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Tiny Tusks Internship: The Relationship Between Socioeconomic Status and Breastfeeding Barriers

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NURS 498VH: Honors Internship

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TINY TUSKS INTERNSHIP: THE RELATIONSHIP BETWEEN SOCIOECONOMIC STATUS AND BREASTFEEDING BARRIERS

Introduction

Tiny Tusks is a breastfeeding and infant support program developed by the nursing program at University of Arkansas. From 2021-2022, I have had the opportunity to complete my honors internship with this organization. Tiny Tusks was started with the goal of creating safe spaces for mothers to breastfeed and/or pump during school sporting events, along with providing up to date information on breastfeeding and infant safety practices. Tiny Tusks also provides changing tables, spaces for young children to decompress in a low-stimulation environment. Before beginning this internship, I had very little knowledge about breastfeeding. I knew that it was recommended, but I was unaware of all of the benefits and challenges. Throughout this experience, I have been able to learn about the different experiences of women during their breastfeeding journey, barriers they faced, and what kind of support they needed. I also learned more about the health benefits of exclusive breastfeeding and why it is strongly encouraged. As a future nurse in the neonatal intensive care unit (NICU), this experience will aid me in supporting the mothers of the infants I will be caring for. An infant admitted to the NICU faces many challenges related to breastfeeding, and mothers may feel that they are not able to breastfeed, especially with extremely sick or premature infants. The knowledge I have gained through this internship will allow me to encourage and support NICU mothers in their decision to breastfeed their infants despite all of the challenges they face.

As an intern with Tiny Tusks, I attended football games, basketball games and gymnastic meets to provide services to families. My duties included setting up the spaces, cleaning the space between uses, checking in everyone who accessed the spaces, providing teaching and education to mothers and families, and interacting with children and parents at the activity tables. Throughout my interactions with mothers in this environment, I learned that many women don’t

feel fully comfortable breastfeeding in public, despite it being legal in all fifty states (NCSL, 2022). Tiny Tusks is able to provide them with privacy and allow them to feel comfortable and supported in their decision to breastfeed. There were also many challenges I found that hinder women from choosing to exclusively breastfeed and pump. As part of my Tiny Tusks internship, I went around to every lactation space on campus to assess what needed to be improved, and what I found was disappointing. The rooms were small, untidy, and lacked appropriate resources. In addition to this, there weren't nearly enough spaces. For Tiny Tusks, we did our best to make sure the rooms we provided for mothers were clean, air-conditioned, and provided privacy and comfort for all who accessed them. However, we were limited by what the athletic facilities were able to provide for us. The main Tiny Tusks space at the football stadium is spacious, but the secondary room and the room at the basketball stadium could only accommodate one client at a time, which resulted in mothers having to form a line and wait. In addition to this, all of the rooms are tucked away and can be a challenge to find if you are not familiar with the stadium layouts. Another challenge is getting the word out about Tiny Tusks and what we do. After the pandemic we have renewed the social media focus with more information posted each week and additional posted prior to each home game. This is one factor that may have supported the increased number of participants using Tiny Tusks in the Fall of 2022.

Overall, this experience has opened my eyes to the challenges facing breastfeeding mothers and how much work needs to be done to change the culture of breastfeeding in this country. Even though there is a mountain of research highlighting the benefits of breastfeeding, there is little support for the women who make that decision. While breastfeeding is encouraged and discussed during pregnancy, the reality is there is a lack of support and resources provided. Many mothers that I spoke with expressed how difficult it was to maintain a normal life while

breastfeeding, and that most public places were not conducive to breastfeeding. I will take this experience and all I have learned with me in my future nursing career so that I may be a source of knowledge and support for the patients I care for.

Literature Review

During my experience with Tiny Tusks, I was exposed to women and families of all backgrounds utilizing the breastfeeding spaces. As I spoke with some of the women, I realized they all face very different challenges when it comes to their breastfeeding journey. To explore these challenges, my literature review focuses on the relationship between socioeconomic status and breastfeeding barriers.

Breastfeeding promotes bonding and comfort, lowers babies' risk for infections and sudden infant death syndrome (SIDS), reduces mothers' risk for type 2 diabetes and certain breast and ovarian cancers, among other things (Meek & Noble, 2022). The American Academy of Pediatrics (AAP) recommends 6 months of exclusive breastfeeding, and continuation of breastfeeding along with complementary foods for an additional 1 to 2 years (Meek & Noble, 2022). Despite these recommendations, there is a clear lack of support in place for mothers during this time. According to the annual breastfeeding report card released by the Centers for Disease Control and Prevention (CDC), among infants born in 2019, 83.2% started out receiving breast milk, a number that steadily declined after women left their birthing centers. By 6 months, only 55.8% of infants were receiving any breast milk, with only 24.9% exclusively breastfeeding (CDC. 2022). Socioeconomic status can have an impact on the resources available to breastfeeding women, so I wanted to know if these numbers differ based on socioeconomic factors, and what barriers arise based on a mother's socioeconomic status. By understanding this

correlation, we can implement support programs that target communities who are at higher risk for premature breastfeeding cessation.

Methods

Design

I completed a systematic research review to look at the relationship between socioeconomic status and breastfeeding barriers. I utilized two databases for this research: MEDLINE Complete and CINAHL Complete. The medical subject headings (MeSH) utilized for this database were breastfeeding or breast-feeding or infant feeding or lactation or lactating AND socioeconomic status or poverty or low income or socio-economic. Additional search limiters included published between 2017 and 2022, a peer-reviewed scholarly article, and written in English.

Inclusion/Exclusion Criteria

All articles were chosen based on the initial research question which was “What is the relationship between socioeconomic status and breastfeeding barriers?” Articles were chosen for the literature review if they addressed potential barriers to breastfeeding among low-income women.

Search Results

The initial search in MEDLINE Complete and CINAHL Complete resulted in 73 total articles after all duplicates were removed. A screening was conducted which resulted in 49 articles being thrown out due to not addressing the initial research question. An evaluation was

done on the remaining 24 articles, and 9 did not meet the inclusion criteria, resulting in 15 articles being chosen for the literature review. Figure 1 depicts the article search process.

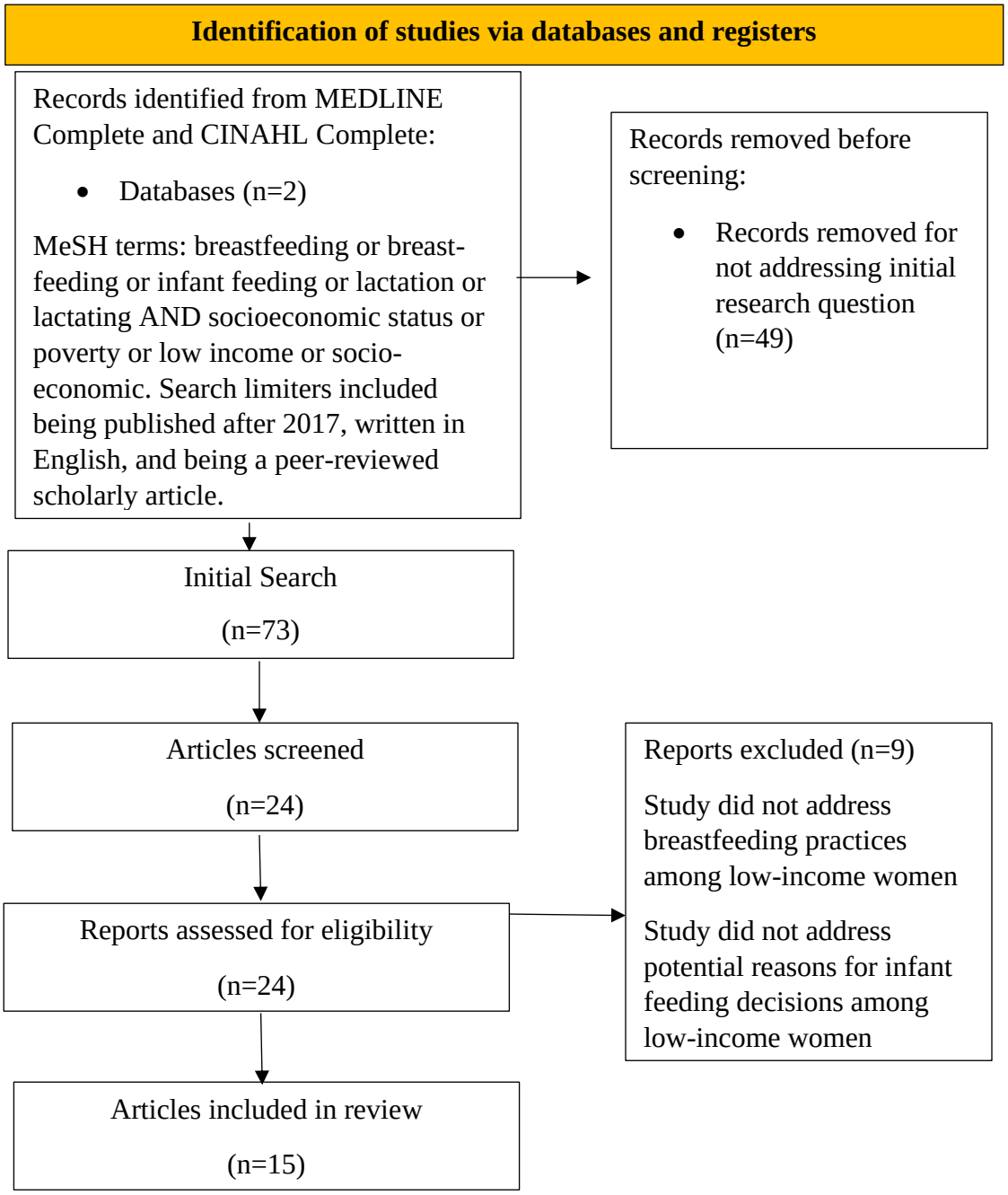

Figure 1. PRISMA Flowchart demonstrating the article selection process

Results

Return to work

A study conducted in Haiti by Lesorogol et al. (2017) documented the economic determinants that influence feeding practices in 582 infants 6 to 11 months old. The mean household income of the women interviewed was less than $3 a day, and one third of participants brought in less than $2 a day. When questioned about reasons for early breastfeeding cessation, many women cited the need to return to work and be separated from their infants, with maternal employment resulting in infants 36% less likely to be exclusively breastfed. Other women decided to return to work and continue breastfeeding but explained that the stress of the job affected milk supply (Lesorogol et al., 2017). Rethy et al. (2019) analyzed results from a survey provided to 190 Hispanic women who accessed Supplemental Nutrition Programs for Women, Infants and Children (WIC). Women who reported not exclusively breastfeeding at 3 or 6 months gave returning to work and school as one of their biggest reasons for introducing formula (Rethy et al., 2019).

Provider Interactions

Hardison-Moody et al. (2018) reported reasons for early breastfeeding cessation amongst low-income women living in North Carolina. In this study several women cited that they received little provider support after leaving the hospital, and when breastfeeding problems arose, nurses or physicians were quick to offer formula instead of assistance. Pain related to breastfeeding was also dismissed by providers which lead women to quit prematurely (Hardison-Moody et al., 2018). Newhook et al. (2017) surveyed 451 low-income women who expressed interest in breastfeeding antenatally, and it was discovered that women who were categorized as socioeconomically marginalized were more than three and a half times more likely to quit

breastfeeding by one month, compared to women who were not socioeconomically marginalized. Reasons for quitting included lack of skin-to-skin contact in the hospital and a negative first impression of breastfeeding during their stay in the hospital (Newhook et al., 2017).

Social Support

Witten et al. (2019) compared the barriers and enabling factors to breastfeeding in 159 women living in low-income areas in South Africa. Barriers to exclusive breastfeeding included an unsupportive home environment and not wanting to breastfeed in public spaces. Enabling factors for exclusive breastfeeding included having adequate support at home (Witten et al., 2019). Hardison-Moody et al. (2018) discovered similar findings from low-income women living in North Carolina, where 19% of women interviewed reported shared living spaces as their primary reason for early cessation of breastfeeding (Hardison-Moody et al., 2018).

Food Insecurity, Perceived Milk supply, and Nutrition

Studies conducted by Sim et al. (2020) and Gross et al. (2019) uncovered similar attitudes about breastfeeding and perceived milk supply and quality among low-income women. During interviews, women explained that they believed their milk was not enough to properly nourish their infants because they were struggling with high levels of stress, obesity, drug use, and food insecurity. Many of the women could not afford to keep themselves fed, and the foods they could afford were not nutritious, and they were worried that would affect the quality of the milk they were providing for their infants. Results from a study by Hornsby et al. (2019) supported these findings. A group of 221 low-income women who stopped breastfeeding by 6 months were interviewed, and 41% identified breast milk supply concerns as their primary reason for quitting

(Hornsby et al., 2019). The following table depicts the articles chosen for the literature review, including authors, design method, sample size, country, findings, and limitations.

Author(s) & Year	Design Method	Sample Size	Country	Significant Findings	Limitations
1. Bjorset et al., (2017)	Cross-sectional design. Data collected from a randomized controlled trial.	715 mother/infant dyads with infants between 5 and 6 months of age	Norway	Infants at 5 months of age had higher rates of being breastfed if they had mothers with higher education, compared to infants with mothers with lower levels of education. Mothers who reported they would not be able to pay for unforeseen expenses were also less likely to breastfeed exclusively or non-exclusively.	Not in the United States
2. Grant et al., (2019)	Qualitative study	10 low-income women on welfare benefits less than 30 weeks pregnant at time of first interview	United Kingdom	Reasons provided for non-exclusive breastfeeding in low-income mothers included lack of confidence to breastfeed in public, more support from partners with formula feeding, and lack of support from midwives in the postpartum period.	Small sample size, not in the United States
3. Lesorogol	Randomized controlled study using	582 children aged 6-11 months	Haiti	Poverty, food insecurity, and maternal	Not in the United States

et al., (2017)	mixed methods and longitudinal design			employment created challenges for exclusive breastfeeding, however some mothers experiencing severe food insecurity chose to exclusively breastfeed due to lack of other food supplies.	
4. Kay et al., (2020)	Cluster randomized trial	460 mothers participating in the Greenlight study who reported giving any breastmilk to their children at 2 months	United States	Less than half of low-income mothers providing breast milk at the 2-month check-up were able to meet their breastfeeding intentions. 80% of these women were on WIC benefits, and over half reported an income of less than $20,000 per year.	Unable to measure other important modifiable factors
5. Hornsby et al., (2019)	Secondary data analysis using data from a randomized intervention trial	221 women participating in the Special Supplemental Nutrition Program for Women, Infants and Children who reported initiating breastfeeding and stopping by 6 months	United States	Out of 221 low-income women who stopped breastfeeding by 6 months, the most commonly cited reasons for stopping included breast milk supply concerns (41%), latch problems (27%) a medical condition (18%) and returning to work or school (14%).	Qualitative data could be inaccurate due to societal pressures
6. Gross et al., (2019)	Qualitative study within a randomized	100 low-income Hispanic	United States	Interviews found that women with perceived food	Excluded certain

	controlled trial testing the efficacy of a prevention program called Starting Early	mothers with infants less than 2 years old participating in the Starting Early program		insecurity were less likely to breastfeed due to concerns about breast milk nutrition and supply due to poor eating habits.	marginalized families
7. Sim et al., (2020)	Qualitative research study utilizing face-to-face, audio recorded interviews	Pregnant women who were intending to breastfeed interviewed prenatally (n=8), 1 month postpartum (n=6) and 3 months postpartum (n=6)	Canada	Findings showed that participants believed breastfeeding to be "good mothering" however many expressed concerns with perceived nutrition due to obesity, drug use, food insecurity and stress.	Small sample size, not in the United States
8. Newhook et al., (2017)	Cohort study	451 birthing parents in Newfoundland and Labrador who reported intention to breastfeed at the pre-natal survey	Canada	Breastfeeding cessation rates at 1 month among socioeconomically marginalized groups were more than three and a half times higher (24.7%) compared to those who were not socioeconomically marginalized (6.9%). Determinants of breastfeeding cessation in the SEM group included single birthing parents, negative impression of breastfeeding in the hospital, and lack of skin-to-skin contact.	Not in the United States

9. Rethy et al., (2019)	Cross-sectional survey	190 Hispanic women who access Supplemental Nutrition Programs for Women, Infants and Children (WIC)	United States	At 3 months, 34% of women reported exclusive breastfeeding, and this number jumped to 45% at 6 months due to new WIC guidelines incentivizing exclusive breastfeeding at 6 months. Predictors for exclusive breastfeeding included less than a high school education and setting an exclusive breastfeeding goal. 61% of women reported introducing formula before leaving the hospital, and the reasons for this included perceived milk insufficiency and returning to work/school.	Large reliance on mothers' memories and recollection
10. Hardison-Moody et al., (2018)	Qualitative study utilizing interviews	98 low-income mothers in North Carolina who reported having a child between 2 and 9 years old	United States	The highest reported reasons for breastfeeding cessation included supply issues (23), shared living spaces (19), provider interactions (20), and workplace policies (13).	Did not factor in mothers who were partially breastfeeding at 3 months
11. Mangrio et al., (2017)	Systematic search	27 articles	Multiple countries	The systematic review found that there was a link between sociodemographic	Pre-assigned search terms and exclusion criteria

				factors and early breastfeeding cessation, including mother's age, return to work, level of education, income, and ethnicity.	
12. Orr et al., (2018)	Cross-sectional survey	10,450 women who had given birth the year of or the year before the interview	Canada	Half of the women experiencing food insecurity ceased breastfeeding by 2 months, while most of the women who were food secure continued breastfeeding for 4 months or longer.	Not in the United States
13. Witten et al., (2020)	Prospective cohort study	159 mothers living in low-income areas	South Africa	Barriers to breastfeeding included maternal stress, home environment, maternal knowledge, and public spaces. Enabling factors included maternal positivity, support at home, and access to information/care.	Not in the United States
14. Beauregard et al., (2022)	Longitudinal study	1080 low-income women receiving WIC assistance	United States	Less than half of the women met their breastfeeding intentions at 1 month, but maternity care practices such as initiating breastfeeding within 1 hour of birth, not introducing other foods or drinks, and not introducing a pacifier were	Data was collected in 2013 and maternity care practices have improved since then

				positively correlated with meeting breastfeeding intentions. Mothers who received more maternity care practices were more likely to breastfeed.	
15. Schindler-Ruwisch et al., (2021)	Observational study	10,173 women who gave birth to a singleton infant between January 1st, 2014 and June 30th, 2016	United States	8.8% of WIC participants smoked during pregnancy, and smoking was found to be negatively correlated with both breastfeeding initiation and duration. Delivering at a baby friendly hospital was positively correlated with both breastfeeding initiation and duration.	Did not measure potentially influential variables such as maternal employment

Discussion

The results of this literature review found that there is a relationship between socioeconomic status and increased breastfeeding barriers. One barrier that many low-income women noted as a reason for early cessation was lack of support from their providers (Hardison-Moody et al., 2018). Although many knew that breastfeeding is the best option, they could not identify what the specific benefits were. Physicians stress the importance of breastfeeding during antepartum visits, and there may be some levels of support during the hospital stay after the baby is born, but beyond that there is minimal support and minimal education offered for mothers who

want to breastfeed. Many women even stated that their concerns with latch, supply issues and pain were dismissed, and formula was quickly offered without addressing the root problem (Hardison-Moody et al., 2018). Educating women in the hospital after labor, taking their breastfeeding concerns seriously, and leaving them with a positive first impression could greatly impact how prepared women feel to continue breastfeeding after discharge. Many of the women interviewed in these studies were also experiencing poverty and food insecurity, and this was another reason commonly given for early breastfeeding cessation. Women struggling with food insecurity worried about quality of the milk they were producing, since there was a lack of nutritious food available to them (Gross et al., 2019). Women coming from lower socioeconomic backgrounds also experienced higher levels of stress due to having to work, financial troubles or poor home environments and felt that the stress would affect the milk quality as well. Due to financial constraints, many women were forced to return to work and school which impacted their ability to breastfeed. Some potential reasons for breastfeeding cessation related to employment could be insufficient maternity leave, workplace policies, time constraints and insufficient milk supply after returning to work. Formula feeding may be viewed as the only option due to a lack of time and community support. Social barriers to breastfeeding included home environment, shared living spaces, and lack of resources for breastfeeding in public. Educating healthcare providers about these barriers could help to identify women who are at higher risk for breastfeeding cessation, however mitigating these issues would require widespread systemic changes.

Conclusion

This literature review clarifies the relationship between socioeconomic status and breastfeeding while exploring the reasons this correlation exists. The results of this study found

that mothers from a lower socioeconomic status are at a higher risk of premature breastfeeding cessation, and little is being done to prevent this. Many of the reasons given for breastfeeding cessation are modifiable risk factors, including lack of education and lack of support from healthcare providers in the postpartum period. Through my knowledge gained in this review and throughout my internship experience with Tiny Tusks, I feel better prepared to serve the mothers of the NICU infants I will be caring for in my future nursing career. I will be able to recognize risks related to socioeconomic background and provide additional education and support as needed. Non-modifiable risk factors were also identified, such as the need to return to work and/or school and medical conditions and addressing these issues would require widespread systemic changes.

I feel extremely blessed to have had the opportunity to learn more about breastfeeding and the experiences of women during my internship with Tiny Tusks. It is so important as healthcare providers to not only encourage women to make the decision to breastfeed, but also support them in whatever ways we can throughout their breastfeeding journey. This review has helped me understand the importance of a society that normalizes and encourages breast feeding practices, and with the implementation of programs like Tiny Tusks we are headed towards that.

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