



CLÍNICA

Socio-Cultural Factors Influencing Breastfeeding Practices among Low-Income Women in Fortaleza-Ceará-Brazil: a Leininger's Sunrise Model Perspective

FATORES SOCIOCULTURAIS QUE INFLUENCIAM A PRÁTICA DA AMAMENTAÇÃO ENTRE MULHERES DE BAIXA RENDA EM FORTALEZA, CEARÁ, BRASIL: UMA PERSPECTIVA A PARTIR DO MODELO DO SOL NASCENTE DE LEININGER

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ABSTRACT

This study was developed to analyze socio-cultural factors that may influence the breastfeeding practices of low-income women in Fortaleza, Ceará, Brazil. This observational study utilized Leininger's Culture Care Theory to identify and analyze key socio-cultural factors. The study was based on 12 pregnant and breastfeeding women. Using an observational data sheet created in concordance with the Sunrise model (Leininger), we visited the homes of pregnant and breastfeeding women and observed their living conditions. Our observations were recorded and photographs were taken of the overall housing conditions, the surrounding neighborhood, and the local clinic. Living conditions were impoverished. Most homes had inadequate refrigeration, structural problems, and provided small living space. This indicated the severity of the residents' economic situations. The women observed were usually self-employed and living with at least one family member. The factors that appeared to have the most influence on women's decisions regarding breastfeeding were familial and economic factors. It is expected that the findings of this study will lead to more culturally appropriate and effective interventions aimed at increasing breastfeeding initiation and duration.

RESUMO

Este estudo foi desenvolvido para analisar os fatores socioculturais que podem influenciar a prática da amamentação entre mulheres de baixa renda em Fortaleza, Ceará, Brasil. Este estudo observacional utilizou a Teoria do Cuidado Cultural de Leininger para identificar e analisar os fatores socioculturais chave. O estudo envolveu 12 gestantes e nutrizes. Usando um formulário de observação criado de acordo com o modelo do Sol Nascente (Leininger) foram realizadas visitas nos domicílios das mulheres e observadas suas condições de vida. As observações foram registradas no formulário e foram realizadas fotografias das condições gerais da moradia, da vizinhança e do serviço de saúde local. As condições de vida são pobres. A maioria das casas tem refrigeração inadequada, problemas estruturais e pouco espaço. Isso revela a gravidade das condições econômicas dos residentes. As mulheres observadas em geral eram autônomas e viviam com pelo menos um membro da família. Os fatores que pareceram ter mais influência sobre a decisão das mulheres em amamentar foram os fatores econômicos e familiares. Espera-se que os achados deste estudo levem a intervenções mais efetivas e culturalmente apropriadas visando o aumento do início e duração da amamentação.

INTRODUCTION

Breastfeeding is regarded by health professionals as one of the most effective ways to protect the health of both mother and child. The United Nation's Children's Fund (UNICEF) appropriately refers to breast milk as "the baby's 'first immunization' that helps to protect against diarrhea, ear and chest infections, and other health problems."¹ Various studies have documented the physical, mental, and emotional benefits that breastfeeding has on children.²⁻⁴ Numerous studies conducted worldwide demonstrate that there are a myriad of benefits associated with breastfeeding.⁵ For the child, this means a stronger immunity that lowers the risk of contracting a multitude of other diseases and chronic illnesses. Study populations with more successful rates of breastfeeding have shown lower rates of infant morbidity and mortality, decreased rates of chronic disease (i.e. cancer, diabetes, obesity, etc...), and increased cognitive development.⁶

Additionally, there are health and cost benefits for the mother. According to the Department of Health and Human Services Office on Women's Health, breastfeeding "...aids in minimizing postpartum maternal blood loss... delays the resumption of normal ovarian cycles... increased self-confidence... reduced risk of breast and ovarian cancers... and early return to pre-pregnancy weight."⁷ Successful breastfeeding also prevents the mother from having to invest in expensive formula for her child.⁸ The American Academy of Pediatrics advocates for exclusive breastfeeding during the first six months of the infant's life and recommends that mothers should breastfeed their child for a total of at least one year.⁹

Even with all of these benefits, the practice of early weaning is often seen in different countries. Brazil is the largest country in South America. Many social issues have plagued this developing country and socioeconomic and racial disparities have contributed to the country's current health trends.¹⁰ The Pan-American Health Organization (PAHO) reported that three of the main determinants of health inequalities – ethnic group, geographic location, and education – are prevalent in countries, such as Brazil, suffering from high child mortality rates.¹¹ The poorest areas in Brazil are located in the Northeast, which consequently contains a very large portion of preventable illness and disease cases, especially among children. In 2004, statistical reports indicated that children under five years of age comprised 9% of the total population and accounted for 6.1% of deaths¹². Fortaleza, Ceará's capital city, is located in the Northeastern region of Brazil. Child residents in the low-income communities (*favelas*) surrounding the city suffer largely from malnutrition and chronic diarrhea.

The Brazilian average of exclusive breastfeeding is 47.5% at 1 month and decreases sharply to 7.7% at 6 months. Fortaleza exceeds these rates with 73.4% of infants receiving breast milk exclusively at 1 month and 10.2% at 6 months.¹³ Low adherence to established breastfeeding guidelines is a major health concern because it becomes a catalyst for various childhood diseases and increases chances of childhood morbidity and mortality. Oria and researchers conducted a literary review in order to synthesize breastfeeding research, organize findings into historical time periods, and learn what kinds of programs and studies were launched in areas of northeastern Brazil to address problems surrounding breastfeeding¹⁴. The authors developed a time period beginning with the launch of the Brazilian Breastfeeding Program (BBP). Numerous studies have shown that this program has made a significant impact on rates and duration among breastfeeding women.

The Brazilian government established the BBP in March of 1981. The program protected, promoted, and supported breastfeeding through the use of media, employment legislation, market control of infant formula, and educational programs and materials.¹⁵ According to one study, there was a remarkable increase in breastfeeding duration (74 days to 167 days or 10.5 weeks to 23.8 weeks) between 1975 and 1989; rates continued to rise, reaching 210 days (30 weeks) in 1996.¹⁶ Nevertheless, overall rates of breastfeeding, particularly in the northern region of the country, continue to lag in comparison to standards established by WHO and UNICEF.

Breastfeeding is one of the many health behaviors that have been largely affected by social norms. In exploring a region in northeastern Brazil, some authors identified sixteen socio-cultural factors that have influenced the decline of breastfeeding in northeastern Brazil¹⁷. Some of the main influences are familial change, societal and cultural differences, absence of elders informing the tradition of breastfeeding, associations made between the chosen method of feeding and socioeconomic status (i.e. the belief that only poor women breastfeed their babies), and the woman's changing economic role in support of her family.

The literature reveals more and more studies that define social and cultural determinants of breastfeeding. In low-income communities the factors that generally seem to influence decisions regarding breastfeeding are associated with education, employment, and family. Interestingly, breastfeeding is common in the northeastern region of Brazil, but is often interrupted by early introduction of other sources of nutrition.¹⁶ Nevertheless, it is proven that exclusively breastfed infants have substantially healthier weight and height in comparison with other infants.¹⁸ Continued identification of socio-cultural influences helps health professionals create tailored campaigns and interventions that are more effective. Several different tools and theories aid in accomplishing this.

This study was developed to analyze socio-cultural factors that may influence the breastfeeding practices of low-income women in Fortaleza, Ceara, Brazil. We have chosen Madeleine Leininger's Culture Care theory to support this study.

Theoretical Framework

Madeleine Leininger's Culture Care Theory is a union of concepts from the fields of nursing and anthropology. According to Leininger, the purpose and goal of the theory is "to provide culturally congruent, safe, and meaningful care to clients of diverse or similar culture"¹⁹ This theory has been instrumental in helping to develop ways to address providing forms of care that are both culturally appropriate for a given population and also in line with traditional nursing practices.

Culture is defined as “the lifeways of an individual or a group with reference to values, beliefs, norms, patterns, and practices.”²⁰ Culture is the legacy that group members pass down to one another intergenerationally. How a health professional views and understands culture is of particular importance in providing the best care.

Leininger’s theory is derived from five main assumptions, including the belief that healing does not take place without caring, every culture carries unique knowledge of care practices, and various socio-cultural factors influence culture care values, beliefs, and practices.²¹⁻²²

Material and Methods

A qualitative observational study design was used, supported by Leininger’s Culture Care Theory, in order to most accurately and appropriately examine social influences on breastfeeding behavior. Leininger’s theory offers unique concepts for researchers wishing to understand and analyze foreign cultural lifeways and traditions. Several studies have used this theory and other theoretical frameworks incorporating culture in order to fully assess health problems and the best way to solve them.²³⁻²⁵ Using Leininger’s Sunrise Model, we created a tool for field observation based on the following seven types of social and cultural factors: 1. technological; 2. religious and philosophical; 3. kinship and social; 4. cultural values, beliefs, and lifeways; 5. political and legal; 6. economic; and 7. educational.

We associated markers for observation with each corresponding factor. This method allowed us to maintain a level of consistency conducting the field observations. Observations were recorded photographs were taken of housing conditions and the surrounding neighborhood. Verbal consent was received to take pictures of residences. In addition to observational efforts, a small literary analysis was conducted to learn what kinds of studies had utilized Culture Care Theory and the Sunrise Model, and to pinpoint other studies that attempted to address social determinants of breastfeeding among Brazilian women.

The proposal for this study was approved by the Ethical Committee of Federal University of Ceara (UFC). The sample size for this study was 12 women and follow the ethical aspects required by Brazilian Resolution 196/96.²⁶

Results

Each woman lived in one of two neighborhoods: Planalto Pici or Pan-Americano. The neighborhoods did not have paved roads or gutters. Thundershowers created puddles of contaminated still water. During our visitations we would often see children playing in the street, most without shoes and with very little clothing, if any. Broken glass and trash piles decorated areas of the sidewalks. Piles of bricks and dirt remained next to abandoned and dilapidated housing. Open sewers containing unsanitary water and various kinds of debris served as a backyard to some of the houses. Residences were in very close proximity to one another. Images of these general observations are displayed in **figures 1-4**.



[Figure 1. Open sewer located in Pan-Americano neighborhood.]



[**Figure 2.** Piles of dirt and bricks lay next to an abandoned house and roadsides are littered with trash.]



[**Figure 3.** Houses built in very close proximity to one another.]



[**Figure 4.** Residence that lacked basic furniture such as beds and sofas but contained a well-priced sound system and television.]

On average, women seemed to be content with their pregnancies or the recent birth of their newborns. Most of the subjects exhibited signs of fatigue and exhaustion; this physical weakness was most likely caused by pregnancy but no formal conclusion could be made at an observational level. Housing conditions usually dictated the severity of poverty for the woman. Extremely small houses or apartments that lacked beds and had minimal furniture were usually occupied by multiple persons including the participant. The most impoverished women lacked even the most basic furniture (i.e. cribs) and other materials for their babies. Many residents used hammocks (*redes*) in lieu of formal beds. Some mothers used the *redes* as a makeshift crib for their baby to sleep in.

Technology:

Observations made about technology were separated into three categories: media access, nutrition, and hygiene. A majority of the mothers had access to the media through either television or radio. Very few mothers had access to a telephone in the household; most used a public phone or made/received calls through the clinic. Most of the houses lacked sufficient lighting and at times light fixtures appeared to be broken. Although all women were classified as low-income, poverty severity varied among households. Understandably, women living in less severe conditions of poverty had newer and more technological equipment. Under the subgroup of nutrition, most of the women did have adequate cooking utensils such as stoves, pots and pans. Very few, however, had access to a microwave or oven. Some kitchens appeared to have more modern appliances, but on average the kitchenware was usually very old and worn. About half of the participants had a refrigerator, but few owned a water fountain containing filtered water. Under the subgroup of hygiene, all residences had access to toilets,

however, only few had access to flush toilets. No residence had access to an enclosed shower. Women suffering from more severe levels of poverty lived in rundown housing with cracked walls and exposed pipes.

Religious/Philosophical:

Not enough time was spent in the region to fully analyze exposure to religious/ philosophical beliefs and traditions and assess their influence on breastfeeding. However, religious affiliation seemed to be dependent on level of income; women who lived in more impoverished conditions (i.e. without advanced forms of technology, minimal furniture) displayed no interest in attending church and contained little to no religious paraphernalia in their homes.

Kinship and Social Factors:

Younger mothers tended to be single and living with an elder female relative, usually a mother or grandmother. On average, women indicated that they consulted with family members regarding their decisions to breastfeed. This suggests that family plays a vital role in the success of breastfeeding. Of the women that were either married or engaged in a civil union, the husbands appeared to be very involved in family life.

Cultural Values, Beliefs, and Lifeways:

Most mothers stated that they intended to breastfeed for four to five months. Reasons for stopping after that time period were largely work-related. Their display of intent implied that they placed value on breastfeeding and saw it as health for the child; this value could be a result of information and knowledge gained from *CEDEFAM* (Center for Family Development) since the health professionals there incorporate breastfeeding orientation into prenatal care. A majority of women also regularly attended their scheduled prenatal appointments understanding that they learned the importance of maintaining regular meetings with their doctor for a better chance of a healthy and successful pregnancy. As mentioned earlier, the BBP has ignited an aggressive initiative aimed at increasing duration of breastfeeding; these national efforts suggest that general cultural values include protection of children's health.

Political and Legal:

While we found that this factor is not ideally observable, we were able to learn about national efforts in the area of breastfeeding mainly through literature review. Political and legal factors can be viewed from different governmental levels: local, state, and national. During the study federal workers went on strike for several weeks; this affected many agencies and departments, including the human milk bank located near *UFC*. Human milk banks are essential because they provide healthy human milk for babies whose mothers are infected with contagious disease and provide support for mothers experiencing difficulties in managing breastfeeding. Unfortunately, social and economic conditions can have a major impact on the delivery of health care, having a domino effect and ultimately prohibiting individuals from receiving the care that they need and deserve. In Brazil, most women who work outside the home (formal economy) were assured, by the 1988 Brazilian Constitution, a 4-month maternity leave in order to fully breastfeed their newborn. Three months after conclusion of this study, the Brazilian Senate approved a plan to extend this period to 6 months. This policy needs two other approvals to be signed into law; however, many Brazilian states, including Ceara, have adopted this practice. The impact of this new

regulation is not yet known, but certainly will bring more advantages to the mother-infant health.

Economic:

Women in more financially secure situations appeared to exhibit lower levels of stress and exhaustion. Most incomes seemed to go towards food and entertainment regardless of housing conditions. Residences suffering from cracked walls and exposed pipes many times contained televisions and stereo systems. This suggests that many people in the community use money to satisfy wants rather than needs.

Educational:

Several studies suggest that a woman's level of education is directly related to breastfeeding success. Unfortunately, we did not have the time to adequately observe and analyze educational conditions in these neighborhoods. This is one of many limitations that will be discussed later.

Discussion

The goal of this study was to analyze socio-cultural factors that may influence breastfeeding patterns and to also identify actions that may be taken using the theoretical framework and guidelines set forth by Leininger. We ultimately identified solutions affiliated with each cultural factor to ensure that the best promotion and delivery of health knowledge is carried out and adhered to. It is strongly believed that in order to fully understand the target population, health professionals must challenge themselves to step into a world different from their own. Worldviews are created as a result of influences existent in our own environments that shape the way we view ourselves and how we view other societies.

Overall it has been observed that the two most important social factors in a woman's success in breastfeeding are economic and familial. A woman's economic situation can have a profound effect on physical and emotional well-being. Venancio and Monteiro's study involving contextual and individual determinants of breastfeeding found that exclusive breastfeeding is positively associated with socioeconomic status; instances exclusive breastfeeding were found to be more prevalent among women with higher incomes.²⁷ Another study conducted by de Oliveira and colleagues found that breastfeeding cessation was associated with impoverished living conditions.²⁸ This finding supports the notion that health professionals need to especially target low-income women when creating and applying interventions. In an economic analysis of breastfeeding, Ball and colleagues found breastfeeding to be cost-effective for a variety of stakeholders, including mother and child, providers, health agencies, and governments.²⁹ The authors postulate that a woman's choice to breastfeed will minimize chances that her child will develop an illness or disease that will undoubtedly increase expenditures on medical treatments. Viewing the act of breastfeeding from a prevention standpoint, this choice would increase chances of the child living a healthy life. If breastfeeding rates increased to ideal standards, rates of childhood morbidity and mortality would decrease and health agency patient expenses would decrease as well. The authors charge that governments should fund campaigns promoting this type of health behavior to protect public interest; the benefits of such an investment, they contend, would undoubtedly outweigh the cost.

The BBP has invested in health education and promotion, supports interventions, incorporates policy, uses tailored messages to increase awareness of the issue, and largely

utilizes technology in carrying out messages. While studies have indicated that this program has increased national trends in breastfeeding, few researchers have looked at how subgroups within the population are responding to these efforts. More research needs to be done to understand best way to reach a more defined and hard-to-reach population, such as low-income women. Rea state that the success of the program has had in increasing breastfeeding rates is a result of an integrated approach in planning and implementing components of the program.³⁰

The role of familial support is another factor that is important to consider when discussing influences surrounding a woman's breastfeeding behavior. Impoverished working women have the added stress of striving to make enough money to support their families, a reality that often conflicts with duration guidelines for breastfeeding exclusivity. Strong and positive familial relations within the home, however, have proven to be a key component in decreasing amounts of stress. The women who appeared to be happiest and most at ease, either with their pregnancy or the birth of their infant, were receiving sufficient support from their husbands and, at times, live-in relatives. Falceto and colleagues found that while the strength of couples' relationships does not seem to have a significant impact on the interruption of breastfeeding, it is positively associated with paternal support for mother and child.³¹ Perez-Escamilla et al. found that the duration of exclusive breastfeeding increased when mothers had a live-in partner.³² The authors also found that the biggest barrier to achieving long-term exclusive breastfeeding was the need for the mother to return to work.

Employment as a barrier to successful breastfeeding has become a recurring theme in breastfeeding literature. In recognition of this, the BBP incorporated a policy component dedicated to implementing changes that encourage working women to exclusively breastfeed for longer durations. Scavenius et. al. states that policy efforts should aid in guiding women in breastfeeding initiation and appropriately-timed cessation.³³ The most recent policy change occurred in October/November of 2007 when the Brazilian Senate approved a plan to extend the maternity leave to 6 months. The government is hoping that this allowance will encourage more mothers to commit to exclusively breastfeeding their child for longer duration; it is expected that this will ultimately increase childhood immunity to chronic diseases such as malnutrition and diarrhea – major health concerns that are prevalent in low-income communities of northeastern Brazil.

Limitations

Because this field study was conducted in the *favelas*, it was extremely difficult to locate the residences of study participants. We found that some women used the addresses of friends or relatives and were not actually residents of Fortaleza. Working with low-income residents is also difficult because it is not feasible to reach them by telephone, a method of contact that is taken for granted in developed countries. These realizations limited our abilities to have a larger sample size and collect more observational data for the study.

Secondly, time constraints did not allow for advanced in-depth analysis. Ideally, to develop solid data about all factors to be observed, it is believed that researchers, especially those who are not working in their native country, should prepare to spend a time period of at least six months. It is suggested that others who wish to take part in international qualitative research involving socio-cultural analysis should plan to spend a significant amount of time in the country to be examined and also spend a sizeable amount of time becoming acquainted with the language to minimize any language barriers.

Conclusion

While human lactation is a naturally occurring phenomenon following child birth, the act of breastfeeding has historically been complicated by numerous social and cultural factors. Some of the key factors that have been identified as influential in breastfeeding decision-making are economic and social/familial. Leininger's Culture Care Theory provides concepts that should be utilized by public health professionals working in the global health arena. The theory has proven useful in helping to identify key influencers for a variety of health behaviors. An interdisciplinary and cultural approach to addressing the health issue of early breastfeeding cessation is needed in order to produce stronger and more effective health promotion campaigns.

More analysis needs to be conducted in the area of health policy and breastfeeding. Furthermore, more comparisons should be made between developed and developing countries such as the United States and Brazil. Embracing varying worldviews, health professionals from different countries can help each other in identifying solutions to prevalent health problems and concerns. In honoring health prevention efforts, mothers should be recognized as crucial health providers and their physical and emotional contributions are essential for the physical and emotional well-being of their children. Lastly, health workers and policy makers need to identify solutions at each societal level: individual, community, state, national, and global. Only when vital information is disseminated and action is taken at each level can a difference be made in developing and developed countries.

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