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Tiny Tusk Internship: Barriers to Effective Breastfeeding within Low Socioeconomic Populations

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Reflection

Introduction

The Tiny Tusk Breastfeeding and Infant Support program was created for young mothers in need of a safe and quiet environment for their infants in the midst of exciting events that span across the University of Arkansas' campus. It serves as a platform to spread significant information about the importance of breastfeeding and all the components that must be considered. Director of CDC's Division of Nutrition, Physical Activity, and Obesity, Dr. Ruth Petersen states, "Breastfeeding provides unmatched health benefits for babies and mothers. It is the gold standard for infant feeding and nutrition, with breast milk uniquely tailored to meet the health needs of a growing baby. We must do more to create supportive and safe environments for mothers who choose to breastfeed" (CDC, 2023). Becoming a participant in such a progressive program has opened my eyes to an entire field of healthcare that I had not considered before. I was able to interact and connect with women who used the facilities and hear their perspectives of breastfeeding in modern society and the barriers that accompany it.

Lessons Learned

Tiny Tusk Breastfeeding and Infant Support has served as a resource for many women spanning over the Northwest Arkansas area and those visiting for sporting events. Internship participation taught me the importance of connecting healthcare resources to the community. The first step towards change in community healthcare is assessing the needs and developing a plan to meet those needs. Oftentimes, women feel discouraged to go out in public or attend events due to the time restraints and their need to breastfeed or pump. By providing safe spaces for women who are lactating, breastfeeding mothers can enjoy activities that they love or previously attended. Altogether, this has also brought to light the importance of the need for community

breastfeeding initiatives. Tiny Tusk continues to strive to diminish negative stigmas that often surround the task of breastfeeding in public places.

Challenges

During my time participating in this program, there were a few challenges. We had limited time and opportunities to work directly with mothers and infants. Our time was spent directing mothers to the facility's safe spaces and making sure the room was kept in a professional and clean manner. I believe that more one-on-one time spent with participants could have allowed for more knowledge about breastfeeding, techniques that can be used, and polishing communication skills when educating patients. I also believe that more community-based networking and publicizing can be done to connect Tiny Tusk with more lactating women and participants in the program.

Review of Literature

The purpose of this review of literature was to identify factors and barriers faced by low socioeconomic mothers that influence their decision to breastfeed their infants for the recommended duration advised by the Center of Disease Control and Prevention [CDC] and in July of 2022, the American Academy of Pediatrics altered their policy statement that breastfeeding, if mutually desired by the mother and the child, can be continued for two years and beyond, along with complimentary foods at six months (Meek, 2022).

Introduction

Approximately one in four infants are exclusively breastfed by the time they are 6 months old as recommended by the CDC (CDC, 2023). Low rates of breastfeeding add more than \$3 billion (about \$9 per person in the US) a year to medical costs for the mother and child in the United States (CDC, 2023). This review aims to better understand the factors that influence

mothers of low socioeconomic status decisions regarding breastfeeding and factors that are associated with shorter durations of breastfeeding.

The evidence that the benefits of breastmilk as the best feeding option for infant feeding is clear. John Hopkins Medicine found that “compared with formula, the nutrients in breast milk are better absorbed and used by your baby” (John Hopkins, 2021, p. 1). These nutrients include sugar or carbohydrates and protein; it is even found that due to the specific and unique fat that the mother can pass on to her infant via breastfeeding, their baby’s eyes can also grow to be more effective and accurate. Essential nutrients found in breast milk also promote brain growth and nervous system development (John Hopkins, 2021). Colostrum, the first milk produced by a lactating mother, has been found to be “rich in immunologically active molecules and various nutrients and vitamins” (Alotiby, 2023, p. 1). Breast milk is proven to be rich in immunoglobulins and contains antibodies that are capable of binding to “potentially dangerous pathogens and rendering them active” (Alotiby, 202, p. 1). Immunological, hormonal, enzymatic, and bioactive substances found in breastmilk provide passive protection to the infant. Alotiby (2023) concluded that infants are not the only ones who benefit from the act of breastfeeding. Lactating mothers who participate in breastfeeding for longer periods have a reduced risk of pregnancy obesity and risk for cancers in the breast and ovaries. Breastfeeding can also reduce the risk of brittleness in bones leading to osteoporosis (Alotiby, 2023).

Despite the evidence supporting the importance of breastfeeding, there are also extenuating circumstances that prohibit some mothers from initiating breastfeeding. Mothers suffering from conditions such as HIV or active tuberculosis should not breastfeed due to the risk of transmission to the infant via breastmilk. American Psychological Association studied the relationship between socioeconomic status and the transmission and diagnostic rates of HIV/AIDS. “Women living in poorer households may experience difficulties before, during, and

after childbirth that can place them at risk for HIV infection and complications. These women may be less likely to access prenatal care that can test them for this condition,” and they are more likely to experience food insecurities that affect their adherence to breastfeeding (American Psychological Association, 2022). Even some medications such as mood stabilizers and sleep-aid medicines are not recommended to be taken while breastfeeding (U.S. Department of Health and Human Services, 2017). Low-income women also have a higher prevalence of mental health issues and psychiatric disorders which may cause them to be on these medications that are contraindicated with breastfeeding (Knifton et al., 2020). Altogether, mothers with low socioeconomic populations often face modifiable and non-modifiable circumstances that affect their choice to breastfeed.

Given its importance to the health of the mother and the infant, low rates of breastfeeding initiation and early cessation of breastfeeding is a societal concern of public health. This research’s goal is to identify barriers that may present themselves at individual, community, or society levels that hinder low-income women from breastfeeding.

Methods

Design

A review of literature was conducted to better understand the factors that influence mothers of low socioeconomic status decisions regarding breastfeeding and factors that are associated with shorter durations of breastfeeding.

Information Sources

For this research, MEDLINE complete and CINAHL databases were employed to search a wide array of biomedical and health peer reviewed journals.

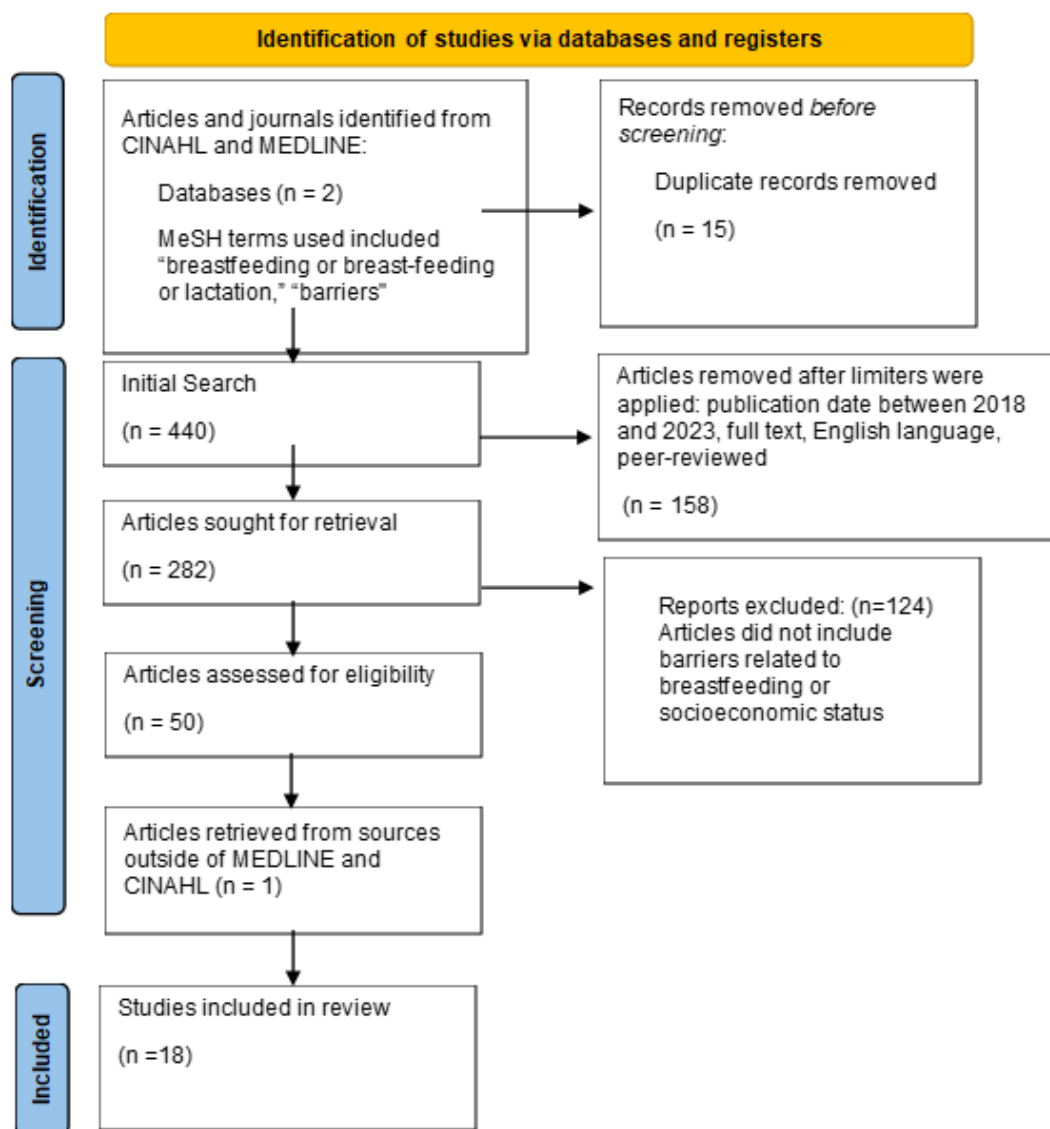
Search Strategy

Databases utilized were CINAHL complete and MEDLINE complete. Due to MEDLINE's and CINAHL wide range of articles, certain parameters were placed on the better define the search. The timeframe for inclusion was a published date from 2018 - 2023. The medical subject headings (MeSH) terms utilized in the first search were "breastfeeding or breastfeeding or lactation" and "barriers." A second search was conducted and included the terms "breastfeeding" and "low socioeconomic status". Search limiters include English language, peer reviewed, and publication dates from 2018 - 2023.

Inclusion/Exclusion Criteria

Articles were excluded if they fell outside of the time frame and if the journals were not in English. Additionally, articles were excluded if they did not meet the peer review. Abstracts of each article were analyzed for their relevance towards the research topic. Figure 1 depicts the process of finding published data meeting the inclusion criteria.

Figure 1



Search Results

After completing the literature search, 440 articles were obtained. My initial search containing the key terms "breastfeeding or breast-feeding or lactation" and "barriers" yielded 282 articles. From my second search that contained the key terms "breastfeeding" and "low socioeconomic status" the articles yielded 158 articles. Once inclusion criteria were inserted, the articles were refined to 50 articles. The titles and abstracts of these articles were reviewed and 32

were excluded for not meeting inclusion criteria. After the full text of these articles were reviewed, there were no more articles that were excluded.

Analysis

The overall breastfeeding goal is to have mothers exclusively breastfeed for approximately 6 months and then begin introducing complementary foods to the infant. Hornsby (2019) found that the most common reasons reported for breastfeeding cessation were maternal worry about milk supply and infant difficulty in latching. Increasing duration of breastfeeding was reported as increasing the worry about breast milk supply for mothers. Latch difficulty was most reported among women who only breastfed for one month or less. Returning to work was also a factor which played a role in women's decision to cease breastfeeding (Hornsby, 2019).

A cross-sectional survey interviewing mothers found that exclusive breastfeeding was related to higher socioeconomic status. Moran-Lev et al. (2021) found that of the participants 36% of mothers exclusively breastfed, 34% provided a combination of breastmilk and infant formula, and 30% exclusively use infant formula. It was concluded that the leading cause for combining breastmilk and formula supplementation in the infant's diet was maternal difficulty in breastfeeding (Moran-Lev et al., 2021). The survey results indicated that low-income families had a lower prevalence of exclusive breastfeeding.

Despite having the intentions to breastfeed for the recommended duration, many times these intentions are not always met due to the disparities that low income and ethnic minorities face (Kay, 2020). In a study that included mothers from various backgrounds, including low income and members of minority groups, researchers asked breastfeeding goals to understand the likelihood of mothers to meet their breastfeeding intentions. Mothers were asked at their two-month postpartum visit about the duration, in months, that they would like to breastfeed. Kay

(2020) concluded that “the longer a mother intended to breastfeed, the less likely she was to meet her breastfeeding intentions.” Lack of social support and unanticipated challenges associated with breastfeeding were a few of the barriers that hindered the mother’s ability to continue breastfeeding. Unanticipated challenges associated with breastfeeding included many health conditions such as nipple soreness, engorgement, mastitis, and failure to latch. “Support needed to sustain breastfeeding comes from many places, including health care providers, family, and friends,” low-income women can oftentimes have difficulty regularly accessing healthcare and may live in unstable household and relationship situations (Kay, 2020, p. 5).

Boone et al. (2019) completed a data analysis to observe socioeconomic determinants that influence breastfeeding initiation and duration. This study considered sociodemographic variables, institutional resources, economic hardship, and food insecurity. It was found that although the majority of mothers initiate breastfeeding, “less than half continued breastfeeding to three months postpartum, with a very small percentage exclusively breastfeeding as recommended by the American Academy of Pediatrics” (p. 272). Many variables were reported including difficulty paying bills, education level, employment status, and ability to afford balanced meals. The results from this study support the need for targeted support and interventions for women and families living in poverty. (Boone et al., 2019).

Characteristics of Studies

Author, publication year, study design, sample size, study location, purpose of the study and significant findings were analyzed and obtained from the eighteen articles that were utilized in this review of literature. This information is presented in Table 1.

Table 1

Author, pub. Year	Study design, sample size	Study Location	Purpose of study	Significant Findings
Alotiby, A. A., 2023	Systematic review of literature, 28 studies included	Saudi Arabia	“Studying the role of breastfeeding as a protective factor against the development of immune-mediated diseases.”	Breastfeeding is a protective factor against various chronic diseases; “the role of breastfeeding in the prevention of diabetes mellitus has been found to be significantly higher than other diseases.”
Beggs, B., Koshy, L., & Neiterman, E., 2021	Scoping review methodology and thematic analysis (n=59)	United States	“The overall goal of this research is to identify what barriers mothers face when attempting to breastfeed and what supports they need to guide their breastfeeding choices.”	“A lack of partner support and social networks, as well as advice from health care professionals, play critical roles in women’s decision to breastfeed.”
Boone, K. M., Dynia, J. M., Logan, J., & Purtell, K., 2019	Survey data analysis from The Kids in Columbus Study, n = 322	Columbus, Ohio	“To characterize socioeconomic determinants of breastfeeding initiation and continuation to 3 months postpartum in a Midwestern cohort of families living in poverty.”	Less than half of the participants continued breastfeeding to 3 months postpartum, with a very small percentage exclusively breastfeeding as recommended by the American Academy of Pediatrics. “Target support

				for single mothers and mothers with lower levels of education may lead to high rates of breastfeeding initiation and continuation.
Francis, J., Mildon, A., Stewart, S., Underhill, B., Ismail, S., Di Ruggiero, E., Tarasuk, V., Sellen, D. W., & O'Connor, D. L., 2021	Prospective cohort study via telephone questionnaires, n = 199.	Canada	This research aimed to “determine whether breastfeeding outcomes at 6 months differ based on maternal sociodemographic and food insecurity and assess utilization of the lactation support program.”	All participants initiated breastfeeding and 84% continued for 6 months. However, adherence to the recommended 6 months of exclusive breastfeeding was low.
Grant, A., Pell, B., Copeland, L., Brown, A., Ellis, R., Morris, D., Williams, D., & Phillips, R., 2022	Qualitative systematic review	United States	Identify barriers and facilitators to breastfeeding in public spaces from 2007 - 2021.	Five core factors influenced mothers' thought processes and their breastfeeding in public behavior: legal system, structural (in)equality, knowledge, beliefs, and social environment.
Hedden & Thompson, 2022	A prospective performance improvement project using historical	Rural New Jersey	Increasing breastfeeding initiation and duration by providing a	Patient-reported prenatal breastfeeding education rates have increased

	comparison with participants (n = 57) consisting of pregnant women in their third trimester.		digitally fluent form of prenatal breastfeeding education to lead to overall increased health benefits long term.	to 93%, which emphasizes the effectiveness of the digital platform.
Hornsby, P. P., Gurka, K. K., Conaway, M. R., & Kellams, A. L., 2019	Secondary data analysis using prospective data collected during a randomized intervention trial of WIC-eligible women (n = 221)	United States	Examine “reasons for cessation among low-income mothers to inform the development of targeted strategies to address breastfeeding disparities.	The most common reasons for early cessation of breastfeeding consisted of concerns about milk supply and latch difficulty.
Kay, M. C., Cholera, R., Flower, K. B., Yin, H. S., Rothman, R. L., Sanders, L. M., Delamater, A. M., & Perrin, E. M., 2020	Data collected from mothers participating in Greenlight, a cluster randomized trial	United States	To describe the association between intended and actual breastfeeding duration among low-income, diverse mothers.	Median intended breastfeeding duration was 11.5 months and median actual breastfeeding duration was 8.6 months. Approximately 49% met intended breastfeeding duration. The longer a mother intended to breastfeed, the less likely she was to meet her breastfeeding intentions.
Kenemi, 2021	Cross-sectional study with face-to-face interviews	Nekemte, Ethiopia	Assessment of knowledge, attitude, practice, and perceived	The “most common perceived barriers to

			barriers of breastfeeding among women attending antepartum care follow-up appointments	breastfeeding are being too busy to breastfeed and lack of support to the mother.”
Lewkowitz, A. K., Raghuraman, N., López, J. D., Macones, G. A., & Cahill, A. G., 2019	Cross-sectional study (n=149)	United States	“To determine infant feeding practices of low-income women at a Baby-Friendly Hospital and to ascertain breastfeeding interventions they believe would increase exclusive breastfeeding.”	Of 149 participants, 129 (86.6%) initiated breastfeeding however, but postpartum day 2, 47 (31.5%) exclusively breastfed, 51 (34.2%) breastfed with formula, and 51 (34.2%) exclusively formula fed.”
Matare, C. R., Craig, H. C., Martin, S. L., Kayanda, R. A., Chapleau, G. M., Kerr, R. B., Dearden, K. A., Nnally, L. P., & Dickin, K. L., 2019	Trials of Improved Practices (n=36)	Rural Tanzania	Explore barriers and facilitators to exclusive breastfeeding (EBF) and assess parents’ willingness and ability to try specific recommended EBF practices plus strategies for men to support breast-feeding.	“Dominant gender roles and work away from home were barriers even if the fathers were willing to help with household chores.”
McCardel & Padilla, 2020	Online cross-sectional survey collecting quantitative and qualitative data	United States	“This study examines working mothers’ access to workplace breastfeeding resources, their	“Approximately 78.8% of the participants reported access to private spaces and 65.4%

			barriers and facilitators to combining breastfeeding and work.”	reported access to break times for breastfeeding. Fewer participants reported access to breast pumps, lactation consultants, and support groups.”
Moran-Lev, H., Farhi, A., Bauer, S., Nehama, H., Yerushalmy-Feler, A., Mandel, D., & Lubetzky, R., 2021	Cross-sectional survey via interview (n=239)	Tel Aviv, Israel	“To present factors influencing parents' choices of infant nutrition and to examine whether these choices are influenced by socioeconomic status.”	There is an overall lower prevalence of exclusive breastfeeding among low-income families.
Pezley, L., Cares, K., Duffecy, J., Koenig, M. D., Maki, P., Odoms-Young, A., Clark Withington, M. H., Lima Oliveira, M., Loiacono, B., Prough, J., Tussing-Humphreys, L., & Buscemi, J., 2022	Systematic review	United States	To review the efficacy of behavioral interventions focused on both maternal mental health and breastfeeding outcomes, examining the intersection of the two.	“Interventions that extend the perinatal period and offer individualized support from both professionals and peers are most successful in improving both mental health and breastfeeding outcomes.”
Prentice, 2022	Meta-analyses of dozens of individual studies.	United States	To identify facilitators and barriers to breastfeeding and	Community based interventions including group

			study interventions that promote breastfeeding.	counseling or education and social mobilization increase early breastfeeding initiation by 86% and exclusive breastfeeding by 20%.
Snyder, K., Hulse, E., Dingman, H., Cantrell, A., Hanson, C., & Dinkel, D., 2021	Qualitative Study (n=49)	Nebraska, United States	“The purpose of this study was to examine supports and barriers to breastfeeding across environmental systems.”	At the individual-level, women are hindered by exhaustion, isolation, and the time commitment of breastfeeding. At the interpersonal level, lack of familial support was a barrier. At the community and organizational level, cultural acceptance and legislation regarding workplace breastfeeding protections were identified as barriers.
Uddin, M. F., Jabeen, I., Islam, M. A., Rahman, M., Chisti, M. J., Ahmed, T., & Sarma, H., 2022	Qualitative study	Five rural sub-districts in Bangladesh	This study is aimed to understand barriers to breastfeeding among infants and	Barriers to breastfeeding at society level include sociocultural norms, beliefs, and practices

			young children in Bangladesh.	such as a mother obliged to give more attention to household chores than breastfeeding to become a good housewife and feeding formula milk perceived as a symbol of parents' financial solvency. System-level barriers include attractive advertisements of breastmilk substitutes and inadequate facilities and support processes in mothers' work environments.
Washio, Y., Collins, B. N., Hunt-Johnson, A., Zhang, Z., Herrine, G., Hoffman, M., Kilby, L., Chapman, D., & Furman, L. M., 2020	Randomized controlled trial	Two separate states in the United States	To identify the impact of community based behavioral interventions on breastfeeding rates as well as maternal and infant health.	“The preliminary outcomes of contingent incentives for breastfeeding in addition to existing support show promising effects in sustaining breastfeeding among mothers in the Special Supplemental Nutrition Program for women, infants

				and children (WIC).”
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Discussion

Through my review of literature, various barriers for breastfeeding were identified related to low socioeconomic status; oftentimes these barriers were modifiable. These modifiable barriers included social support from family, friends, and healthcare providers; latch difficulty; and concerns of milk supply. Key barriers for low-income women and families are a lack of education and support from healthcare providers (Lazar, 2018). Many women, once they have given birth to their infant, are without education or needed support about how to initiate breastfeeding. They are left only with their preconceived notions of breastfeeding and fear of inadequacy. Finally, societal norms play a large part in choosing to breastfeed. For example, there is a large social stigma that surrounds the act of breastfeeding, especially in public places. Due to this stigma, there are very few areas in public spaces that connect maternal need and convenience. Tiny Tusk Breastfeeding and Infant Support is a notable example of how communities can foster facilities that encourage safe and effective breastfeeding spaces and provide women, from various backgrounds, with essential information that can help address any gaps of knowledge.

Conclusion

Tiny Tusk Breastfeeding and Infant Support Internship provided numerous opportunities for growth and experiences that I can take with me into my career. It has opened my eyes to the needs within my own community. It has given me new skills, such as therapeutic communication, collaboration, and teaching which I can utilize in my future career. After completing a thorough review of literature, I have a better understanding of the importance of breastfeeding and how there are many social and economic determinants that deter women,

especially from low socioeconomic statuses, from initiating and continuing breastfeeding for the recommended duration.

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