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BREASTFEEDING'S EFFECTS ON MATERNAL MENTAL HEALTH

**Tiny Tusks Breastfeeding and Infant Support: Breastfeeding's Effects on Maternal Mental
Health**

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NURS 498VH: Honors Internship

Dr. Scott and Dr. Vowell Johnson

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Introduction

From Fall 2021 until Fall 2022, I participated in a Tiny Tusks Breastfeeding and Infant Support Internship. This program through Eleanor Mann School of Nursing allows for mothers to have a safe, clean, and private space to breastfeed or pump during Razorback football and basketball games and gymnastics meets. Tiny Tusks also provides information and education about the benefits of breastfeeding. Many mothers that utilize the Tiny Tusks resources state that they were hesitant to attend athletic events due to the lack of clean spaces to breastfeed or pump prior to their knowledge of Tiny Tusks. The Tiny Tusks rooms are also available for children to come during games for a low-stimulation and temperature-controlled environment.

Tiny Tusks has given me the opportunity to be exposed to breastfeeding information and the effects of breastfeeding on the mother and her mental, physical, and social well-being. As a nurse, this additional education on breastfeeding will be applicable in my line of work, especially when taking care of newborn patients or pregnant and breastfeeding mothers.

Tiny Tusks has changed many women's perceptions of attending Razorback athletic events. Mothers have tried to breastfeed in private box seats at the games and have been told that they might make others uncomfortable. Because of incidents like this, many mothers have told me that they would avoid coming to games so they would not have to pump or breastfeed in the bathrooms, so, to me, being able to make events more inclusive and accessible is the most important part of this program.

Reflection

Tiny Tusks experienced challenges during the hot weather, because mothers would bring their children in our room to cool off or get free water. The biggest challenge during hot weather is needing more space – there often is a line to breastfeed or the room is crowded with parents

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trying to keep their children out of the heat. Additionally, we only have one room at the south endzone during football games, so many times, we recommended people access the main room at the north endzone. This meant that people had to go to the opposite end of the stadium to access a Tiny Tusks room without waiting in a line in the heat. Another challenge that we faced was getting the word out about our program, because during the height of the COVID-19 pandemic, Tiny Tusks was not in operation. When we re-opened during the 2021 football season, we had a new location, so it took a lot of posting on social media and promotion for our space to become as busy as it now is.

Tiny Tusks has offered me further education on breastfeeding and has allowed me to gain knowledge and experience in an area of nursing that, otherwise, I would not have much experience. I feel that the opportunities offered through Tiny Tusks will make me a more well-rounded and knowledgeable nurse, as well as offering experience to be flexible if I did choose to be an OB or NICU nurse in the future. Tiny Tusks also gave me the opportunity to speak with many mothers about how breastfeeding had changed their life and health – socially, psychologically, and physically. This has given me a new perspective on breastfeeding that I will take into my career so that I can educate more people, whether it be coworkers, patients, friends, or family.

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Literature Review

As a result of my Tiny Tusks experience and speaking with many breastfeeding mothers, I decided to further investigate the connection between breastfeeding and a mother's mental and social health. Breastfeeding is a highly variable experience from person-to-person, but the goal of this search was to find patterns in research about the impact of breastfeeding on mental health and open the discussion about the correlation between breastfeeding and mental health.

While breastfeeding has proven to be beneficial for the infant and maternal physical health, there are variable outcomes for maternal mental health. When breastfeeding is successful, it has been shown to improve maternal mental health outcomes for many reasons, including an increased feeling of attachment to the infant (Scarborough et al., 2022), decreased anxiety, and decreased postpartum depression symptoms (Wouk et al., 2022). For these reasons, the World Health Organization (2021) recommends exclusive breastfeeding for at least the first six months of life. For mothers that have difficulty breastfeeding, mental health outcomes have been shown to be far more negative, inducing feelings of shame and guilt and leading to higher rates of postpartum depression symptoms (Jackson et al., 2021).

Methods

Study Design

The search for academic journals and articles for this literature review was conducted through MEDLINE and CINAHL. Key words used in the search include "breastfeeding or lactation or lactating" and "maternal mental health or postnatal mental health". To find relevant and recent articles, search limits used include full text, English language, peer reviewed, and articles from 2017 to 2022. Articles were not limited by geography, as breastfeeding is a global experience.

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Inclusion and Exclusion Criteria

To be included in this literature review, the research in the articles must include components based on the question “How does breastfeeding impact maternal mental and social health?”. The subjects of the study must be attempting to breastfeed, breastfeeding, or have recently breastfed.

Studies were excluded from this literature review if the article discussed how significant pre-existing mental health conditions prevented successful breastfeeding. This was considered exclusion criteria because previous maternal mental health issues could have served as barriers to breastfeeding. Studies were also excluded if the focus of the study was external factors impacting mental health, unrelated to breastfeeding.

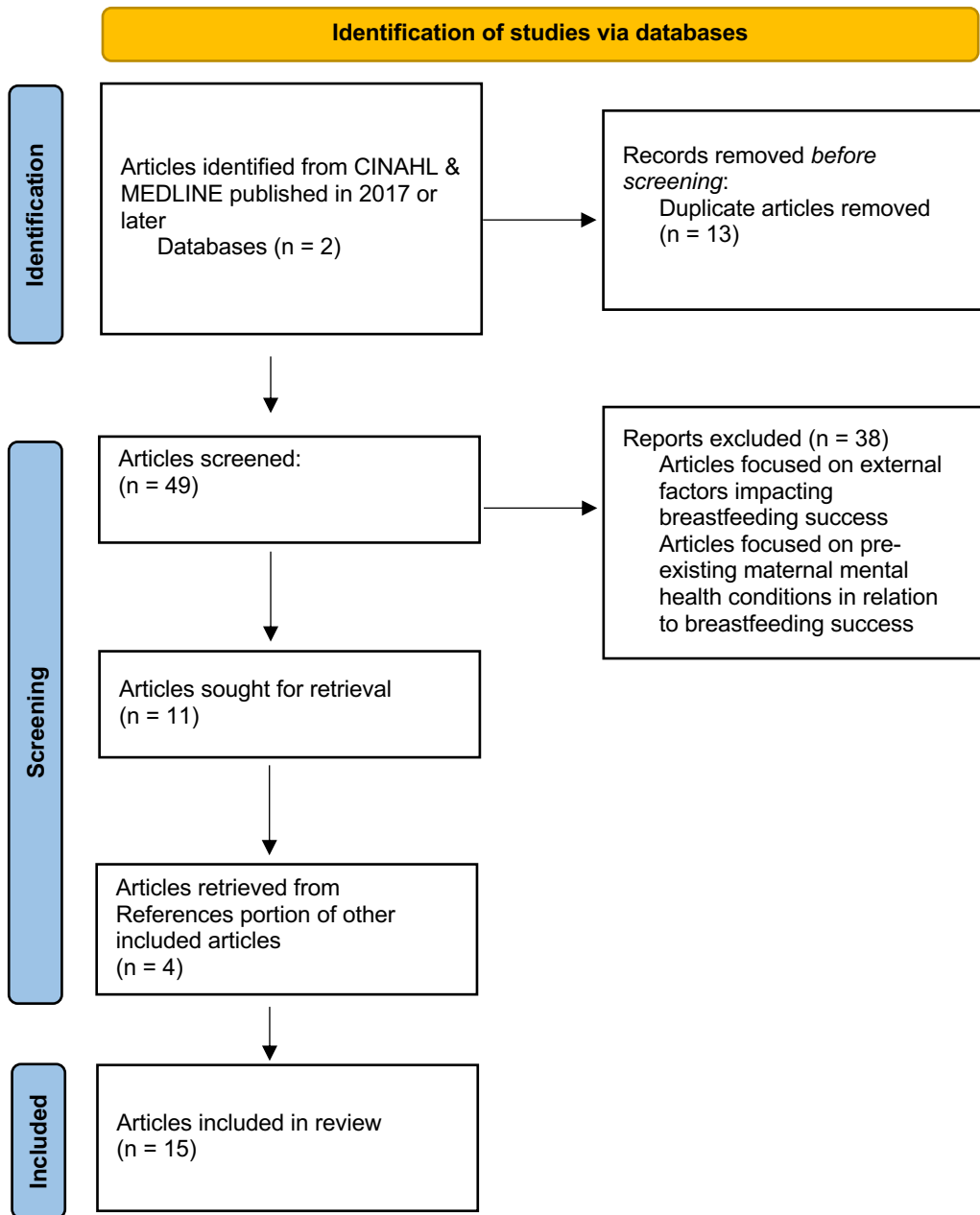
Search Results

CINAHL initially resulted with 25 articles, and MEDLINE resulted with 37 articles. 13 articles from the CINAHL search were duplicate articles, leaving 49 articles to be reviewed. After screening these articles, 11 articles met inclusion criteria and were included in this literature review. The remaining four articles were selected from the references portion of selected articles. Figure 1 shows the search and selection process for included studies.

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Figure 1

Study Selection Process



Results

Scarborough et al. (2022) described the relationship between breastfeeding and mental health is “bidirectional”, meaning that breastfeeding impacts mental health, and mental health

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impacts breastfeeding. For this review, I focused on the former. From an interview with participants, it was found that out of the 45 participants who reported mental health issues, 17 participants state that mental health issues started after giving birth and during their child's newborn period. One participant who felt that breastfeeding negatively impacted their mental health reported that the struggle of breastfeeding caused them to feel like a failure (Scarborough et al., 2022). Others say that they felt isolated, sleep deprived, anxious, and guilty. Mothers who reported a positive impact on mental health also report successful breastfeeding experiences, stating that the bond and attachment from breastfeeding made them feel secure as a mother.

Xiao et al. (2020) conducted a qualitative study in which mothers in China were interviewed about their breastfeeding experience. Many of the participants stated that they experience anxiety or frustration with breastfeeding and reported not having proper support or education about breastfeeding once discharged from the hospital. As the previous study found, mothers who had a positive experience breastfeeding described it as a "joyful experience" and found that it improved the emotional attachment between them and their child. The women who had less accessible public breastfeeding spaces, failure in breastfeeding, and pain with breastfeeding reported higher rates of postpartum depression symptoms than mothers who had positive breastfeeding experiences.

Jiang et al. (2022) conducted a cross-sectional study in which maternal mental health and breastfeeding beliefs were assessed in rural China using objective tools; the Depression, Anxiety, Stress Scale-21 (DASS-21), the Iowa Infant Feeding Attitude Scale, and Breastfeeding Self-Efficacy Scale. In this study, there was not a significant correlation between maternal mental health and breastfeeding beliefs, but results revealed a more significant correlation between

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maternal mental health and socioeconomic status. Although this study utilizes objective tools, it is limited in that directionality of correlations is not able to be assessed.

Tomlinson et al. (2020) conducted an exploratory study in Afghanistan in which the Patient Health Questionnaire-9 (PHQ-9) was used to screen mothers for symptoms of depression. A score of 5-9 on the PHQ-9 indicated mild depressive symptoms, while a score of 10-14 indicated moderate symptoms, and a score of greater than 15 indicated severe depressive symptoms. To be included in this study, the participant had to score a 12 or higher on the PHQ-9. 215 women were screened using the PHQ-9, with 131 meeting inclusion criteria. Seventy-two mothers participated in this study, with 66% of them exclusively breastfeeding their infant. This population has many barriers preventing successful breastfeeding, correlating with high rates of post-partum depression.

In a cross-sectional study in Catalonia, Spain, Nicolás-López et al. (2022) investigated the correlation between maternal mental health and breastfeeding during the COVID-19 pandemic. According to Nicolás-López et al. (2022), elevated posttraumatic stress, anxiety, and depression were reported in postpartum women during the pandemic, as well as a significant increase in the number of women practicing exclusive breastfeeding. During this time, less resources for breastfeeding mothers were available, and nine mothers in this study switched from exclusive breastfeeding to either mixed breast and formula feeding or exclusive formula feeding. However, an overall increase in mental health issues was shown in the general population during the pandemic, so the increase in mental health issues could be contributed to the pandemic, rather than breastfeeding specifically.

Keim et al. (2021) examined maternal perception of lactation consultants when faced with difficulty breastfeeding prior to discharge from the hospital. Women who felt supported by

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the lactation consultant reported overall more positive experiences and improved breastfeeding results. There was also a correlation between women who did not feel supported by lactation consultants, low-success breastfeeding experiences, greater general anxiety, and low self-efficacy with breastfeeding.

A systematic review found that guilt, shame, and a feeling of failure was more prevalent in mothers who formula feed their infants due to unsuccessful breastfeeding. Jackson et al. (2021) also found that women who were “underprepared and ineffectively supported” were more likely to experience anxiety and doubt regarding breastfeeding that they perceived as a failure. Perceived failure in breastfeeding also showed to impact a mother’s mental health as a matter of morality following being told “breast is best”, implying that formula feeding is guilt-inducing.

Wouk et al. (2019) conducted a longitudinal cohort study, following 164 mother/infant pairs from the third trimester to 12 months postpartum. Positive emotions during breastfeeding and depression and anxiety symptoms were measured at 2 months, 6 months, and 12 months postpartum. Women who experienced clinical depression or anxiety before or during pregnancy showed reduced symptoms during breastfeeding at 2 and 6 months postpartum. In women who did not have a prenatal depression diagnosis, those who exhibited high positive emotions related to breastfeeding were significantly less likely to develop postpartum depression symptoms at 2 and 6 months postpartum.

Table 1 presents authors, year published, study design, sample size, study location, and significant study findings for articles selected for this literature review.

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Table 1

Study Characteristics and Findings

Authors & Year	Sample size	Study Design	Location	Significant Findings
Blixt et al. (2019)	139 women	Qualitative study: focused interviews	Sweden	Women interviewed reported that varying opinions from so many sources (WHO, healthcare professionals) often causes confusion and stress about the “right” way to breastfeed. Participants stated that individualized approaches should be made for each mother when addressing breastfeeding issues, and nurses should be positive, supportive, and provide evidence-based information to help improve breastfeeding attitude and outcomes.
Brown & Shenker (2021)	1219 participants	Survey	United Kingdom	When mothers are able to meet breastfeeding goals they’ve set for themselves, their mental health does not suffer. When they are not able to meet these goals, their risk of depression and grief increases.
Ezzeddin et al. (2019)	325 women	Cross-sectional	Iran	There were no significant associations between exclusive breastfeeding and mother’s postpartum depression. There was a significant association between exclusive breastfeeding and economic satisfaction and infant birth weight.

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Fallon et al. (2019)	11 articles	Systematic review	United Kingdom	Women that experienced breastfeeding challenges felt that they were surprising, and it was exhausting, painful, and demanding, in some cases. Women who felt guilt (external and internal) surrounding breastfeeding had higher amounts of negative perceptions about themselves and poorer mental health outcomes.
Jackson et al. (2021)	20 articles	Systematic review	United States	Guilt is experienced by the mother more as breastfeeding success or frequency declines. This guilt is brought on most often by family and peers for breastfeeding mothers and healthcare professionals for formula-feeding mothers.
Jiang et al. (2022)	742 mothers of infants under 6 months old	Cross-sectional	China	Mothers exhibiting depressive symptoms showed a significant association with poor breastfeeding attitude and self-efficacy. Anxiety and stress were also significantly associated with breastfeeding self-efficacy. No significant association between maternal mental health and exclusive breastfeeding.
Keim et al. (2021)	210 postpartum women	Observational, cross-sectional	United States	29% of participants reported negative perceptions of lactation consultant support, which was associated with lower breastfeeding self-efficacy, less successful breastfeeding, and greater general anxiety. Perceptions did not correlate with postpartum depression symptoms.
Nicolás-López et al. (2022)	91 mother-baby pairs with 56 pairs completing the study	Observational, cross-sectional	Spain	Breastfeeding significantly increased during the COVID-19 pandemic, but there was no significant increase in adverse maternal mental health outcomes in relation to breastfeeding. Elevated anxiety and depression

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				was shown in postpartum women during the pandemic, without association with breastfeeding.
Scarborough et al. (2022)	109 participants	Qualitative and quantitative survey	United Kingdom	Participants that reported poor mental health outcomes were associated with pressure to breastfeed, breastfeeding difficulties, and poor support. Participants report positive impacts on mental health when feeling a sense of empowerment from successful breastfeeding.
Song et al. (2017)	120 postpartum women		China	Women who were provided with psychological nursing had significantly higher breastfeeding success rates, along with significantly lower depression scores when compared to the control group.
Tomlinson et al. (2020)	215 women initially screened, 47 completed the study	Feasibility	Afghanistan	Of the 47 women participating in the study that screened positively for postpartum depressive symptoms, 66% of them were exclusively breastfeeding. These mothers had significant barriers for breastfeeding, correlating with high rates of postpartum depression.
Wouk et al. (2019)	164 women	Longitudinal cohort study	United States	Women that experienced positive emotions while infant feeding during 2, 6, and 12 months postpartum were associated with improvement in postpartum mental health and well-being. These findings were consistent between women who had clinically diagnosed depression prenatally and women who had no previously diagnosed depressive disorder.

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Xiao et al. (2020)	22 women	Qualitative exploratory	China	Women who had less accessible breastfeeding support, less successful breastfeeding experiences, and more barriers report higher rates of postpartum depression symptoms, while women who were successful in breastfeeding attempts report higher rates of attachment and bonding to their infant.
Yahya et al. (2019)	248 mothers	Cross-sectional study	Malaysia	Mothers studied who had a high risk of depressive symptoms showed a more negative attitude toward breastfeeding. Mothers with a higher breastfeeding intention exhibited better attitudes toward breastfeeding, then showed more success with breastfeeding for a longer duration of time.
Yuen et al. (2022)	55 articles	Systematic review	United States	36 studies found significant correlations between breastfeeding and maternal mental health, and in 29 of those studies, breastfeeding was shown to correlate with more positive maternal mental health outcomes. However, when the mother is faced with breastfeeding difficulties, breastfeeding was correlated with negative maternal mental health outcomes.

Discussion

Breastfeeding is a highly individualized experience in which the effects on mental health are often dependent on the mother's positive or negative experience. Each mother has a different experience and based on a plethora of factors like breastfeeding success, breastfeeding independence, and outside pressure or influences, maternal mental health outcomes vary greatly. Most often, the articles reviewed in this literature review show that positive breastfeeding

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experiences tend to impact maternal mental health positively (less postpartum depression and anxiety symptoms).

Given the bidirectional relationship between maternal mental health and breastfeeding experience, both factors constantly impact each other. If the mother had poor mental health or well-being while breastfeeding, that could have also decreased the mother's breastfeeding success and independence. This constant cycle that includes maternal mental health and breastfeeding success is a topic that requires further investigation – however, there is little evidence on how to eliminate factors that are causing poor mental health outcomes in relation to unsuccessful breastfeeding experiences.

There are several limitations for this literature review. In many of the articles reviewed, the women participating in studies had social and environmental factors that correlate with stress and depression, such as low socioeconomic status. Also, since many of these studies were conducted outside of the United States, there are various cultural differences and barriers regarding breastfeeding that differ from breastfeeding norms in the U.S. As previously stated, postpartum maternal mental health and breastfeeding are significantly intertwined, so it can be challenging to determine which is affecting the other. Another limitation is many of the articles reviewed in this literature review focused on how maternal mental health or external social factors impact breastfeeding duration and success, rather than breastfeeding's effect on maternal mental health.

Conclusion

Through this literature review and the experience of being a Tiny Tusk intern, I have been able to widen my knowledge about breastfeeding and mental health significantly. Maternal and postpartum mental health are subjects that are lacking in research, especially in relation to

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breastfeeding. Breastfeeding research often focuses on the benefit for the infant and disregards the potential negative effects on the mother. I am optimistic that research and information will be more readily available for mothers who may struggle with their mental health while breastfeeding, and that it will allow them to make fully informed decisions regarding breastfeeding – what's best for them and their baby.

Interacting with mothers during Tiny Tusks offered me insight into the social isolation and exhaustion that breastfeeding can cause. Being able to provide a safe and accessible space for mothers to come breastfeed or pump was so important to me, because I wanted those mothers to know that someone was thinking about them. My hope is that Tiny Tusks will continue to grow, improve, and offer more services for the mothers and infants that attend Razorback athletic events.

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