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CHALLENGES TO BREASTFEEDING DURING THE FIRST FOUR WEEKS POSTPARTUM AMONG MOTHERS AGED 18 – 29 YEARS, WHO ATTEND SELECTED CLINICS IN ELEUTHERA, THE BAHAMAS

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ABSTRACT

The present study seeks to investigate the breastfeeding challenges mothers on the Bahamian island of Eleuthera face, and propose strategies to improve the situation. Purposive sampling was utilized to recruit mothers from selected health centers in Eleuthera, the Bahamas (N=51). The study utilized a cross-sectional, quantitative research design wherein a forced choice, closeended survey questionnaire using Likert Type scale to elicit data from the research participants. Demographic data was analyzed using descriptive analysis, while ANOVA (Analysis of Variance) was used to determine the relationship between demographic variables (independent variable) and breastfeeding knowledge, attitudes and practices (dependent variables) using the Statistical Package for the Social Sciences (SPSS) Version 26. The findings demonstrated that the relationship between breastfeeding knowledge, attitudes and practices and demographic variables such as educational level, marital status, maternal parity and religion was not statistically significant. The implications of the finding are that health centers can enable mothers to overcome breastfeeding challenges, by improving breastfeeding knowledge through advocacy, education and awareness. Important recommendations pertaining to nursing interventions and social support programs for initiating and continuing breastfeeding among Bahamian mothers and focusing on erasing the social stigma associated with breastfeeding to improve breastfeeding rates were also made.

Keywords: attitude, knowledge, breastfeeding challenges, Theory of Planned Behavior

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Introduction

Breastfeeding is linked to positive maternal health outcomes although the practice itself is not so common or frequent, despite the advantages linked to it. The practice of breastfeeding is critical for newborns to access nutrients and creating energy for attaining developmental milestones. Breastfeeding is associated with a lower risk of maternal ovarian and breast cancer, and maternal obesity in the postpartum stage. Significantly positive mental and physical health outcomes are linked to breastfeeding in mothers. The focus on investigating why Bahamian mothers do not participate in breastfeeding practices is missing from present empirical research.

Breastfeeding by mothers is essential for meeting the newborn's nutritional needs. [1] Studies demonstrate that breast milk leads to attainment of sensory and cognitive growth and development milestones, besides protecting infants against chronic and infectious diseases. [2] Breastfeeding also wards off childhood diseases and enhanced the capacity to recover from illnesses. [2] Given the significant benefits of breastfeeding, the lack of adherence to a maternal breastfeeding practices among Bahamian mothers between 18 and 29 years especially concerned the midwife researcher. The rationale for the present study is the focus on understanding challenges Eleuthera mothers face, while providing healthcare workers with data about the challenges faced by the Bahamian women to formulate effective pre and postnatal classes and education, awareness and advocacy programs for them. Programs and initiatives such as the Baby-Friendly Hospitality Initiative and the efforts of global and domestic health organizations such as the Pan American Health Organization, Bahamas, UNICEF and WHO are notable in this regard. [3,4]

Given that approximately 44% of the infants in 2019 breastfed for the first six months, the question that arises concerns the deliberate decision by some mothers to not breastfeed. [4] The objective of this study is to find out if Bahamian mothers between 18 and 29 years of age breastfeed their children, determining their knowledge, attitude and breastfeeding practices, and whether their demographic characteristics are related to their knowledge, attitude and breastfeeding practices in a statistically significantly manner.

Conceptual Framework

The proposed conceptual framework for the study is the Theory of Planned Behavior. This theory is frequently utilized in healthcare for understanding the behavior of individuals. Cognitive factors affecting behavior are targeted through this theory, which views intentions and perceived behavioral control as critical behavioral determinants. [6] This theory predicts the choice of the individual to engage in a particular behavior at a certain time and place. Behavioral intent forms the central component of this theoretical perspective. [6] The likelihood that behavior impacts intention is the basis of this theory. The theory has been effectively utilized to explain challenges encountered in making breastfeeding decisions.

The theory holds that behavior is the result of ability as a form of behavioral control and motivation in the form of intention.6 The theory considers three types of beliefs: normative, management and behavioral and six constructs representing the behavior of an individual, namely behavioral intention, social and subjective norms, perceived behavioral control and perceived power. [6] Behavioral intention is associated with motivating behavior, in that the stronger intentions to perform behavior lead to higher likelihood of the behavior being carried out. Similarly, positive or negative assessment of

particular behaviors represent the attitude the individual has, and involves the consideration of behavioral outcomes. [6] Similarly, social norms refer to customary codes of conduct associated with individuals or within a culture's context. Subjective norms are beliefs associated with whether individuals approve or disapprove of the behavior of interest.

Perceived power concerns the view of factors hindering or facilitating behavioral performance. Perceived behavioral control is associated with the individual difficulty or ease associated with performing a particular behavior, varying across situations, as well as actions. Research exploring the intention of pregnant mothers to breastfeed their infant and the role of beliefs in the theory of planned behavior identifies behavioral, normative and control beliefsserving to influence the intention to engage in breastfeeding practices. [6] Those with weaker intentions were less likely to breastfeed. [6] Additionally, the participants intention to breastfeed was most influenced by injunctive normative beliefs.6 The Theory of Planned Behavior links behavior and belief in empirical research, examining how behavior and intentions are shaped by attitudes towards a particular behavior, perceived behavioral control and subjective norms. [6]

Literature Review

A review of extant contemporary and classic research shows the diverse interlinkages between demographic factors and knowledge, attitudes and practices among breastfeeding mothers. Beliefs have been identified as a significant factor in successful breastfeeding. [7] Beliefs in a Theory of Reasoned Action, are categorized into behavioral, normative, and control beliefs and intention. Conventional negative values and lack of knowledge minimize breastfeeding,

wherein normative beliefs influence how others perceive the practice of breastfeeding and directly influence whether mothers think it is right or wrong to breastfeed. [7] Inability to adhere to norms are impacted by others' perceptions of such norms. Control beliefs are linked to seleffi-cacy and a mother's belief about such factors can serve as a barrier or facilitator for breastfeeding based on social support. 7 The relationship between various health risks and breastfeeding in children, including preventing diseases, obesity, hypertension, obesity, allergies. Central Nervous System (CNS) development, and the role played by breastfeeding in improving health and preventing disease and Sudden Infant Death Syndrome (SIDS) is well established. [1] Additionally, benefits for the mother include reduce risks of developing hypertension, breast cancer, recurrence of postpartum migraines, and diabetes among other health problems.1Breastfeeding provides psychological and physiological benefits enhancing mother child bonding. [8]

Despite being a "gold standard" breastfeeding remains less common among pregnant mothers, with instances of mothers not breastfeeding their children becoming global, prevalent concerns. [9] Lack of knowledge, lactation, social norms, economic requirements, poor health services and lack of social support are the key breastfeeding challenges. [9] Key breastfeeding challenges are associated with health problems, such as lactation failure that prevent women from initiating breastfeeding. [9] During first four weeks, mothers may experience multiple changes in terms of mental, physical and emotional health, necessitating postpartum depression medication in some cases. Medication is a self-reported obstacle leading to the discontinuation of breastfeeding, despite most medicines being safe for lactation. [10]

Failure to breastfeed may also occur in the subsequent weeks. Webb, Stickney and Heywood

have identified individual, group and society level breastfeeding challenges. [11]

Individual challenges include attributes of mothers and children, as well as the mother-child dyads. [11] Environmental features such as health and hospitals services, home, work and community environment constitute group level challenges. [11] Societal challenges include societal aspects, such as economic and cultural norms. [11] Societal and cultural challenges vary across regions and significantly contribute to knowledge, attitude and breastfeeding practice. Social and cultural factors are improved via education, and training initiatives for healthcare professionals to educate mothers about breastfeeding. [12] Costanian, Macpherson and Tamim emphasize the role of nurses in educating women on breastfeeding affecting breastfeeding knowledge, practice and attitudes.

Social and cultural challenges can be addressed through information and education, although health-related challenges are more difficult to overcome. Health problems on the part of mothers, children, lactation challenge sand health services are common medical conditions obfuscating frequent breastfeeding in mothers. Obstetric providers should work towards anticipatory guidance, managing lactation and support for breastfeeding physiology. [13] Bergmann and colleagues investigated medical problems encountered by breastfeeding mothers, and although the practice itself was natural, health-related challenges either psychological or physiological served obstruct breastfeeding. [14]

Psychological challenges such as attitude are more difficult to identify than physiological challenges. Lyons et al. focused on five psychological factors linked to breastfeeding namely intention to breastfeed, belief in nutritional value, breastmilk adequacy and sufficiency, body image, infant feeding practice beliefs, and social know-how. [15] In negative forms such as body image issues, disbelief in milk value etc. serve as breastfeeding challenges. [15] Psychological issues such as anxiety, distress, depression and anxiety are also negatively linked to breastfeeding. [15]

Hormones also serve as critical physiological milk production activators, such as progesterone, prolactin, oxytocin and estrogen as vital and essential hormones. Critical hormone levels hinder the production of milk, affecting breastfeeding. [16] The Feedback Inhibitor of Lactation (FIL) is implicated in the production of milk, as tis body substance or polypeptide regulates milk production.16 Health related challenges are likelier to impact the mother or the infant in equal measure. Lactation challenges associated with the mother include inadequate milk production, plugged milk ducts, poor technique, breast infection and postnatal depression. [17] Health challenges impacting the infant include tongue ties, limited ability on the part of infants to maneuver tongues, and impact their ability to breastfeed effectively. [16] This affects the discontinuation or initiation of breastmilk. A UK survey found the highest prevalence of breastfeeding is in women aged 30 or more, and that despite knowledge about the benefits of breastfeeding, breastfeeding rates remain lower. [18]

Mothers with lower socioeconomic status, education and teenage or non-married single mothers were likelier to avoid or discontinue breastfeeding. [18] Factors linked to cessation of breastfeeding include frequent feeding, pain during breastfeeding, lack of support and inadequate information provision. [18] Sharma and Byrne collected data on personal experiences and beliefs associated with breastfeeding among mothers and found obstacles to timely and continued breastfeeding include education, income and other social and economic factors, health

specific factors associated with ill health at the time of delivery and demographics such as maternal age.

Social norms impact individual behavior and breastfeeding in mothers and may influence the decision to stop breastfeeding practice. [20] Negative attitudes towards breastfeeding play a critical role in shaping unfavorable attitudes towards breastfeeding mothers. Although breastfeeding is not a social norm, social circles and societal attitudes towards breastfeeding practices and attitudes influence breastfeeding practices. [20] Socioeconomic factors such as economic wealth and educational level impact breastfeeding practices, and a social environment impacts the health service and information availability and accessibility. [19] Jones et al. also examined how cultural challenges impact breastfeeding duration and initiation across multiple races. [21] Beauregard et al. also examined the ethnic and racial disparity in breastfeeding rate and practices. [22] Breastfeeding challenges were higher among uneducated, single, young and AfricanAmerican mothers. Other problems triggering breastfeeding challenges included job obligations, breastfeeding inconvenience, being ashamed or feeling pain, lack of work, breastfeeding cultural acceptance, lack of information for breastfeeding knowledge, substance abuse, lifestyle decisions and acculturation. [21]

Street and Lewallen studied the role of culture on breastfeeding between white and African American women employing the Theory of Culture Care, Diversity and Universality and found 4 categories associated with social and cultural challenges to breastfeeding. [23] The researchers found four major categories associated with knowledge of benefits of breastfeeding, influence of personal choice, family and friends. [23] Cultural background affected breastfeeding decisions including breastfeeding positively affect breastfeeding decisions. [23] Cultural beliefs influence attitudes towards breastfeeding practices. [23]

Individual challenges revolve around infant attributes, maternal characteristics, attributes of mother-child dyads. [23] Infant challenges include anklyoglossia, poor coordination of swallowing, and sucking, frustration caused by letting down in delayed, sensitivity to medication or food in milk, stress in the surrounding. In the mother-baby dyad, the mother should be able and willing to breastfeed, and the surrounding support the dyad. In the immediate hours following the birth, delaying administrative procedures such as measuring and weighing can strengthen the mother-child dyad. Social and cultural factors influence breastfeeding practices directly or indirectly. Maternal knowledge and attitudes also critically determine breastfeeding practice frequency. [24, 25] Alnasser et al. report negative breastfeeding attitudes among employed and earning women, while a positive attitude was noted among mothers with advanced age, breastfeeding education and multiparous. [24] A positive association between advanced age in mothers, breastfeeding awareness and breastfeeding intention. [24]

Methodology

A quantitative research design was utilized to measure and examine breastfeeding challenges in mothers based on their demographic factors. While demographical factors were the independent variable, breastfeeding knowledge, attitudes and practices were the dependent variables. Although no interventions were utilized, this ex-post facto study yielded robust data.

The target population comprised 85 mothers in select Eleuthera clinics in the Bahamas, as per the Commonwealth of Bahamas 2013 report. [27] Purposive or selective sampling was the non probability sampling method used, whereby

Bahamian mothers representing characteristics of interest were used. [26]

Sample and Setting

The study was geographically restricted to selected health centers at the Eleuthera Island, in the Bahamas. All eligible mothers possessing inclusion criteria in Eleuthera were required to participate in the study, anda response rate of 63.75% (n=51) volunteered to participate in the study.

Inclusion criteria utilized for the present study was as follows.

• Mothers aged 18-29 years on the island of Eleuthera were selected for the study

• The mothers were assessed during the postpartum stage.

• Mothers who received healthcare services from clinics participated in the study.

• Only women who could read and write English and volunteered to participate were recruited in the study.

The following exclusion criteria were also utilized for the study.

• Mothers who were not receiving healthcare services from the clinics were excluded

• Mothers who were not receiving healthcare services from clinics participated in the study.

• Mothers who were younger than 18 or older than 29 years did not participate in the study.

• Mothers who refused to participate or could not read or write English were also not part of the study.

The research was conducted in the rural area of the island of Eleuthera, and the targeted population for the study were mothers from North, Central and South Eleuthera public clinics.

Ethical Consideration

Informed consent, confidentiality, privacy and lack of researcher bias were key ethical procedures followed during the study. Ethical approval for the study was sought and received from the University of West Indies (UWI). St. Augustine Campus (Trinidad and Tobago) Ethics Committee and The National Medical Research Ethics Committee in The Bahamas.

Instrumentation and Description of the Tool

The survey questionnaire was simplified and adapted from an Irish questionnaire adapted from Emmanuel and Clow for the Nigerian setting. [28] This study adapted and modified the questionnaire for Bahamian mothers, showing high content validity index for relevance (0.94), ambiguity (0. 94), clarity (0.94) and simplicity (0.96). Cronbach's Alpha was 0.81 and reliability coefficient was 0.76. 28 The survey questionnaire comprised a combination of checklist and forced-choice, close-ended items in a Likert type scale to assess attitudes, knowkedge and practice regarding breastfeeding among mothers in select clinics in Eleuthera Island, in the Bahamas. The scales used in the three categories associated with knowledge, attitude and practices towards breastfeeding were assigned scores tabulated below:

Table 1 Ratings for converting scales into quantitative data

Factor	Scale					
Items	Knowledge about BF initiation, benefits and length, and antenatal attendance			Antenatal teaching of breastfeeding		
Knowledge about BF	Yes	No	Don't Know	All the time	Sometimes	Never
Rating	3	2	1	3	2	1
Items	BF preference, convenience, and if BF is healthier					

	than formula					
Attitude towards Breastfeeding	Strongly agree	Agree	Disa-gree	Strongly disagree		
Rating	4	3	2	1		
Items	Initiation within one hour and frequency of BF					
Breast Feeding Practices	All the time	Some-times	Never			
Rating	3	2	1			

Each response was coded and analyzed using SPSS Version 26 following the aggregation of scores on knowledge, attitude and practice, such that for knowledge, with 10 items, the score ranged from 10 (minimum) to 30 (maximum). For the Attitude scale, scores ranged from 12 (minimum) to 48 (maximum), while the score for Practice ranged between 9 (minimum) and 27 (maximum). The knowledge items were recorded as per the following scale: (1) as poor,(2) as moderate and (3) as high. Attitude scores were rated as (3-4) poor and (2-1) fair. For practice level, the ranges were (3) high, (2) moderate, and (1) poor. Descriptive statistics and frequency distributions were used to interpret survey responses. For pre-testing the tool, the Cronbach's alpha was used and the reliability of the tool was high (r=0.80). The structured survey questionnaire was developed utilizing an iterative approach and refining items based on reliability and validity indices.

The survey questionnaire was categorized into four sections from A to D. The first section was associated with six items pertaining to demographic factors. The second set of 10 items were associated with knowledge about breastfeeding. The next 11 items were related to attitude towards breastfeeding, while the last 9 items were linked to breastfeeding practice.

Data Collection Procedure

Following approval from the UWI St. Augustine's Campus (Trinidad & Tobago) ethics committee, the Medical Research Oversight System, National Medical Research Ethics committee permitted the research study. Once approval was given, the researcher invited mothers from selected clinics in Eleuthera, the Bahamas in the postpartum stage to take part in the study.

Following informed consent, the survey questionnaire was administered to the participants. The questionnaire was administered using the channel stated as most convenient by the research participants. Participants who agreed to complete the questionnaire in the clinic were recruited for the study. Confidentiality and privacy of data was guaranteed and research participants were assured of anonymity while responding to the questionnaire.

Data Analysis Plan

Data was analyzed to assess the breastfeeding challenges and explain the relationship between breastfeeding knowledge, attitudes and practice, on the one hand, and demographic variables on the other hand. On account of the numerical nature of quantitative data, the research used to statistically analyze the data. A preliminary, descriptive analysis based on percentages and frequencies was carried out using demographic data, and information about knowledge, attitudes and breastfeeding practices. Numbers are allocated to responses. Questions in relation to knowledge, practice, attitude were analyzed by assigning the higher number to a more positive attitude. Totals for each category were

calculated to determine participant attitude. Numerical allocation to responses enabled calculation of descriptive statistics using SPSS V.26.

Results

The demographic distribution of the research participants was analyzed utilizing descriptive statistics. Women between the ages of 18 and 29 participated in the study (n=51) (see Table 2).

Table 2 Frequency and Percent distribution of respondents by demographics

Demographic Factor	**No. of participant (n)**	**%**
Education Level		
Primary	3	5.9
Secondary	34	66.7
Tertiary	14	27.5
Formal	0	0
Marital status		
Single	37	72.5
Married	9	17.6
Common-law	5	9.8
Divorced	0	0.0
Demographic Factor	No. of participant (n)	%
Employment status		
Student (College)	2	3.9
Unemployed	16	31.4
Self-employed	8	15.6
Government	7	13.7
Private	16	31.4
Housewife	1	2.0
Maternal parity		
1 child	36	51.0
2 children	19	38.3
3 children	4	7.8
4 children	2	3.9
5 and more	0	0.0
Demographic Factor	No. of participant (n)	%
Religion		
Anglican	8	15.7
Methodist	8	15.7
Baptist	3	5.9
Pentecostal	16	31.4
Other	16	31.4

A major percentage (66.7%) received secondary education, while a significantly lower percentage (27.50%) completed tertiary education. The smallest percentage of research participants belonged to the primary education category (5.90%). A majority of the respondents were single mothers (72.50%) and none were divorced with respect to marital status. A majority of the research participants (79.60%) were employed, as compared to unemployed mothers (31.40%). Regarding maternal parity, a majority (51%) of the mothers had a child, while 38.83% of the mothers had two children. No participants had more than five children. The distribution of religious affiliations showed a majority of the participants (31.40%) belonged to groups other than common denominations such as Methodist, Anglican, or Baptist while an equal percentage were Pentecostal (31.40%).

Frequency of scores on knowledge, attitude and breastfeeding practice were calculated next. The highest score was allocated to positive responses and vice versa. While the items in the section measuring breastfeeding knowledge focused on benefits of breastfeeding, initiation and duration of breastfeeding, and education imparted in terms of antenatal classes and patient education imparted by midwives and nurses. Attitude questions focused on whether mothers preferred to breastfeed, the degree of convenience and whether it resulted in healthier infants than one-formula fed babies. The questions on breastfeeding practice chiefly focused on breastfeeding within one hour of giving birth and the frequency of breastfeeding. Table 3 represents the frequency and percentage of knowledge variables measured.

Table 3: Frequency and Percentage Distribution of Knowledge Of Respondents related to Breastfeeding (Checklist)

No.	Item/Question	Nature of Response			
		Yes		No	
		N	%	N	%
1.	Do you know what breastfeeding is?	46	90%	5	10%
2.	Do you know the benefit(s) of breastfeeding?	44	86%	7	14%
3.	Did you attend antenatal clinic during pregnancy?	47	94%	3	6%

Table 4: Frequency and Percentage Distribution of Knowledge of Respondents related to Breastfeeding (Likert type scale)

No.	Item/Question	Nature of Response					
		Never /No/		Sometimes /Do not know		All The Time /Yes	
		N	%	N	%	N	%
4.	Did the nurse discuss breastfeeding during antenatal visits?	12	23.52%	13	25.49%	26	50.98%
5.	Did you receive any information about the health benefit of breastfeeding?	9	17.64%	10	19.60%	32	62.74%

6.	When should breastfeeding start?	After 24 hours of birth		Do not know		Within one hour of birth	
		11	21.56%	11	21.56%	29	56.82%
7.	Does breastfeeding prevent your baby from diseases?	14	27.45%	9	17.64%	28	54.90%
No.	Item/Question	Nature of Response					
8.	For how long should you breastfeed?	<6 months		6 months		>6 months	
		10	19.60%	9	17.64%	32	62.74%
9.	Does breastfeeding prevent pregnancy?	25	49.01%	19	37.25%	7	13.72%
10.	Does frequent sucking help milk production?	11	21.56%	11	21.56%	29	56.82%

A majority of the mothers were aware of breastfeeding (n=46, 90%), knew the advantages of breastfeeding (n=44, 86%) and attended antenatal clinics (n=47, 94%). A major percentage of the mothers indicated nurses and midwives discussed breastfeeding during antenatal visits (n=26, 50.98%) and mothers were aware of health benefits of this practice (n=32, 62.74%). The mothers who knew that breastfeeding should commence within one hour of birth was also high (n=29, 56.82%) and whether breastfeeding benefitted by protecting infants from diseases (n=28, 54.90%). A major percentage of the mothers reported breastfeeding for a length greater than six months (n=32, 62.74%). However, a majority of the research participants reported breastfeeding did not prevent pregnancy (n=25, 49.01%) although it did so. Despite this, a large percentage of the respondents accurately reported frequent sucking helped in milk production (n=29, 56.82%).

Table 5 Attitude of Respondents towards Breast Feeding

No	**Do you believe:**	**Agree**		**Disagree**		**Strongly agree**		**Strongly disagree**	
		N	%	N	%	N	%	N	%
1	Formula feeding is more convenient than breastfeeding.	8	15.68%	24	47.05%	7	13.72%	14	27.45%
2	Breastfeeding increases mother-infant bonding.	20	39.21%	5	9.8%	21	41.17%	5	9.8%
3	Formula-fed babies are more likely to be overfed than breastfed babies.	21	41.17%	13	25.49%	12	23.52%	5	9.8%
4	Formula feeding is the better choice if the mother plans to go back to work.	13	25.49%	16	31.37%	9	17.64%	12	23.52%
5	Mothers whom formula feed miss one of the great joys of motherhood	17	33.33%	12	23.52%	11	21.56%	11	21.56%

6	Women should not breastfeed in public places such as restaurants.	15	29.41%	14	27.45%	10	19.60%	12	23.52%
7	Breastfed babies are healthier than formula-fed babies.	21	41.17%	9	17.64%	13	25.49%	8	15.68%
8	Breast milk is cheaper than formula.	22	43.13%	5	9.8%	16	31.37%	7	13.72%
9	Breastfeeding is more convenient than formula.	25	49.01%	6	11.76%	15	29.41%	5	9.8%
10	That children less than six months who are breastfed are healthier than children who take other food?	21	41.17%	13	25.49%	13	25.49%	5	9.8%
No.	**Do you believe:**	**Agree**		**Disagree**		**Strongly agree**		**Strongly disagree**	
11	That only breastmilk is enough for a child for up to 6 months?	19	37.25%	14	27.45%	10	19.60%	9	17.64%
12	Prefer to breastfeed your baby?	20	39.21%	9	17.64%	17	33.33%	5	9.8%

Most mothers participating in the study felt formula feeding lacked the convenience associated with breastfeeding (see Table 5) (n=38, 74%). According to a major percentage of the research participants, breastfeeding enhances the mother-child bond with more mothers agreeing or strongly agreeing regarding this (n=41, 80%). An equal percentage and number of mothers felt formulas led to overfeeding. Additionally, working mothers reported formula feeding as an ineffective choice, holding a positive attitude towards breastfeeding.

Table 6 Practices of Respondents towards Breast Feeding

No	**Question**	**All the time**		**Sometimes**		**Never**	
		N	**%**	**N**	**%**	**N**	**%**
1	Did you initiate breastfeeding in the 1st hour of delivery?	17	33.33%	8	15.68%	26	50.98%
No	**Question**	**All the time**		**Sometimes**		**Never**	
2	Did you have skin-to-skin contact with your baby after birth?	23	45.09%	9	17.64%	19	37.25%
3	Did you offer feeds other than breastmilk to your baby before starting to breastfeed?	9	17.64%	20	39.21%	22	43.13%
4	Did you develop any breast problems while breastfeeding?	7	13.72%	14	27.45%	30	58.82%
5	If Yes, did you stop breastfeeding during the breast problem?	9	17.64%	11	21.56%	31	60.78%

6	How often did you breastfeed within the first 4 weeks?	23	45.09%	15	29.41%	13	25.49%
7	If your child is sick, will you continue to breastfeed?	25	50%	8	16.66%	18	33.33%
8	Do you express your milk for the baby to take when you are away?	22	43.13%	10	19.60%	19	37.25%
9	Did you breastfeed your last child on demand?	20	39.21%	13	25.49%	18	35.29%

Table 6 showed a majority of the research participants were not positively oriented towards breastfeeding practices. A total of 50.98% of the mothers reported not breastfeeding in the first hour of delivery.

Table 7 Respondents' Knowledge Score Frequency Summary

Low	15(29.41%)
Moderate	10(19.60%)
High	26 (50.98%)

Among the research participants, 70.58% showed moderate to high levels of breastfeeding knowledge than 29.41% obtaining low scores on this factor.

Table 8 Respondents' Attitude Score Frequency Summary

Positive	(3,4) 36(70.58%)
Negative	(1,2) 15 (29.41%)

A total of 70.58% of the mothers reported positive attitudes, while another 29.41% reported negative attitudes towards breastfeeding.

Table 9 Respondents' Practice Score Frequency Summary

Low	27 (52%)
Moderate	9 (17%)
High	15 (31%)

A major percentage (52%) of the mothers scored low on breastfeeding practice, while 48% of the mothers reported high to moderate levels of breastfeeding practice.

Table 10: ANOVA for Aggregated Knowledge Scores and Demography Tests of Between-Subjects Effects					
Dependent Variable: Knowledge Score					
Source	Type III Sum	Df	Mean	F	Sig.

	of Squares		Square		
Corrected Model	31.314a	45	.696	.949	.602
Intercept	152.979	1	152.979	208.608	.000
Marital Status	.000	1	.000	.000	1.000
Employment	.357	4	.089	.122	.969
Parity	.500	2	.250	.341	.726
Religion	2.064	3	.688	.938	.488
Education	2.500	2	1.250	1.705	.273
Error	3.667	5 .733			
Total	308.000	51			
Corrected Total	34.980	50			
a. R Squared = .895 (Adjusted R Squared = -.048)					

The association between aggregated knowledge scores and demography was not statistically significant.

Table 11: ANOVA for Aggregated Attitude Scores and Demography

Tests of Between-Subjects Effects					
Dependent Variable: Attitude Score					
Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	58.255[a]	39	1.494	2.900	.031
Intercept	218.231	1	218.231	423.626	.000
Marital Status	.083	1	.083	.162	.695
Employment	.864	5	.173	.336	.881
Parity	4.188	3	1.396	2.710	.096
Religion	3.245	3	1.082	2.100	.158
Education	2.843	2	1.421	2.759	.107
Error	5.667	11 .515			
Total	535.000	51			
Corrected Total	63.922	50			
a. R Squared = .911 (Adjusted R Squared = .597)					

No statistically significant association was found between attitude and demography.

Table 12: ANOVA for Aggregated Practice Scores and Demography

Tests of Between-Subjects Effects					
Dependent Variable: Attitude Score					
Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	32.167[a]	39	.825	1.158	.419
Intercept	80.650	1	80.650	113.253	.000

Marital Status	.000	1	.000	.000	1.000
Employment	3.404	5	.681	.956	.484
Parity	3.854	3	1.285	1.804	.205
Religion	2.116	3	.705	.991	.433
Education	2.227	2	1.114	1.564	.252
Error	7.833	11	.712		
Total	244.000	51			
Corrected Total	40.000	50			
a. R Squared = .804 (Adjusted R Squared = .110)					

No statistically significant association was observed between practice towards breastfeeding and demographical factors.

Discussion: Findings and Implications

The research study sought to examine if Bahamian mothers in select clinics on the Island of Eleuthera aged 18 to 29 years of age were likelier to breastfeed, their knowledge, attitude and practices regarding breastfeeding and the association between knowledge, attitudes and breastfeeding practices and demographic characteristics. The research reviewed demonstrated that contextual, sociocultural, health and individual obstacles and challenges impact breastfeeding attitudes, knowledge, and ultimately practice. [14,15] Results indicated Bahamian mothers aged between 18 and 29 did not breastfeed their children to a large extent, though most mothers held in-depth knowledge and positive attitudes towards this practice. Antenatal care education is critical for advancing knowledge about breastfeeding among mothers. Beliefs were not in line with ample breastfeeding knowledge and attitudes, even though reviewed empirical literature pointed in the opposite direction. [7] The research also sought to examine if knowledge, practices and attitudes followed by Bahamian mothers were high, moderate or low. While the research participants held more positive attitudes towards breastfeeding, they reported lower likelihood of actually practicing breastfeeding. Knowledge, attitudes and ultimately practice of breastfeeding is impacted by prenatal exposure to breastfeeding data. [29] Barriers to regular breastfeeding practices include maternal perceptions that babies face undernourishment, and work related challenges or pain and health issues impede effective breastfeeding. [30] Although mothers in the study were knowledgeable about breast feeding, result findings that among mothers with tertiary and primary education regarding breastfeeding knowledge, the differences were not considerable contradicts earlier research that established lower educational levels and single status predicted poor knowledge of breastfeeding. [18] The findings are in line with the findings of the study by Alnasser et al. who found levels of education are no measure of knowledge about a particular subject. [28] Although breastfeeding is considered a “gold standard”, it was not practiced by mothers in the research study.

The findings indicate the need for maternal education to facilitate good child care guidelines and practices and awareness about health and comfort regarding breastfeeding in social settings to promote breastfeeding intention and practice. [31.32] On the other hand, a positive attitude towards breastfeeding was reported among the research participants. Positive attitudes towards breastfeeding influence breastfeeding practices

and infant feeding plans, according to empirical literature. [33,34,35,36, 37] Regarding breastfeeding practice, mothers were less likelier to engage in breastfeeding, even as research has shown breastfeeding is uncertain and infrequent, associated with different factors at different points in the postpartum period, such as health literacy, intention and maternal self-efficacy, increased knowledge and positive attitudes. [38]

ANOVA results indicated no statistically significant associations between knowledge, attitude and breastfeeding practice, on the one hand, and demographic variables on the other. Results suggested midwives need to provide information on breastfeeding and overcome health linked sociocultural challenges. [39] Breastfeeding challenges make it harder to initiate or continue breastfeeding and factors associated with social, health and cultural challenges can serve as deterrents to translating positive attitudes and complete knowledge into positive breastfeeding practices. Anticipatory guidance is critical for overcoming lactation complications, body image concerns and beliefs in nutritional value of breastfeeding. [14, 15, 16] Moreover, social norms and negative social perceptions of breastfeeding such as role or attitude of partner or spouse, relatives, family could also have impacted the lack of connection between knowledge, attitude and breastfeeding practice, with respect to demographic variables. [20]

According to the Theory of Planned Behavior, individual intentions to engage in breastfeeding would be based on attitudes, evaluation of risks and benefits and expected outcomes. Decisions to engage in breastfeeding would depend on attitudes, intention and behavioral control, subjective and social norms and perceived power. Attitudes are partially influence the process of engaging in a practice, suggesting the total of knowledge, attitudes or demographic factors alone cannot predict willingness to engage in breastfeeding practices among postpartum mothers. Despite knowing the benefits of breastfeeding, postnatal mothers are likelier to have different ranges of beliefs regarding breastfeeding,, impacting regular breastfeeding practices. [40, 41, 42. 43]

Implications of the study for nurse administrators is that health centers can improve breastfeeding practice and overcome breastfeeding challenges by working on converting positive attitudes into willingness to engage in breastfeeding. For the nurse researcher or academician, the study suggests future research needs to be conducted to understand the reason for withholding breastfeeding practices. [44] Through the identification of challenges to breastfeeding, nurse practitioners can develop strategies to promote breastfeeding and work towards minimizing health conditions in the mother-infant dyad through careful understanding of the study findings.

Conclusion

Demographic factors associate with education level, religion, maternal parity and marital status do not influence knowledge, attitudes and breastfeeding practice in a statistically significant manner. However, the study found the association between breastfeeding knowledge and practice are related to some extent, and provision of maternal education programs on the benefits of breastfeeding can improve and enhance attitudes and breastfeeding practices. Individual, cultural, health and social factors likewise play a critical role in influencing breastfeeding practices among Bahamian mothers in the study, as demonstrated in the review of empirical literature and the study findings.

Limitations

The study, although offering robust evidence in support of the lack of association between knowledge, attitude and breastfeeding practice

and demographic attributes, is beset by certain limitations. It is possible some research participants may have lack of adequate knowledge or information about past events or experiences, and recall bias could impact the
study. To limit the impact of such a possibility, the researcher attempted to select mothers who had recently given birth. Past events could not be retrieved using intrapartum notes, implying it was the researcher's responsibility to ensure information was documented fairly and objectively. This requirement may also have led to concerns about researcher bias and objectively. Secondly, the study was confined to the select clinics in the Island of Eleuthera in the Bahamas. Therefore, given that the sample was selected from a target population that was confined to a particular geographical region and shared similar attributes, the homogeneity of the sample makes it difficult to generalize the results across wider segments of postnatal mothers in different nations and cultures, besides limited generalizability of results to Bahamian mothers in other areas.

Participants may also have responded in a different way from what they genuinely felt due to social desirability concerns. Knowledge that the researcher may be positively oriented towards the cause of breastfeeding may also have influenced the genuineness of the responses of the mothers adversely. To prevent this limitation from impacting the research study, the researcher assured participants of confidentiality and privacy of the data collected. Another limitation as that data collected was based on self-report measures and accuracy could have been adversely impacted. Such a limitation was controlled by working with participants to ensure they understood items in the survey questionnaire well.

A key limitation of the study was that only a limited percentage of estimated population of 85 mothers (n=51) took part in the study, impacting the generalizability of the study findings.

Additionally no interventions were carried out for supporting mothers with limited or lack of
knowledge or positive attitudes or low willingness to engage in breastfeeding, despite research estimating breastfeeding could prevent 823,000 child deaths and 20,000 maternal deaths annually. [6]

Additionally, the study focused on cross-sectional data alone, as opposed to a longitudinal perspective. Changes in attitudes, knowledge and practice regarding breastfeeding among Bahamian mothers was limited to a cross-sectional study, rather than examining the transitions over time.

Recommendations

A focal recommendation of the study is that breastfeeding advocacy and awareness is critical for combating subjective value systems and unfavorable social norms that may impact willingness to breastfeed among Bahamian mothers. The mothers need to be motivated to consider breastfeeding to be not only a healthier, but a more viable option compared to formula in practice, and not just theory. Additionally, future research in this area should concentrate on intervention based studies encouraging and motivating mothers to engage in breastfeeding, as opposed to following social norms and beliefs that challenge breastfeeding.

Another key recommendation is that mothers should be provided health care and social support to overcome individual, health, social and cultural breastfeeding challenges. Peer support networks, the Midwives Association of the Bahamas, social support initiatives and programs can be effective in promoting breastfeeding practice and combating low rates of breastfeeding despite positive breastfeeding attitudes and complete knowledge regarding the advantages of

breastfeeding. Multidisciplinary health care teams must understand and empower women to raise awareness about breastfeeding, especially among young mothers below thirty years of age. Additionally, policymakers must spread awareness about breastfeeding practice as a family planning method and a way to strengthen the mother-child bond. Acts and laws should be imposed to ensure employers offer work breaks and long maternity leaves for breastfeeding mothers. Breastfeeding practices should be promoted through breastfeeding rooms at public clinics, and businesses such as food stores.

WHO and other prominent health agencies have recommended breastfeeding is critical for mother and child health for the first six months. Social beliefs also impact whether positive attitudes and adequate knowledge translate into willingness to engage in breastfeeding practice among postnatal mothers. Consequently, by controlling infant and maternal mortality and morbidity, breastfeeding should be promoted as an affordable, effective healthcare strategy to lower societal healthcare costs.

Breastfeeding has been associated with stronger mother-child bonds, lowered incidence of childhood diseases and disorders such as SIDs, diabetes, diarrhea, and pneumonia, among others. [45] Additionally, it is associated with healthier bodies and higher intelligence among teens and children. [45] Among mothers, as well, breastfeeding lowers the risk for cancers (breast, ovarian, and endometrial), hemorrhage, postpartum depression, lactation amenorrhea and maternal obesity. [45] Additionally, mothers must receive breastfeeding counseling and antenatal care and guidance to prevent myths and misconceptions. Cultural practices such as mixed feeding should also be considered as obstacles to breastfeeding that must be overcome by bridging the gaps in maternal knowledge, practices and attitudes regarding breastfeeding. The government and non-profit organizations must collaborate with international agencies to sustain positive health impact and overcome maternal reluctance to breastfeed. Breastfeeding support programs and good feeding practices must be promoted through mass media and motivation by healthcare professionals such as nurses and midwives. It is hoped the present research study will change attitudes, grow knowledge and promote breastfeeding practice among postnatal mothers and advance an understanding of breastfeeding challenges among healthcare professionals, researchers, administrators and policymakers.

References

[1] Alimoradi F, Javadi M, Barikani A, Kalantari N, Ahmadi M. An overview of the importance of breastfeeding. Journal of Comprehensive Paediatrics. 2014 May 1;5(2).

[2] Grosso C, Meazza C, Pagani S, Bozzola M. Breastfeeding and its gamut of benefits. Minerva pediatric. 2015 May 29;68(3):201-12.

[3] Pan American Health Organization. World Breastfeeding Week [Internet]. Washington: US;PAHO;2019. Available from: https://www.paho.org/en/file/82005/download?token=i2-sucVA

[4] World Health Organization. Infant and young child feeding [Internet]. Geneva: Switzerland; WHO. Revised 2020. Available from https://www.who.int/news-room/factsheets/detail/infant-and-young-child-feeding.

[5] Ismail T, Alina T, Wan Muda WA, Bakar MI. The extended Theory of Planned Behaviour explains regular breastfeeding intention and behavior among women in Kelantan, Malaysia. Nutrition research and practice. 2016 Feb 1;10(1):49-55.

[6] Ismail TA, Muda W.M., Bakar MI. The intention of pregnant women to exclusively breastfeed their infants: The role of beliefs in the theory of

planned behaviour. Journal of Child Health Care. 2014 Jun;18(2):123-32.

[7] Wood KM, Qureshi K. Facilitators, and barriers for successful breastfeeding among migrant Chuukese mothers on Guam. SAGE Open Nursing. 2017 Jan; 3:2377960816688909.

[8] Papastavrou M, Genitsaridi SM, Komodiki E, Paliatsou S, Midw R, Kontogeorgou A, Lacovidou N. Breastfeeding in the course of history. J Pediatr Neo Care. 2015 Sep 18;2(6):00096.

[9] Office of the Surgeon General (US). The Surgeon General's call to action to support breastfeeding. Washington, DC: U.S. Department of Health and Human Services; 2011. 88.

[10] Saha MR, Ryan K, Amir LH. Postpartum women's use of medicines and breastfeeding practices: a systematic review. International breastfeeding journal. 2015 Dec;10(1):1-10.

[11] Webb K, Stickney B, Heywood P. Guest Editorial: Breastfeeding and the public's health. New South Wales public health bulletin. 2005 Mar 1;16(4):37-40.

[12] World Health Organization. Baby-Friendly Hospital Initiative [Internet]. Geneva: Switzerland; WHO. Revised 2018. Available from: https://www.who.int/nutrition/bfhi/en/

[13] Breastfeeding Expert Work Group. Optimizing support for breastfeeding as part of obstetric practice. In ACOG committee opinion [Internet]. Washington: D.C.; American College of Obstetricians and Gynaecologists; 2016 February. Available from: https://www.acog.org/Clinical-Guidance andP ublications/CommitteeOpinions/Committee-on-Obstetric-Practice/Optimizing Support-for-Breastfeeding-asPart-of-Obstetric-Practice?IsMobileSet=false

[14] Bergmann RL, Bergmann KE, von Weizsäcker K, Berns M, Henrich W, Dudenhausen JW. Breastfeeding is natural but not always easy: intervention for common medicalproblems of breastfeeding mothers–a review of the scientific evidence. Journal of perinatal medicine. 2014 Jan 1;42(1):9-18.

[15] Lyons S, Currie S, Peters S, Lavender T, Smith DM. The association between psychological factors and breastfeeding behavior in women with a body mass index (BMI)≥ 30 kg m− 2: a systematic review. Obesity reviews. 2018 Jul 1;19(7):947-59.

[16] World Health Organization. The physiological basis of breastfeeding. Infant and young child feeding: Model Chapter for textbooks for medical students and allied health professionals. 2009:9-17.

[17] Sultana A, Rahman KU, Manjula S. Clinical update and treatment of lactation insufficiency. Medical Journal of Islamic World Academy of Sciences. 2013 Jan;109(555):1-10.

[18] National Health Service. Infant Feeding Survey - UK, 2010. [Internet]. UK; NHS; 2018. Available from https://digital.nhs.uk/data-and information/publications/statistical/infantfeeding-survey/infant-feeding-survey-uk 201019. Sharma IK, Byrne A. Early initiation of breastfeeding: a systematic literature review of factors and barriers in South Asia. International breastfeeding journal. 2016 Dec 1;11(1):17.

[19] Olejnik A, Adamczewska A, Kossakowska K. Factors affecting public breastfeeding attitude: a cross-sectional web-based study on Polish women. Journal of Public Health, 2020 May 16.:1-10.

[20] Jones KM, Power ML, Queenan JT, Schulkin J. Racial and ethnic disparities in breastfeeding. Breastfeeding Medicine. 2015 May 1;10(4):186-96.

[21] Beauregard JL, Hamner HC, Chen J, Avila-Rodriguez W, Elam-Evans LD, Perrine CG. Racial Disparities in Breastfeeding Initiation and Duration Among U.S. Infants Born in 2015. Morbidity and Mortality Weekly Report. 2019 Aug 30;68 (34):745.

[22] Street DJ, Lewallen LP. The influence of culture on breastfeeding decisions by African American and white women. The Journal of perinatal & neonatal nursing. 2013 Jan 1;27(1):43-51.

[23] Alnasser Y, Almasoud N, Aljohni D, Almisned R, Alsuwaine B, Alohali R, Almutairi O, Alhezayen R. Impact of attitude and knowledge on intention to breastfeed: Can mHealth base education influence decision to breastfeed exclusively? Annals of medicine and surgery. 2018 Nov 1;35:6-12.

[24] Amin T, Hablas H, Al Qader AA. Determinants of initiation and exclusivity of breastfeeding in Al Hassa, Saudi Arabia. Breastfeeding Medicine. 2011 Apr 1;6(2):59-68.

[25] Daniel J. Sampling essentials: Practical guidelines for making sampling choices. Thousand Oaks, CA: Sage; 2012. 320 p.

[26] The Commonwealth of the Bahamas. Vital statistics report, 2013: 1-51

[27] Emmanuel A, Clow SE. A questionnaire for assessing breastfeeding intentions and practices in Nigeria: validity, reliability, and translation. BMC pregnancy and childbirth. 2017 Dec;17(1):174.

[28] Kornides M, Kitsantas P. Evaluation of breastfeeding promotion, support, and knowledge of benefits on breastfeeding outcomes. Journal of child health care. 2013 Sep 1;17(3):264-73.

[29] Agunbiade OM, Ogunleye OV. Constraints to regular breastfeeding practice among breastfeeding mothers in Southwest Nigeria: implications for scaling up. International breastfeeding journal. 2012 Apr 23;7(1):1-10.

[30] Oche MO, Umar AS, Ahmed H. Knowledge and practice of regular breastfeeding in Kware, Nigeria. African health sciences. 2011. Sep 1;11(3) 518-23.

[31] Stuebe, A. M., & Bonuck, K. (2011). What predicts intent to breastfeed exclusively? Breastfeeding knowledge, attitudes, and beliefs in a diverse urban population. Breastfeeding Medicine , 2011 Dec 1: 6(6), 413-20.

[32] Ekambaram M, Bhat B, Ahamed MA. Knowledge, attitude, and practice of breastfeeding among postnatal mothers. Current Pediatric Research. 2010 Jan 7;14(2):119-24.

[33] Chezem J, Friesen C, Boettcher J. Breastfeeding knowledge, breastfeeding confidence, and infant feeding plans: effects on actual feeding practices. Journal of Obstetric, Gynecologic, & Neonatal Nursing. 2006 Mar 9: 32(1):40-7.

[34] Zhou Q, Younger KM, Kearney JM. An exploration of the knowledge and attitudes towards breastfeeding among a sample of Chinese mothers in Ireland. BMC Public Health. 2010 Nov 23;10(1):1-11

[35] Wojcicki JM, Gugig R, Tran C, Kathiravan S, Holbrook K, Heyman MB. Early regular breastfeeding and maternal attitudes towards infant feeding in a population of new mothers in San Francisco, California. Breastfeeding medicine. 2010 Feb 1;5(1):9-15.

[36] Chambers JA, Alder EM, Hoddinott P, McInnes RJ. A systematic review of measures assessing mothers' knowledge, attitudes, confidence, and satisfaction towards breastfeeding. Breastfeeding Review. 2007 Nov 1;15(3):17-25.

[37] Tsai TI, Huang SH, Lee SY. Maternal and hospital factors associated with first-time mothers' breastfeeding practice: A prospective study. Breastfeeding Medicine. 2015 Jul 1;10(6):334-40.

[38] Costanian C, Macpherson AK, Tamim H. Inadequate prenatal care use and breastfeeding

[39] practices in Canada: A national survey of women. BMC pregnancy and childbirth. 2016 Dec;16(1): 100.

[40] Subbiah N. A study to assess the knowledge, attitude, practice, and problems of postnatal mothers regarding breastfeeding. Nursing journal of India. 2003 Aug 1;94(8):177.

[41] Mbada CE, Olowookere AE, Faronbi JO, Onwo-

inlola-Aromolaran FC, Faremi FA, Ogundele AO, Awotidebe TO, Ojo AA, Augustine OA. Knowledge, attitude, and techniques of breastfeeding among Nigerian mothers from a semi-urban community. BMC research notes. 2013 Dec 21;6(1):1-8.

[42] Tadele N, Habta F, Akmel D, Deges E. Knowledge, attitude and practice towards regular breastfeeding among lactating mothers in Mizan Aman town, Southwestern Ethiopia: a descriptive cross-sectional study. International breastfeeding journal. 2016 Dec 1;11(1):1- 7

[43] Altamimi E, Al Nsour R, Al Dalaen D, Almajali N. Knowledge, attitude, and practice of breastfeeding among working mothers in South Jordan. Workplace health & safety. 2016 Oct. 28;65(5):210-18.

[44] McLachlan HL, Forster DA. Initial breastfeeding attitudes and practices of women born in Turkey, Vietnam, and Australia after giving birth in Australia. International Breastfeeding Journal. 2006 Dec 1;1(1):1-0.

[45] Dukuzumuremyi J, Acheampong K, Abesig J, Luo J. Knowledge, attitude, and practice of regular breastfeeding among mothers in East Africa: a systematic review. International Breastfeeding Journal. 2020 May 1;15(1).