of homogeneity in regards to measurement of childhood sexual abuse which limits the ability to draw concrete conclusions between the factors of sexual abuse and later parenting stress.</p>	<p>Results found significant associations between childhood sexual abuse and later parenting stress. This suggests that this effect is caused by depression.</p>

<p>Macdonald, G., Higgins, J. P., Ramchandani, P., Valentine, J. C., Bronger, L. P., Klein, P., O'-Daniel, R., Pickering, M., Rademaker, B., Richardson, G., & Taylor, M. (2012). Cognitive-behavioral interventions for children who have been sexually abused. <i>The Cochrane database of systematic reviews</i>, 2012(5), CD001930. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7061273/</p>	<p>Assesses the effectiveness of cognitive-behavioral approaches (CBT) in the treatment of immediate and longer term consequence of childhood sexual abuse</p>	<p>Sample: 847 children participants under the age of 18 participating in CBT due to sexual abuse</p> <p>Design: randomized or quasi-randomized</p>	<p>Bigger sample size allows increased incidence of significance in research. Sample was randomly selected which introduces a more diverse group. Highlights the need for more carefully conducted and better reported trials within text.</p>	<p>The reporting portion of the study was poorly done making the drawing of conclusions difficult</p>	<p>The results of the study confirmed that CBT has a great potential to address the adverse outcomes associated with childhood sexual abuse</p>
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<p>Noll JG, Trickett PK, Long JD, et al. Childhood Sexual Abuse and Early Timing of Puberty. <i>J Adolesc Health</i>. 2017;60(1):65-71. doi:10.1016/j.jadohealth.2016.09.008</p>	<p>Investigated whether the timing of puberty had an earlier onset for females who had been sexually abused and compared data to a comparison group of non abused females.</p>	<p>Sample: total sample of 173. 84 female participants who have been sexually abused aged 6-16. Comparison participants of 89 were chosen based of criteria of not being sexually abused with similar demographics</p> <p>Design: Longitudinal, cohort</p>	<p>Quantitative data and analysis allowed for hypotheses to be tested. Data presented is consistent, precise, and reliable. Alternative explanations for earlier pubertal onset were considered in the study.</p>	<p>Quantitative data and analysis allows for generalization- Most measurements included in the study relied on self-report which can result in bias. The sample was only restricted to females which makes these findings irrelevant to males.</p>	<p>Sexually abused females entered the stage of puberty approximately 1 year earlier for pubic hair development and 8 months earlier for breast development than their nonabused peers.</p>
<p>Serafini G, Canepa G, Adavastro G, Nebbia J, Belvederi Murri M, Erbuto D, Pocai B, Fiorillo A, Pompili M, Flouri E and Amore M (2017) The Relationship between Childhood Maltreatment and Non-Suicidal Self-Injury: A Systematic Review. <i>Front. Psychiatry</i> 8:149. doi: 10.3389/fpsy.2017.00149</p>	<p>The study's purpose was to systemically determine if there is an association between childhood sexual abuse and physical abuse with non-suicidal self injury.</p>	<p>Sample: 20 cross-sectional studies including 22,517 participants, 3 longitudinal studies including 1,728 participants, and 3 retrospective studies including 62,089 individuals</p> <p>Design: cross-sectional, longitudinal, retrospective</p>	<p>Using multiple studies provides large sample sizes and a lot of evidence that strengthened conclusions of the study. Analyzing previous research makes conclusions more definite.</p>	<p>Only the studies with smaller sample sizes indicated any correlation and the studies with large sample sizes did not so there is a discrepancy in findings.</p>	<p>The results of the meta-analysis states that they experience of childhood maltreatment increases the likelihood of adverse outcomes later in life. Childhood sexual abuse can be an indicator for suicidal behaviors and non-suicidal behaviors.</p>

<p>Lown, E. A., Nayak, M. B., Korcha, R. A., & Greenfield, T. K. (2011). Child physical and sexual abuse: a comprehensive look at alcohol consumption patterns, consequences, and dependence from the National Alcohol Survey. <i>Alcoholism, clinical and experimental research</i>, 35(2), 317–325. https://doi.org/10.1111/j.1530-0277.2010.01347.x</p>	<p>This study is an extension from previous research that investigated the relationship between childhood sexual abuse or childhood physical abuse and alcohol dependence in women.</p>	<p>3,680 women who participated in the 2005 U.S National Alcohol Survey</p> <p>Design: multivariate analysis, qualitative</p>	<p>The findings provide clear new data showing the damaging impact of childhood abuse. The sample size is very large which strengthens the conclusions.</p>	<p>The study used self report measures which may have recall bias. Another limitation would be the study does not fully capture all aspects of child abuse in relation to adult alcohol consumption.</p>	<p>Both child physical and sexual abuse were associated with past year and lifetime alcohol consumption measures. Women who reported abuse had increased likelihood to report past year heavy episodic drinking, alcohol dependence, and alcohol consequences.</p>
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<p>Young, M.-E. D., Deardorff, J., Ozer, E., & Lahiff, M. (2011). Sexual Abuse in Childhood and Adolescence and the Risk of Early Pregnancy Among Women Ages 18–22. <i>Journal of Adolescent Health, 49</i>(3), 287–293. https://doi.org.dominican.idm.oclc.org/10.1016/j.jadohealth.2010.12.019</p>	<p>The study explored the correlation between childhood sexual abuse and the incidence of early pregnancy among women.</p>	<p>The sample included 1,790 women aged 18-22. Purposive sampling was used to ensure diversity in the sample group.</p> <p>Design: cross-sectional</p>	<p>The study was able to capture the most severe type of abuse during each period which strengthened the results. The sampling methods also ensured that the participants were representative of a large population.</p>	<p>Retrospective self-reported data may cause some of the results to be inaccurate because of participants failing to recall correctly. Because of the cross-sectional design, causality cannot be established.</p>	<p>History of sexual abuse at any period of childhood development can be associated with an indication of early pregnancy. There was a greater chance of early pregnancy when women experienced abuse in adolescence</p>
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<p>Sanchez, S. E., Pineda, O., Chaves, D. Z., Zhong, Q. Y., Gelaye, B., Simon, G. E., Rondon, M. B., & Williams, M. A. (2017). Childhood physical and sexual abuse experiences associated with post-traumatic stress disorder among pregnant women. <i>Annals of epidemiology</i>, 27(11), 716–723.e1. https://doi.org/10.1016/j.annepidem.2017.09.012</p>	<p>Evaluate the extent to which childhood physical and or sexual abuse history is associated with post-traumatic stress disorder in pregnant women. Explores the extent to which childhood abuse-PTSD association is mediated through, or modified by adult experiences of intimate partner violence.</p>	<p>2,982 women who have experienced childhood sexual abuse aged 18-24 years old prior to 16-weeks of gestation.</p> <p>Design: qualitative</p>	<p>To help prevent weaknesses, well-trained interviewers used standard questionnaires to collect information from all study participants. This also helped results be consistent.</p>	<p>Childhood abuse and intimate partner violence histories were gathered by self-report. These measures may be subjected to errors in recall by the participants.</p>	<p>The odds of the development of PTSD were increased in women who reported physical and/or sexual abuse compared to women who did not report abuse during early pregnancy. The odds were specifically increased in women who reported both physical and sexual abuse.</p>
<p>Teicher MH, Samson JA. Annual Research Review: Enduring neurobiological effects of childhood abuse and neglect. <i>J Child Psychol Psychiatry</i>. 2016;57(3):241-266. doi:10.1111/jcpp.12507</p>	<p>Aims to synthesize neuroimaging findings in children who experienced caregiver neglect as well as studies in children, adolescents and adults who experienced physical, sexual, and emotional abuse</p>	<p>Participants were from 255 studies that presented a statistical analysis on the association between childhood maltreatment and brain measures of structure, function, or connectivity.</p> <p>Design: meta-analysis, descriptive, correlational</p>	<p>This study provides compelling data on the impact and reversibility of early neglect on brain development, which has never been done before.</p>	<p>Recent research suggests that the female hippocampi may be less vulnerable to the effects of stress, making some female participants less significant given the potential weaker effects of stress on their hippocampus.</p>	<p>Childhood maltreatment influences brain development, as evidenced by psychiatric neuroimaging studies. Verbal abuse, sexual abuse, and witnessing abuse targets the auditory, visual, and somatosensory cortexes.</p>

<p>Wonderlich SA, Wilsnack RW, Wilsnack SC, Harris TR. Childhood sexual abuse and bulimic behavior in a nationally representative sample. Am J Public Health. 1996 Aug;86(8):1082-6. doi: 10.2105/ajph.86.8_p-t_1.1082. PMID: 8712265; PMCID: PMC1380613.</p>	<p>Investigates whether childhood sexual abuse is a risk factor for the development of bulimic behavior in women.</p>	<p>The sample included 1099 women from the US who were interviewed about their childhood sexual experiences and whether they have any bulimic behavior.</p> <p>Design: qualitative</p>	<p>A representative national sample was used of women in the general population, which provided a strong sample group. Multivariate analyses and rigorous criteria were also used to strengthen the conclusions.</p>	<p>It may be too early to make some conclusions because some studies found no relationship and there were some methodological limitations. For example, one study used a sample of anorexic and bulimic individuals.</p>	<p>This study concluded that childhood sexual abuse is a significant risk factor for the development of bulimic behavior. However, concerns about body image could not be significantly related to a history of childhood sexual abuse.</p>
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