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Title: Perception toward breastfeeding support at work: A comparison between career women in the public and private sectors in Trinidad

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PERCEPTION TOWARD BREASTFEEDING SUPPORT AT WORK: A COMPARISON BETWEEN CAREER WOMEN IN THE PUBLIC AND PRIVATE SECTORS IN TRINIDAD

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The University of the West Indies

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ABSTRACT

Background: Returning to work becoming a major reason for the discontinuation of breastfeeding. There is a need for an intervention so that infants, mothers and society can reap the benefits of breastfeeding. Assessing the perception of female employees of child bearing age on breastfeeding support at work is imperative, so that services can be implemented at organizations to aid in extending breastfeeding. Unfortunately, there is no current information on perception toward breastfeeding support at the work by career women in Trinidad.

Purpose: The purpose of this study was to evaluate and compare the perceptions held towards the provision of breastfeeding support at work by career women in the public and private sectors in Trinidad.

Methodology: A total of 400 female employees were sampled. Data were collected with the administration of a 16-item questionnaire to evaluate breastfeeding knowledge and perception towards breastfeeding support at work. The data were analyzed using SPSS v. 21.0. Descriptive statistics, the Independent T-test and Pearson’s correlation was used for statistical analysis.

Results: Working women in Trinidad generally hold very positive perceptions toward breastfeeding support at work (48.1%, n=338). Breastfeeding knowledge and perception toward breastfeeding support at work was found to be positively related (p= 0.001). No significant difference in perception was found between women employed in the public and private sectors.

Conclusion: No significant difference with regard to perception and knowledge were found among the two groups. Breastfeeding knowledge was significantly, positively correlated with
perception of breastfeeding support at work and education level. There was a positive correlation between education level and awareness of breastfeeding support at work.
CHAPTER I

INTRODUCTION

Statement of the Problem

In Trinidad and Tobago, there has been a 3.4% increase of malnourished infants during the first three months of birth between 2009 and 2010 (1). Malnourished children are known to be at risk of death (2). An important connection with malnutrition in the first 6 months of life is its relationship with feeding practices (3). The World Health Organization (WHO) recommends exclusive breastfeeding for the first 4 to 6 months of an infant’s life (4). Exclusive breastfeeding is recommended for infants up to 6 months of age because of its benefits in reducing morbidity and mortality. Reports from 2009 to 2010 illustrated an exclusive breastfeeding rate of 25% at 3 months in 2009 which reduced to 22% in 2010 (5), (6). The available statistics show a predominant pattern of a low prevalence of exclusive breastfeeding in the first three months of life (1), (7).

Despite the recommendation for exclusive breastfeeding up to 6 months, many mothers do not breastfeed because of constraints such as the perceived inconvenience of breastfeeding, inadequate breastfeeding skills and lack of knowledge about the specific benefits of breastfeeding (8). In 2010, Weber et al. conducted a study of female employee’s perception on breastfeeding organizational support and identified that returning to work is a major reason for the discontinuation of breastfeeding amongst women (9). This may or may not be reflective in Trinidad and Tobago; however, over the last two decades, a number of initiatives geared towards the improving of infant feeding have been implemented in Trinidad and Tobago (1). Various training programs for health workers, educational campaigns and community level interventions were developed. Further, these interventions included follow-up support for mothers by health
workers and trained community members. Many of these initiatives are still underway and evaluating their impact is difficult because of the fluctuation of activity. (1).

There has also been an effort to initiate, continue and maintain activities geared toward achieving and maintaining breastfeeding after returning to work in Trinidad and Tobago. Currently, The Central Bank of Trinidad and Tobago is the lone organization that provides such a service for its employees (10).

Before implementing any programme however, it is necessary to evaluate how the target population for which the service is intended will receive it. Implementation research is needed at all levels. Implementation research may be defined as being “the scientific study of methods to promote the systematic uptake of clinical research findings and other evidence-based practices into routine practice, and hence to improve the quality (effectiveness, reliability, safety, appropriateness, equity, efficiency) of health care. It includes the study of influences on healthcare professional and organizational behaviour.” (11) Failure to do so could result in insufficient utilization by individuals the intervention was intended for and wastage of governmental financial resources.

Early discontinuation of breastfeeding and the early introduction of complementary foods may negatively impact the infant’s and mother’s health (12). Workplaces, particularly those in the public and private sectors may wish to consider the establishment of childcare facilities and/or day nurseries that would aid in sustaining the bond between mothers and their infants during their first two years of life. This could be realized if the government considers adopting ‘employee-driven’ policies with the long term interest of the nation at the forefront by assisting public and private sector organizations (13). The costs that are equally important but more
difficult to measure are long-term health concerns such as chronic diseases, a reduction in adult productivity due to decreased cognitive development and increases in chronic illnesses leading to higher health insurance rates related to not breastfeeding (14).

With implementation research in mind, this study seeks to compare the perceptions held toward breastfeeding organizational support between working women in the public and private sector.

**Purpose of the Study**

The purpose of this study was to evaluate and compare the perceptions held towards the provision of breastfeeding support at work by working women in the public and private sector in Trinidad.

**Objectives**

The objectives of this study were as follows:

1. To evaluate the perceptions held on breastfeeding support at work by working women.
2. To compare the perceptions held on breastfeeding support at the workplace between working women in the public and private sector.
3. To compare readiness to utilize breastfeeding support between working women in the public and private sector.
4. To determine the factors that will promote the continuation of breastfeeding amongst working women.
5. To compare the perceived advantages of breastfeeding support at the workplace between working women in the public and private sector.
6. To compare the perceived disadvantages of breastfeeding support the workplace between working women in the public and private sector.

7. To determine the relationship between breastfeeding knowledge and perceptions on combining breastfeeding and work.

8. To compare breastfeeding knowledge between working women in the public and private sector.

9. To determine the relationship between education level and breastfeeding knowledge.

10. To determine the relationship between education level and awareness of breastfeeding support.

**Research hypotheses**

It was hypothesized that:

1. Working women of child bearing age will hold more positive perceptions on breastfeeding support at work than negative ones.

2. Working women in the public sector will hold more positive perceptions towards breastfeeding support in the workplace compared to women in the private sector.

3. Women in the public sector will be more willing to utilize breastfeeding support at work compared to women in the private sector.

4. The main factor contributing to the continuation of breastfeeding amongst working women is availability of suitable equipment and facilities for storing and expressing milk.
5. Women in the public sector will perceive more advantages of breastfeeding support at work than working women in the private sector.

6. Women in the private sector will perceive more disadvantages of breastfeeding support at work than working women in the private sector.

7. The relationship between previous breastfeeding knowledge and perceptions on combining breastfeeding and work is positive amongst both groups.

8. Women in the public sector will be more knowledgeable on breastfeeding as compared to working women in the private sector.

9. The relationship between education level and knowledge on breastfeeding is positive amongst both groups.

10. The relationship between education level and awareness of breastfeeding support at work is positive amongst both groups.

**Significance of the Study**

This study was warranted because sustainable national development rests upon the achievement of proper standards regarding children’s education, health, and nutrition (13). Many training programs and initiatives to promote breastfeeding have been drafted in Trinidad and Tobago (1). Whilst some have been implemented, there is no evidence to suggest that there has been a positive impact on said target group. Initiatives often result in lack of utilization by the target group, which may be due to failed promotional efforts or insufficient ground work to establish the need for such services. Generally, citizens of Trinidad and Tobago hold negative aversions to public services offered whilst some are optimistic about them (15). Moreover, whilst it is deemed imperative that developing countries implement services and policies that would ensure...
exclusive breastfeeding for at least 6 months of an infant’s life (16), there is need to evaluate the perceptions; attitudes and opinions of the target group before implementing such services because of the high initial costs. Unfortunately, studies evaluating the perceptions of women of childbearing age on breastfeeding support at work have been sparse. Previous studies have focused on the benefits of breastfeeding support in the workplace, as well as the knowledge, attitudes and practices of breastfeeding support amongst women (9), (14), (17). Despite the importance, there have been relatively few epidemiologic studies in this area and this study will add to existing information. Few studies have focused on how breastfeeding organizational support is perceived amongst career women and none have compared these perceptions between career women in the public and private sector.
CHAPTER II
LITERATURE REVIEW

Introduction

The promotion of breast-feeding is a global public health concern because of its many benefits to infant and mother (16). Conversely, the continuation of breastfeeding is becoming increasingly difficult for mothers working outside the home (16). According to the Trinidad and Tobago Central Statistical Office (CSO), women of childbearing age accounts for a large percentage of the workforce (41.8%) and it is evident that women make a significant contribution to the economy (9), (18), (19). Returning to work is often cited as a major reason for the discontinuation of breastfeeding (16). Labor force participation by women of childbearing age has increased rapidly posing new challenges for balancing and combing roles as employees and mothers. In Trinidad and Tobago, working women increased by 2.5% during the first 3 months of 2012 (19). According to the Trinidad and Tobago Maternity Act, an employee is entitled 13 weeks of maternity leave and is subjected to return no later than 13 weeks from the date proceeded to leave (20). This often results in working mothers resorting to formal and informal care for infants as well as the early introduction of complementary feeding coupled with the discontinuation of breastfeeding (9). There is a need for an intervention to extend breastfeeding so that infants, mothers and society can reap the benefits of breastfeeding (1). Assessing the perception of female employees of child bearing age on breastfeeding support at work is imperative, so that services can be implemented at organizations to aid in extending breastfeeding.
Exclusive breastfeeding for the first 4 to 6 months of life is the best method of feeding infants (21). Breastfeeding is a natural physiological process. It involves the practice of feeding infant breast milk directly from female human breasts. Breastfeeding has increased over the years as the result of health promotion activities (21). Breastfeeding is an important public health strategy for improving infant and child morbidity and mortality, and improving maternal morbidity, and helping to control health care costs (14). The WHO/PAHO, UNICEF and the American Dietetic Association all unanimously agree that exclusive breastfeeding is best during the early stages of an infant’s life (4), (6), (22).

Perception may be defined as being able to process or be made aware of a particular subject. It involves the realization, understanding and comprehension of a concept (23). It takes into account knowledge, attitude, opinion and judgment toward a particular topic (23). Perception can be derived from knowledge, beliefs, and past experiences (23). It is influenced by education, culture, and expectations (23). An individual’s own self-perception influences the way they perceive things as well as their emotions (23). Although studies conducted on the knowledge, attitude, opinion and judgment of breastfeeding on the work place have been few there exists studies that show a relationship between breastfeeding practices and breastfeeding knowledge (16). In Trinidad, the vast majority of children under 2 years (88.4%) are breastfed (7). At least 45.8% were estimated to be breastfeeding at the time of the MICS while at least 21.2% were estimated to be adequately breastfed (13), (7). A local exploratory study based upon a sample of 424 infants less than 2 years old was conducted in 2011 by Godfrey. He discovered in his study that for children who had never been breastfed, estimated proportions that were greatest in the Central and South-West Regions of Trinidad when compared to the other Regions. In contrast, the most favorable outcome was observed in Tobago. Estimates indicated that children born to
mothers with at most a primary-level education were the most likely to have never been breastfed, this being evident among 16.7% (13). Similarly in another study it established a connection between breastfeeding rates and education. It was realized that women with a college degree (86%) compared with those who have not completed high school (68%) had significantly higher breastfeeding rates (24).

Breastfeeding organizational support is the provision of resources at the workplace, which enable working mothers to continue breastfeeding after returning to work. It may or not include lactation breaks, private rooms for expressing milk and proper storage after expressing. Many women though employed are choosing to continue to breastfeed and many companies have become more sensitive to the needs of breastfeeding mothers (10). Generally, most female employee’s attitude towards breastfeeding at work is positive (9). Breastfeeding support at work is generally received with much success and has been shown to lengthen the duration of breastfeeding for working mothers (25).

**Perception toward breastfeeding**

Our perception is influenced by a variety of factors, such as culture, self-perception and knowledge. According to Chezem, breastfeeding knowledge is related to education, socio-economic status and influences the intent to breastfeed (24). Until recently, Skafida presented evidence that mothers with no qualifications were far more likely to give up breastfeeding sooner (HR 2.2) (26). Yeung et al. indicated that mothers who choose to breast-feed are knowledgeable of its advantages and want to nurse their infants (16).

Godfrey discovered in his studies that greater levels of awareness and knowledge that are promote adequate breastfeeding patterns were found in the highest socio-economic status group
in Trinidad and Tobago (13). Unfortunately, based upon the results of his study, significant knowledge of recommended breastfeeding standards in Trinidad and Tobago were not apparent (13). He also discussed the problem that lack of knowledge has an unfavorable bearing on breastfeeding practices among children less than 6 months. He concluded that the vast majority of infants have ceased being breastfed by their first birthday in Trinidad and Tobago (13).

Conversely, knowledge and awareness of breastfeeding can be related to the perceptions held toward breastfeeding practices; which may or may not include breastfeeding at work.

Chezem reached a similar conclusion that breastfeeding practices were related to breastfeeding knowledge and education. In her study, seventy-one subjects completed all study requirements: 56 planned to exclusively breastfeed, and 15 planned to mix feed. The majority of subjects were white, educated beyond high school, and married. Expectant parents planning to exclusively breastfeed were significantly more likely to report higher paternal age (p = 0.019), higher maternal age (p = 0.006), and higher maternal education (p = 0.023) than those planning to mix feed. Among fathers, those planning exclusive breastfeeding expressed more favorable attitudes related to naturalness (p = 0.009) and closeness (p = 0.036) than their mixed-feeding peers. Compared with mothers planning mixed feeding, those planning exclusive breastfeeding indicated more favorable attitudes related to naturalness (p = 0.006) and respect for breastfeeding women (p = 0.005). Overall, mothers reported more favorable attitudes toward breastfeeding than fathers in several areas, including disease protection (p = 0.004), respect for breastfeeding women (p = 0.043), and naturalness (p = 0.011).

It is encouraging to know that most women report the desire to continue breastfeeding after returning to work if they have access to facilities, work flexible hours and take rest breaks during working hours (27). Whilst breastfeeding support at work may be a good initiative it is important
to evaluate the attitudes toward such a service at work by both the target group and other employees. A study from the US showed that among working mothers enrolled in an employer-sponsored lactation program, breastfeeding was initiated by 97.5% of the women, suggesting that female employees generally have positive perceptions about combining breastfeeding and work (28).

Moreover, other employee’s perceptions on breastfeeding support at work are also important. In a study conducted by Suyes et al., overall attitudes about the impact of breastfeeding on the work environment were found to be favorable. Previous exposure to a co-worker who breastfed or expressed milk during the work day was associated with a positive attitude towards workplace breastfeeding, even after controlling for respondents' gender, length of employment and personal breastfeeding history (29). Mean IBA scores were higher among female respondents (mean score = 35.3, 95% CI: 34.7, 35.0) than among male respondents (mean score = 34.3; 95% CI: 33.4, 35.2); this difference did not achieve statistical significance (p = 0.08). Mean scores were somewhat higher among those respondents who reported that they or a spouse/partner had breastfed an infant while either was employed at the company (mean score = 36.4; 95% CI: 35.7, 37.0) compared to those who did not (mean score = 34.2; 95% CI: 33.5, 34.9), (p < 0.01). Scores were also higher among female respondents who reported having breastfed an infant (mean score = 36.6, 95% CI: 35.9, 37.2) than among female respondents with no personal breastfeeding history (mean score = 32.8; 95% CI: 31.6, 34.0) (p < 0.01). Mean IBA scores did not vary significantly by respondents' age category (p = 0.25). These findings suggest that lactation accommodations did not have negative repercussions for other employees, and that a corporate environment designed to enable and encourage continued breastfeeding does not endanger positive attitudes towards breastfeeding in other employees (29).
Breastfeeding Support at Work

The WHO recommendation of 4 to 6 months of exclusive breastfeeding (4) can be achieved if women are provided with a supportive environment at home and work that protects and promotes breastfeeding (9). For women in the workforce, merging breastfeeding and paid work is difficult. Undoubtedly, workplaces are excellent settings for interventions to encourage and assist the initiation and continuation of exclusive breastfeeding. However, women face various barriers in the workplace, and the type of support and information needed to encourage them to continue breastfeeding has yet to be fully identified and addressed by all parties.

Breastfeeding support may or may not include maternity leave provisions; flexible employment practices; lactation breaks; and physical facilities such as private rooms and access to refrigeration (9). Breastfeeding support should not be mistaken for breastfeeding support at work. Breastfeeding support offers assistance to expectant mothers as well as after giving birth. However, breastfeeding support focuses on community based breastfeeding promotion and support. It involves counseling, breastfeeding classes, pump rental services, support groups and hotlines at the community level (10) whilst breastfeeding support at work is a service provided by the organization at which female employees are employed.

Yimyam et al. in a qualitative analysis, quoted mothers with irregular working hours as expressing frustration about maintaining breast-feeding (16). Workplace intervention may also have a positive impact on breastfeeding initiation. In one study conducted at two separate sites, 75% of participants in a program which involved access to a worksite breast pump room, along with counseling from a lactation professional, continued to breastfeed their children to six months of age (30). Another study demonstrated that 58% of women provided with access to a
worksite breast pump room, services of a certified lactation consultant and a class on the benefits of breastfeeding continued to breastfeed their children to six months of age (28).

It has been suggested that offering paid maternity leave may encourage more women to extend the duration of breastfeeding. Studies suggest that paid leave may result in more positive health outcomes for both mother and infant (14).

Benefits of breastfeeding on work include reduced medical costs, lower maternal absenteeism due to infant illness, increased employee loyalty, improved productivity, lower insurance premiums and enhanced public image (9), (14).

Reason for the discontinuation of breastfeeding

Discontinuation of breastfeeding is multifactorial. Returning to work is one of the main reasons for discontinuing breastfeeding (9). Recent surveys conducted report that one-fourth of working women with infants will be breastfed for at least 1 month (31). Factors such as hospital practices, knowledge, beliefs, and attitudes of mothers and their families, and access to breastfeeding support can influence initiation, duration, and exclusivity of breastfeeding (14). Even with sufficient family and community support, many women discontinue or reduce breastfeeding when they return to employment outside the home. Evidence suggests that return to employment does not necessarily reduce initiation of breastfeeding except for those mothers returning to work within the first 6 weeks after delivery. However, there is evidence to suggest that breastfeeding duration is significantly reduced when the mother returns to work in less than 12 weeks (14).

In a study conducted by mothers working part-time were most likely to breastfeed for 6 weeks or more (66.7%), while non-working mothers were the least likely to both initiate breastfeeding (51.2%) and to breastfeed for 6 weeks or longer (35.2%). Non-working mothers would be
expected to have the highest take-up and longest duration of breastfeeding, based on a hypothesis which assumes employment and prolonged breastfeeding pose conflicting demands on maternal time. The survival analysis revealed that it was not the lack of employment which was associated with a lower predisposition towards breastfeeding, but other common characteristics of non-working mothers, such as being younger and having less educational qualifications, which was in turn accounting for the negative relationship between unemployment and shorter breastfeeding spells (26).

The same study shown that controlling for other confounders such as age, education and social class, mothers not in work were at a lower risk of earlier breastfeeding cessation (Hazard Ratio 0.6) when compared to mothers working as full-time employees. In fact, part-time self-employed mothers and part-time employees were also less likely to stop breastfeeding sooner (HR 0.6 and 0.8) compared to full-time employees (26). Compared to mothers who were still on leave when the child was aged 10 months, mothers who took over 1 month and up to 2 months of leave had a higher risk of earlier breastfeeding cessation (HR 1.6) (26). The results suggest that employment is negatively associated with a mother’s ability to breastfeed for prolonged periods of time among mothers in Scotland, confirming existing research in this field. Those who do not work are more likely to breastfeed for longer.

**Benefits of breastfeeding: Infant, mother and organization**

It is well established that breastfeeding via support at work, provides a wide range benefits to both mother and child. However, the benefits also extend to the organization. Breastfeeding is associated with a reduced risk of otitis media, gastroenteritis, respiratory illness, sudden infant death syndrome, necrotizing enter colitis, obesity, and hypertension (14). Breastfeeding provides
the appropriate composition and balance of nutrients with high bioavailability. It provides hormones that promote physiological development of the infant. Exclusive breastfeeding also helps to improve the cognitive development of an infant. (12). In one study it was affirmed that breastfeeding may provide protection against developing some chronic disease such as asthma, type 2 diabetes, obesity and other chronic non-communicable diseases (32). In another study it was found that breastfeeding protects against infection and food allergies (33). Breastfeeding is also associated with a reduction in post neonatal deaths from all causes other than congenital anomalies and malignancies (34) and exclusive breast feeding is associated with lower rates of hospitalization from infections in the first year of life (21). Evidence suggests that breastfeeding may reduce the risk for a large number of acute and chronic diseases (14). Three meta-analyses of good and moderate methodological quality report an association of breastfeeding and a reduction in the risk of obesity in adolescence and adult life compared with those not breastfed. Updated meta-analyses concluded that the evidence suggests that breastfeeding may have a small protective effect on the prevalence of obesity. Breastfeeding may also have a protective effect on blood pressure. Two moderate quality meta-analyses concluded there was a small reduction in systolic and diastolic pressure in adults who were breastfed compared to those formula fed. Updated meta-analyses showed a small but significant protective effect of breastfeeding on systolic and diastolic blood pressure (4), (14).

An unexpected benefit of exclusive breastfeeding is improved sleeping at night for mothers. Mothers who supplement with formula at night even when the father takes over the nighttime feedings to allow the mother to get more sleep have been found to sleep 40 to 45 minutes less and to have more sleep disturbances than mothers who exclusively breastfeed their infants, including overnight feedings. According to the National Sleep Foundation, there is a relationship
between sleep and work productivity. A recent study found that 51% of the American workforce report that sleepiness on the job interferes with the amount of work they get done whilst 68% said that sleepiness interferes with their concentration and makes handling stress on the job more difficult. Nineteen percent of respondents reported that occasional and frequent work errors due to sleepiness.

Breastfeeding also lowers the blood pressure of breastfeeding mothers before, during, and after breastfeeding sessions. This effect on blood pressure is said to be caused by the release of the hormone oxytocin during breastfeeding. The practice of breastfeeding is also associated with a reduced risk of breast and ovarian cancer, type 2 diabetes, and postpartum depression. The reductions in these illnesses may help to decrease health care related expenses and productive time lost from work in the long run (14). Consistently studies have shown that breastfeeding is associated with a decrease in depressive symptoms in the postpartum period and some studies have reported lower mean depression scores in breastfeeding mothers compared to those who bottle-feed. A shorter duration or no breastfeeding is associated with increased rates of postpartum depression although it is difficult to determine whether depression leads to a reduced duration of breastfeeding as opposed to breastfeeding reducing the risk for the development of depression (14). It should be noted that the degree to which some of these health benefits may be realized however, depends on breastfeeding duration, breastfeeding frequency, breastfeeding exclusivity, and other personal factors.

The benefits of breastfeeding also extend to the organization. It has been reported that, mothers can return to work from maternity leave earlier than usual. One study has shown that women are more likely to return to work when breastfeeding support is offered at work which in turn reduces employee turnover. Employee absenteeism is reduced because time off from work would
not be needed to take care of a sick infant. Offering such services at an organization also builds employee loyalty to the firm and fosters a supportive environment amongst work colleagues. In a study conducted by Dodgson Chee and Yags, it was found that improved morale levels of concentration results in increase in productivity from employees (35). There is also the potential for lower insurance premiums and a positive enhanced public and corporate image (14). The benefits of offering breastfeeding support at an organization far outweigh the high initial cost of implementing such a program (14).

To conclude, it is without doubt that human milk has many benefits to the infant and the practice of breastfeeding to the mother and organization. Returning to work is associated with the early discontinuation of breastfeeding and introduction of complementary foods. Breastfeeding support at work has been proven to lengthen the duration of breastfeeding. However, the implementation of such a service at the workplace should be evaluated first. Perception of breastfeeding by mothers is highly dependent on knowledge of breastfeeding. Perception may also affect the way working mothers perceive combining breastfeeding and work.
CHAPTER III

METHODOLOGY

Research design

A descriptive, cross-sectional survey of women employed in the public and private job sectors in Trinidad was conducted. All subjects were employed at the time of data collection. Descriptive studies are used to describe the relationships between variables or the frequency of variable occurrence (17). In addition, surveys are able to generate information that describes, makes comparisons and predictions about attitudes, opinions, values, and behavior concerning what individuals may say or see and what is contained in records about them and their activities (36). Since the aim of this study was to evaluate the perception of breastfeeding support at work, utilizing a survey design was appropriate.

The formula \( n = \frac{1.96^2 \hat{p} \hat{q}}{d^2} \) was used to determine the sample size. The sample size was calculated to estimate a 95% confidence interval. The formula was based on the estimated prevalence percentage. The representative sample required to give significance to the study was 369 female employees. Since an unbiased and representative population was desired, simple random sampling was used.

Subjects

Eligible criteria for participation in the study included female workers employed in the public or private sector. Participants in the study were 400 female employees. Subjects were selected from South, Central, West and East Trinidad. All participants were selected randomly, giving each individual the probability of being selected. Consent forms were provided and signed by all participants. The survey had a response rate of 84.5%.
Instrument

Questionnaires are one of the main methods for collecting data in survey designs (17). A questionnaire was used to collect data for this study. The questionnaire was obtained from The Breastfeeding and Work Study conducted at the Sydney South West Area Health Service (SSWAHS). The original questionnaire consisted of 59 questions and the modified questionnaire comprised of 16 questions. The questionnaire was pretested before conducting the study.

The questionnaire was divided into three sections; demographics, knowledge, attitudes and opinions. The first section was designed to indicate the type of individuals who participated in the survey. All subjects were asked their age, ethnicity, and their education level. This section also seeked to determine what job sector each subject belonged to. Section two of the questionnaire asked three basic, fundamental knowledge questions about breastfeeding. Participants were allowed to tick either “True” or “False” to indicate their response. The dichotomous choice was selected for this section of the questionnaire in order to facilitate the participants’ decision making. The purpose of creating this section was to evaluate whether or not knowledge of breastfeeding influenced the participants perception of breastfeeding support at work. Further, the correct answer was given a score of “1” and the wrong answer was given a score of “0”. The final section of the questionnaire consisted of one awareness question and questions used to assess the attitude and opinion of the participants towards breastfeeding support at work. This section also evaluated the subjects’ perceived advantages and disadvantages of breastfeeding support at work. It also attempted to ascertain the readiness to utilize breastfeeding support at work by female employees in Trinidad and to highlight what factors would help them continue to breastfeed after returning to work. The final question consisted of 5 responses. The participants were asked to choose one option only. The following
were the possible responses; “I find combining breastfeeding and work a very positive initiative”, “I find combining breastfeeding and work a positive initiative”, “I find combining breastfeeding and work neither a positive nor a negative initiative”, “I find combining breastfeeding and work a negative initiative”, “I find combining breastfeeding and work a very negative initiative.” This question was asked to evaluate the perceptions held toward breastfeeding support at by working women.

**Procedures**

Various organizations were contacted randomly to participate in the survey. Information was given about the nature of the study through a letter that was attached to the questionnaire. A brief description of “breastfeeding support at work” was given whenever time permitted. After receiving permission from the organizations, the questionnaires were packaged in envelopes and dropped off at the respective locations giving specific instructions that only female employees were eligible to participate. Organizations were left with contact information to notify when the questionnaires were ready to be collected. All organizations were given a maximum of two weeks to complete the questionnaires. The questionnaires were collected at the respective locations after the duration of two weeks.

**Statistical analysis**

Statistical analyses were carried out using IBM Statistical Package for Social Sciences (SPSS) v. 21.0 software (SPSS, Inc., Chicago, IL, USA). Descriptive statistics were used to calculate the frequencies, percentages and means. All tests utilized a statistical significance of \( p < 0.05 \). Comparison of the perceptions held by the public and private sector was done using the
Independent t-test. Hypotheses 7, 9 and 10 were tested using Pearson’s correlation. This statistical test was used to determine the relationship between two variables.
CHAPTER IV
RESULTS

Demographics

Table 1 presents the demographic characteristics of the survey participants. Most of the participants made up the 26-32 age group, accounting 30.3% (n=92), whilst 25.3% (n=77), 17.4% (n=53) and 15.5% (n=47) represented the 18-25, 33-39, and 40-47 age groups respectively.

In addition, most of the respondents were of Afro-Trinidadian descent representing 48.1% (n=162) followed by those of mixed ethnicity (individuals that are the offspring of parents of different ethnicities) which accounted for 30.3% (n=102) of participants.

In relation to education level, most of the respondents possessed undergraduate degrees, 34.3% (n=116). Secondary school certificate holders represented 18.9% (n=64) of the sample whilst those holding technical, trade certificates or diplomas accounted for 16.3% (n=55). Postgraduate level of education and those pursuing education accounted for 15.1% (n=51) and 12.4% (n=42) respectively.

The majority of participants were from the public sector (63.2%, n=206) and the least from the private sector (36.5%, n=119).
Table 1: Demographic Characteristics of Survey Participants

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Category</th>
<th>Frequency (n=338)</th>
<th>Percentage (%)</th>
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<tbody>
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<td>Age range</td>
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<td>77</td>
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<td></td>
<td>26-32</td>
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</tr>
<tr>
<td></td>
<td>33-39</td>
<td>53</td>
<td>17.4</td>
</tr>
<tr>
<td></td>
<td>40-47</td>
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<td>15.5</td>
</tr>
<tr>
<td></td>
<td>48-54</td>
<td>27</td>
<td>8.9</td>
</tr>
<tr>
<td></td>
<td>55-61</td>
<td>8</td>
<td>2.6</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>Afro-Trinidadian</td>
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</tr>
<tr>
<td></td>
<td>Euro-Trinidadian</td>
<td>4</td>
<td>1.2</td>
</tr>
<tr>
<td></td>
<td>Indo-Trinidadian</td>
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<td>19.6</td>
</tr>
<tr>
<td></td>
<td>Mixed</td>
<td>102</td>
<td>30.3</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>2</td>
<td>0.6</td>
</tr>
<tr>
<td>Education</td>
<td>Primary school certificate</td>
<td>10</td>
<td>3.0</td>
</tr>
<tr>
<td></td>
<td>Secondary school certificate</td>
<td>64</td>
<td>18.9</td>
</tr>
<tr>
<td></td>
<td>Technical or trade certificate/diploma</td>
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<td>16.3</td>
</tr>
<tr>
<td></td>
<td>Undergraduate or other tertiary degree</td>
<td>116</td>
<td>34.3</td>
</tr>
<tr>
<td></td>
<td>degree</td>
<td>51</td>
<td>15.1</td>
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<tr>
<td></td>
<td>Postgraduate or other tertiary degree</td>
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<td>12.4</td>
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<td>Pursuing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Job sector</td>
<td>Public Sector</td>
<td>206</td>
<td>63.2</td>
</tr>
<tr>
<td></td>
<td>Private Sector</td>
<td>119</td>
<td>36.5</td>
</tr>
</tbody>
</table>
**Knowledge**

The questionnaire consisted of three basic breastfeeding knowledge questions. The first question stated “Breastfeeding is an unequalled way of providing ideal food for the healthy growth and development of infants”. The majority of women responded “True” which accounted for 69.8% (n=236) of survey participants. Twenty-six percent (n=88) of women responded “False” and 4.1% (n=14) of women did not respond to the question.

The second question stated “Exclusive breastfeeding for 6 months is the optimal way of feeding infants”. Most of the respondents answered “True”; 78.4% (n=265) and 18.9 % answered “False”. Almost 3% of respondents did not provide an answer.

The third question stated, “Breastfeeding contributes to the health and well-being of mothers”. The majority of the respondents answered ‘True” accounting for 82.4% of survey participants. Fifteen percent of women indicated that the statement was ‘False” and 1.8% of women did not respond.

Each question was given a score and a total score for each participant was tabulated. The highest and lowest scores were 3 and 0 respectively. The mean breastfeeding knowledge score was 2.31 ± 0.830. The highest score was 3, which accounted for 50% of survey participants and the lowest score was 0 (4.4%).

With respect to the comparison of breastfeeding knowledge between working women in the public and private sectors, the Independent T-test was used. There was a difference in knowledge between the two groups. The public sector was found to have more knowledge on breastfeeding when compared to the private sector. The mean and standard deviations for the public and
private sector were $2.42 \pm 0.759$ and $2.14 \pm 0.914$ respectively. (P value= 0.004). These results are presented in Tables 2-4.
Table 2: Breastfeeding Knowledge of Survey Participants

<table>
<thead>
<tr>
<th>Statement</th>
<th>Category</th>
<th>Frequency (n=338)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breastfeeding is an unequalled way of providing ideal food for the healthy growth and development of infants.</td>
<td>True</td>
<td>236</td>
<td>69.8</td>
</tr>
<tr>
<td></td>
<td>False</td>
<td>88</td>
<td>26.0</td>
</tr>
<tr>
<td></td>
<td>No response</td>
<td>14</td>
<td>4.1</td>
</tr>
<tr>
<td>Exclusive breastfeeding for 6 months is the optimal way of feeding infants.</td>
<td>True</td>
<td>265</td>
<td>78.4</td>
</tr>
<tr>
<td></td>
<td>False</td>
<td>64</td>
<td>18.9</td>
</tr>
<tr>
<td></td>
<td>No response</td>
<td>9</td>
<td>2.7</td>
</tr>
<tr>
<td>Breastfeeding contributes to the health and well-being of mothers.</td>
<td>True</td>
<td>280</td>
<td>82.8</td>
</tr>
<tr>
<td></td>
<td>False</td>
<td>52</td>
<td>15.4</td>
</tr>
<tr>
<td></td>
<td>No response</td>
<td>6</td>
<td>1.8</td>
</tr>
</tbody>
</table>
Table 3: Breastfeeding Knowledge Score of Participants

<table>
<thead>
<tr>
<th>Score</th>
<th>Responses</th>
<th>Category</th>
<th>Frequency</th>
<th>Percentage %</th>
</tr>
</thead>
<tbody>
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<td>0</td>
<td>15</td>
<td>Public</td>
<td>6</td>
<td>40.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Private</td>
<td>8</td>
<td>53.8</td>
</tr>
<tr>
<td>1</td>
<td>35</td>
<td>Public</td>
<td>16</td>
<td>45.7</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Private</td>
<td>18</td>
<td>51.4</td>
</tr>
<tr>
<td>2</td>
<td>118</td>
<td>Public</td>
<td>70</td>
<td>59.3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Private</td>
<td>42</td>
<td>35.6</td>
</tr>
<tr>
<td>3</td>
<td>170</td>
<td>Public</td>
<td>114</td>
<td>67.1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Private</td>
<td>51</td>
<td>30.0</td>
</tr>
</tbody>
</table>

Table 4: Means and Standard Deviations for Breastfeeding Knowledge: Public and Private Sector

<table>
<thead>
<tr>
<th>Variable</th>
<th>Frequency</th>
<th>Percentage %</th>
<th>Means ± standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public</td>
<td>206</td>
<td>60.9</td>
<td>2.42 ± 0.759</td>
</tr>
<tr>
<td>Private</td>
<td>119</td>
<td>35.2</td>
<td>2.14 ± 0.914</td>
</tr>
</tbody>
</table>

P value= 0.004
Attitude and Opinion

Results regarding awareness of breastfeeding support are illustrated in Figure 1. The questionnaire consisted of 1 awareness question. It was based on awareness of breastfeeding support at work in the Western World. Fifty percent of participants were aware of breastfeeding organizational support and 49.1% was not aware.

When asked “Who do you believe would benefit from breastfeeding support at work in Trinidad?”, the majority of women responded that working mothers were most likely to benefit. Almost 86% of women indicated that mothers would benefit and 14.2% indicated mothers would not benefit. In the case of infants, 74.6% of women believed that the infant was most likely to benefit and 25.4% indicated they would not. Five percent of women indicated that neither infant, mother, organization would benefit from breastfeeding support at work. Results are illustrated in Figure 2.

When asked what changes should be made before implementing such a program at the workplace 50.3% of women indicated that males should not be sensitized and educated. Forty-six percent of women indicated that working hours should become more flexible. Seventy-three percent of participants indicated that they did not believe paid lactation breaks should be given to facilitate such a service and 46.4% of women indicated the facilities for expressing and storing milk was needed. These results are presented in Table 5.

When asked “Who should be given the privilege from such a program at the workplace?”, 94.1% of women said that every female should be able to utilize such a program, 1.2% responded only supervisors and women in managerial positions and 3.3% of women said no one should be able to use breastfeeding support at work. These results are presented in Table 5.
Figure 1: Pie Chart Illustrating the Level of Awareness of Survey Participants
### Table 5: Perceived Beneficiaries of Breastfeeding Support and Perceived Changes Needed

<table>
<thead>
<tr>
<th>Statement</th>
<th>Response</th>
<th>Frequency (n=338)</th>
<th>Percentage %</th>
<th>Means ± Standard deviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organization/Employer</td>
<td>Yes</td>
<td>149</td>
<td>44.1</td>
<td>0.44 ± 0.497</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>189</td>
<td>55.9</td>
<td></td>
</tr>
<tr>
<td>Working mothers</td>
<td>Yes</td>
<td>290</td>
<td>85.8</td>
<td>0.86 ± 0.350</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>48</td>
<td>14.2</td>
<td></td>
</tr>
<tr>
<td>Infant</td>
<td>Yes</td>
<td>252</td>
<td>74.6</td>
<td>0.75 ± 0.436</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>86</td>
<td>25.4</td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>Yes</td>
<td>18</td>
<td>5.3</td>
<td>0.08 ± 0.586</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>319</td>
<td>94.4</td>
<td></td>
</tr>
<tr>
<td>Educate and sensitize males</td>
<td>Yes</td>
<td>170</td>
<td>50.3</td>
<td>0.50 ± 0.501</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>167</td>
<td>49.4</td>
<td></td>
</tr>
<tr>
<td>Flexible working hours</td>
<td>Yes</td>
<td>156</td>
<td>46.2</td>
<td>0.46 ± 0.499</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>182</td>
<td>53.8</td>
<td></td>
</tr>
<tr>
<td>Paid lactation breaks</td>
<td>Yes</td>
<td>90</td>
<td>26.6</td>
<td>0.27 ± 0.443</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>248</td>
<td>73.4</td>
<td></td>
</tr>
<tr>
<td>Facilities to express and store</td>
<td>Yes</td>
<td>181</td>
<td>53.6</td>
<td>0.54 ± 0.499</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>157</td>
<td>46.4</td>
<td></td>
</tr>
</tbody>
</table>
Who Should Be Given the Privilege of Utilizing Breastfeeding Support?

- Every female employee: 95%
- Only supervisors/managers: 1%
- No one: 1%
- No response: 3%

Figure 2: Pie chart showing the Perception of Survey Participants on Who Should be Given the Privilege to Utilize the Service.
Comparison of perceived advantages and disadvantages between public and private sector

This question asked the participants what they thought the advantages of breastfeeding support at work were. The Independent T-test was used to compare the indicated responses of the 6 options that were provided in the questionnaire, between the public and private sector. The options stated in the questionnaire were, “Employee is able to continuing breastfeeding for 6 months +”, “Reduced employee turnover”, “Improved staff loyalty”, “Improved productivity at work”, “Enhanced public image for organization”, and “Decreased absenteeism at work”. No significant difference was found with regard to perceived advantages between the two groups.

In addition, the perceived disadvantages held toward breastfeeding support at work were also compared between the public and private sector using the Independent T-test. The options stated by the questionnaire were, “High initial cost for organization”, “Less productivity from employees”, “Inconvenient and uncomfortable for co-workers”, “Time consuming”, “Discrimination and harassment from co-workers” and “Possible contamination of expressed breast milk”. No significant difference was found between the two groups. Only the frequencies and percentages of “Yes” indications were used in these results. Table 6 and 7 presents these results.
Table 6: The Perceived Advantages of Breastfeeding Support at Work: Comparing the Public and Private Sector

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Category</th>
<th>Frequency</th>
<th>Percentage %</th>
<th>Means ± standard deviation</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Public</td>
<td>173</td>
<td>63.6</td>
<td>0.84 ± 0.368</td>
<td>0.750</td>
</tr>
<tr>
<td></td>
<td>Private</td>
<td>98</td>
<td>36.0</td>
<td>0.82 ± 0.383</td>
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</tr>
<tr>
<td>2</td>
<td>Public</td>
<td>59</td>
<td>58.4</td>
<td>0.29 ± 0.453</td>
<td>0.275</td>
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<tr>
<td></td>
<td>Private</td>
<td>41</td>
<td>40.6</td>
<td>0.34 ± 0.477</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Public</td>
<td>122</td>
<td>65.6</td>
<td>0.59 ± 0.493</td>
<td>0.821</td>
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<tr>
<td></td>
<td>Private</td>
<td>72</td>
<td>36.9</td>
<td>0.61 ± 0.491</td>
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</tr>
<tr>
<td>4</td>
<td>Public</td>
<td>90</td>
<td>68.7</td>
<td>0.44 ± 0.497</td>
<td>0.103</td>
</tr>
<tr>
<td></td>
<td>Private</td>
<td>41</td>
<td>31.3</td>
<td>0.34 ± 0.477</td>
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</tr>
<tr>
<td>5</td>
<td>Public</td>
<td>99</td>
<td>63.9</td>
<td>0.48 ± 0.501</td>
<td>0.750</td>
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<td></td>
<td>Private</td>
<td>55</td>
<td>35.5</td>
<td>0.46 ± 0.501</td>
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</tr>
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<td>6</td>
<td>Public</td>
<td>144</td>
<td>66.4</td>
<td>0.70 ± 0.460</td>
<td>0.277</td>
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<tr>
<td></td>
<td>Private</td>
<td>72</td>
<td>33.2</td>
<td>0.64 ± 0.516</td>
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</table>
Table 7: Perceived Disadvantages of Breastfeeding Support at Work: Comparison of the Public and Private Sector

<table>
<thead>
<tr>
<th>Disadvantages</th>
<th>Category</th>
<th>Frequency</th>
<th>Percentage (%)</th>
<th>Means ± standard deviation</th>
<th>P-value</th>
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</thead>
<tbody>
<tr>
<td>1</td>
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<td>Private</td>
<td>48</td>
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<td>2</td>
<td>Public</td>
<td>57</td>
<td>64.8</td>
<td>0.28 ± 0.448</td>
<td>0.753</td>
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<tr>
<td></td>
<td>Private</td>
<td>31</td>
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<td>0.26 ± 0.441</td>
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</tr>
<tr>
<td>3</td>
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<td>90</td>
<td>61.2</td>
<td>0.44 ± 0.497</td>
<td>0.558</td>
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<td>56</td>
<td>38.1</td>
<td>0.47 ± 0.501</td>
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<tr>
<td>4</td>
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<td>0.283</td>
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<td>39.6</td>
<td>0.48 ± 0.502</td>
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<tr>
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<td>68.1</td>
<td>0.45 ± 0.498</td>
<td>0.134</td>
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<td>0.784</td>
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<tr>
<td></td>
<td>Private</td>
<td>55</td>
<td>37.2</td>
<td>0.46 ± 0.501</td>
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</tr>
</tbody>
</table>
Readiness to utilize breastfeeding support at work

Seventy-three percent of the total survey respondents were willing to utilize breastfeeding support at work if given the opportunity, 19.4% responded “Maybe” and 7.4% responded “No”. Results can be seen in Figure 3.

Additionally, the comparison of readiness to utilize breastfeeding support at work between the public and private sector was done using the Independent T-test. No significant difference was found between the two groups ($P = 0.294$). The means and standard deviation for public and private sectors were $1.08 \pm 0.482$ and $1.14 \pm 0.525$ respectively. Results are summarized in Table 8.
Figure 3: Bar chart showing Survey Participant’s Readiness to Utilize Breastfeeding Support at Work.
<table>
<thead>
<tr>
<th>Statement</th>
<th>Category</th>
<th>Frequency (n=338)</th>
<th>Percentage (%)</th>
<th>Means ± standard deviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>Public</td>
<td>157</td>
<td>65.1</td>
<td>1.08 ± 0.482</td>
</tr>
<tr>
<td></td>
<td>Private</td>
<td>84</td>
<td>34.9</td>
<td>1.14 ± 0.525</td>
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<td>No</td>
<td>Public</td>
<td>16</td>
<td>64.0</td>
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<tr>
<td></td>
<td>Private</td>
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<td></td>
</tr>
<tr>
<td>Maybe</td>
<td>Public</td>
<td>33</td>
<td>55.0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Private</td>
<td>26</td>
<td>43.3</td>
<td></td>
</tr>
</tbody>
</table>
Overall perception of breastfeeding support at work

These results are presented in Figure 4 and Table 9. Most of the participants found combining breastfeeding and work to be “very positive” accounting for 46.4% of the sample. Thirty-six percent found combining breastfeeding and work “positive”, 11.6% “neutral”, 1.8% “negative” and 3.6% “very negative”. The total sample mean and standard deviation was 1.76 ± 0.965.

With respect to differences in overall perception toward breastfeeding support at work between the public and private sector, no significant difference was found (p = 0.184). The respective means and standard deviation were 1.75 ± 0.985 for the public sector and 1.90 ± 0.950 for the private sector.
Figure 4: Bar chart Illustration of Survey Participants Overall Perception on Breastfeeding Support at Work.
Table 9: Overall Perception of Breastfeeding Support at Work: Comparison of the Public and Private Sector.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Category</th>
<th>Frequency (n=338)</th>
<th>Percentage (%)</th>
<th>Means ± standard deviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very positive</td>
<td>Public</td>
<td>103</td>
<td>68.7</td>
<td>1.75 ± 0.985</td>
</tr>
<tr>
<td></td>
<td>Private</td>
<td>46</td>
<td>30.7</td>
<td>1.90 ± 0.950</td>
</tr>
<tr>
<td>Positive</td>
<td>Public</td>
<td>72</td>
<td>60.5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Private</td>
<td>47</td>
<td>39.5</td>
<td></td>
</tr>
<tr>
<td>Neither positive/negative</td>
<td>Public</td>
<td>20</td>
<td>54.1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Private</td>
<td>17</td>
<td>45.9</td>
<td></td>
</tr>
<tr>
<td>Negative</td>
<td>Public</td>
<td>2</td>
<td>33.3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Private</td>
<td>4</td>
<td>66.7</td>
<td></td>
</tr>
<tr>
<td>Very negative</td>
<td>Public</td>
<td>9</td>
<td>75.0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Private</td>
<td>3</td>
<td>25.0</td>
<td></td>
</tr>
</tbody>
</table>
Helpful factors for the continuation of breastfeeding after returning to work

Table 10 presents the helpful factors indicated by the participants that would assist them to continue to breastfeed after returning to work. The question consisted of 12 options of “helpful factors”. Access to a private room was the main helpful factor indicated by the participants representing 84% of the responses.
Table 10: Helpful Factors for Continuing Breastfeeding after Returning to Work as Indicated by Survey Participants

<table>
<thead>
<tr>
<th>Helpful factor</th>
<th>Frequency (n=338)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supportive supervisor/manager</td>
<td>217</td>
<td>64.2</td>
</tr>
<tr>
<td>Access to a private room</td>
<td>284</td>
<td>84</td>
</tr>
<tr>
<td>Suitable equipment for expressing</td>
<td>124</td>
<td>36.7</td>
</tr>
<tr>
<td>Suitable facilities for storing milk</td>
<td>230</td>
<td>68</td>
</tr>
<tr>
<td>Support network among other breastfeeding employees</td>
<td>102</td>
<td>30.2</td>
</tr>
<tr>
<td>Child care in close proximity</td>
<td>225</td>
<td>66.6</td>
</tr>
<tr>
<td>Flexibility of times of usual breaks</td>
<td>175</td>
<td>51.8</td>
</tr>
<tr>
<td>Lactation breaks as needed for breastfeeding/expressing</td>
<td>181</td>
<td>53.6</td>
</tr>
<tr>
<td>Support from male colleagues</td>
<td>93</td>
<td>27.5</td>
</tr>
<tr>
<td>Flexible work options</td>
<td>172</td>
<td>50.9</td>
</tr>
<tr>
<td>Extended maternity leave</td>
<td>137</td>
<td>40.5</td>
</tr>
<tr>
<td>Other</td>
<td>5</td>
<td>1.5</td>
</tr>
</tbody>
</table>
Relationship between breastfeeding knowledge and perception and education level

The relationship between breastfeeding knowledge, perception and education level was done using the Pearson’s correlation test. Breastfeeding knowledge and perception was both positively and significantly correlated. Four perception questions were used to determine this relationship. Each was tested against the overall knowledge score. (p = 0.001)

Conversely, the relationship between breastfeeding knowledge and education level was found to be significant. (p = 0.038).

Relationship between education level and awareness of breastfeeding support at work

With respect to the relationship between education level and awareness, this was also determined by the Pearson’s correlation test. Education and awareness was not found to be significantly correlated (p = 0.413).
CHAPTER V
DISCUSSION

This study was able to evaluate and compare, the perceptions held toward breastfeeding support at work among women working in the public and private sector of Trinidad. Recent surveys conducted report that one-fourth of working women with infants will be breastfed for at least 1 month (31). Moreover, this study was able determine a possible relationship between breastfeeding knowledge and perception toward breastfeeding support at work. Thus, the accumulated findings are to serve as support for the need to develop interventions to provide breastfeeding support at work.

This study composed of 338 working women, 60.9% from the public sector and 35.2% from the private sector (n=206 and n=119). Most respondents were of African and Mixed descent (48.1% and 30.3%). The majority of participants were between 26-32 years and represented 30.3% of the sample. Approximately 50% of the respondents were unaware of breastfeeding support services offered at work in the Western world. To the contrary, the majority of participants had adequate knowledge on breastfeeding and felt positively towards combining breastfeeding and work.

Additionally, the majority of participants expressed readiness to utilize breastfeeding support services at work if ever provided the opportunity. Equally important, the majority of respondents indicated that all women working at organizations should benefit from using such services and not only supervisors or managers.

Most of the survey participants held sufficient knowledge of breastfeeding. The mean total score was 2.31 ± 0.830. The mean total scores were 2.42 ± 0.759 and 2.14 ± 0.914 for women employed in the public and private sector respectively suggesting no significant difference in
breastfeeding knowledge among the two groups. The questions used to evaluate the knowledge of working women where adapted from the WHO guidelines for breastfeeding. Since a great number of women that participated in the study held an undergraduate degree (n=116), it can be generalized that there is an ascribed relationship between breastfeeding knowledge and maternal education level. The findings however, were not consistent with a previous study done in Trinidad and Tobago by Godfrey in 2001. He found that knowledge on international breastfeeding standards was insufficient among women in Trinidad and Tobago (13). It could be argued reasonably, that as a result of technological advances, an increase of circulating information could be directly attributable to the sufficient knowledge found to be held by women in this study.

Conclusion of this analysis found a positive, significant relationship between breastfeeding knowledge and perception toward breastfeeding support at work (p=0.004). Date provided by preceding studies tend to support this finding. Knowledge was strongly correlated with confidence in breastfeeding practices (r= 0.262, p=0.025) and lactation duration (r= 0.455, p= 0.001) in a study done by Chezem et al. (37). Also, maternal education level and breastfeeding knowledge was found to be positively related in this study (p=0.038). These findings were consistent with the results of a study done by Kulkami et al. They found a direct relationship between education level and knowledge about breastfeeding. Ninety-eight percent of women in the study had breastfeeding knowledge and most women in the study were educated at the tertiary level. Certain limitations seem apparent, such as the number of questions asked as well as the sensitivity of the instrument and vocabulary used in the questionnaire.
Conversely, nutrition interventions should be implemented to educate mothers concerning breastfeeding and support breastfeeding mothers at the workplace. An argument in favor of this point is that 49% percent of the participants were not aware of breastfeeding support services offered at the workplace in the Western world. This percentage almost represented half of the entire sample. This finding was incompatible when compared to a study done by Weber et al. in Sydney, Australia. Ninety percent of women were aware of breastfeeding support at work in that study (9). There exists a possibility that these results are not consistent because of the high prevalence of breastfeeding support services and campaigns in Australia in comparison to Trinidad. No significant relationship was found between education level and awareness (p=0.413).

Additionally, it was found that women held very positive perceptions toward breastfeeding support at work (46.4%, n=157) and 73.4% were ready to utilize breastfeeding support services at the workplace if presented with the opportunity to do so. These results were consistent with the findings of a preceding study, where the majority of women intended to breastfeed after returning to work and held positive perceptions towards combining breastfeeding and work. Ninety percent of women wanted to breastfeed upon returning to work (9). In a poll discussion conducted in Atlanta, U.S.A, 66% of respondents, said it would be “very helpful” for workplaces to support breastfeeding mothers by giving them time and space to pump and a place to store breast milk.

However, when comparisons between the public and private sector were made, no significant difference was found between the two groups. The tool may not have been sensitive enough to detect the differences between the two groups.
Inspection of data reveals, availability to a private room was indicated as one of the most helpful factors for the continuation of breastfeeding upon returning to work (84%, n= 284). The least helpful factor was support from male colleagues. Comparison with the literature has found fundamentally conflicting outcomes. To the contrary, flexible work options and flexibility of break times were indicated as being the most helpful factor for continuing breastfeeding upon returning to work in a study conducted by Weber et al (9). Provision of facilities appropriate for expressing milk at work may allow working women to continue to breastfeed after returning to work.
CHAPTER VI
CONCLUSION, LIMITATIONS & RECOMMENDATIONS

In summary, female employees in Trinidad held a positive perception towards breastfeeding support at work. There was no significant difference of perception held between women employed in public and private sector. It was also found that working women are ready to utilize breastfeeding support at work if provided the opportunity. No significant difference in readiness to utilize breastfeeding support at work was found between the two groups. The main helpful factor in the continuation of breastfeeding after returning to work was suitable facilities for expressing and storing milk. Working women in Trinidad had sufficient knowledge on breastfeeding but there was no significant difference between female employees in the public and private sector. There was a significant, positive correlation between breastfeeding knowledge and perception and breastfeeding knowledge and education level. Finally, a positive correlation between education level and awareness of breastfeeding support at work was found.

Even though this research was carefully prepared, it was still susceptible to limitations and shortcomings. Firstly, the instrument may not have been sensitive enough to detect differences in perception between the two groups. Secondly, some of the participants did not fully understand the vocabulary used in the questionnaire. Thirdly, the instrument consisted of no open-ended questions. This is a perception study and the instrument did not encourage participants to include more information, including feelings, attitudes and understanding of the subject. Lastly, breastfeeding support at work is not very popular in Trinidad, so the full understanding of the subject or what breastfeeding support at work entails may not have existed amongst some participants.
In this respect, this study has only focused on the perceptions of career women in Trinidad. Thus, this report recommends further work to:

- Evaluate male’s attitudes and knowledge on breastfeeding support at work; exploration of the factors that contribute to the discontinuation of breastfeeding by working women; employer’s perception on providing breastfeeding support; and the relationship between knowledge of breastfeeding and perception of services that facilitate the continuation of breastfeeding for working women.

- Encourage the implementation of breastfeeding support at organizations in Trinidad because women are ready to use such a service. It will also ensure that working women continue breastfeeding after returning to work.

- Develop interventions to increase the awareness of breastfeeding support at work so that female employees can become more aware of its purpose and benefits.

- Develop interventions to increase breastfeeding knowledge with regards to the health and emotional benefits for mothers because a substantial amount of women did not have adequate knowledge about its benefits.
REFERENCES

1. Trinidad and Tobago Ministry of Health. Draft National Infant and Young Child Feeding Policy for Trinidad and Tobago. Port-of-Spain: Republic of Trinidad and Tobago, 2012.


33. Long-term relation between breastfeeding and development of atopy and asthma in children and young adults: a longitudinal study. Malcolm R Sears, Justina M Greene, Andrew R Willan,


February 6, 2013

Consent Form

For Investigative Procedures

Please permit me to introduce Ms. Amika Lendor, who is a final year undergraduate student in the Human Nutrition and Dietetics programme. Ms. Lendor is required to conduct a mandatory research project as a partial fulfillment of her B.Sc. degree.

In that regard, Ms. Lendor has selected the topic, “Perception toward breastfeeding support: A comparison between career women in public and private sector in Trinidad.” You will be asked to complete one (1) questionnaire, which require approximately 20-30 minutes to complete. We anticipate minimal psychological risks and inconvenience.

The results of this research will be useful in terms of health policy and practices. You may withdraw from this study at any time without jeopardizing your relationship with the University of the West Indies or the Department of Agricultural Economics and Extension.

We also wish to assure you that all information collected will be held in strict confidence and will only be used by the researcher. Please complete the attached consent form.

Should you have further questions, Ms. Lendor will be happy to meet with you to discuss any concerns that you may have. Ms. Anika Lendor can be contacted at anika.lendor@gmail.com or 355-7644. If you have further questions and/or concerns, please feel free to contact Dr. Marquitta Webb, Research Supervisor at 662-2002, Ext 82094 or via e-mail marquitta.webb@sta.uwi.edu.

On behalf of the student, I wish to thank you for your time and assistance.

Sincerely,

Marquitta C. Webb (Dr.)
Lecturer
Human Nutrition and Dietetics
CONSENT FORM

I understand that if I agree to participate in this study, this means the following:

I understand that the participation in this study is entirely voluntary and I can choose to not answer any question or even to withdraw at any time from the study.

__________________________________________  ____________________________
Participant                                      Date

If you have any questions regarding this study, you may contact Dr. Marquitta Webb, Department of Agricultural Economics and Extension at work: 662-2002 ext. 82094 or via email: marquitta.webb@sta.uwi.edu.
APPENDIX B

(Copy of questionnaire used in survey)

BREASTFEEDING QUESTIONNAIRE

To fill in this questionnaire, please either tick the option which is most appropriate to you, or write your answer in the space provided. Unless otherwise specified, please tick only ONE option. There are a few questions where you can choose more than one option if you wish – we have identified these questions for you.

By completing and submitting the survey, you affirm that you are at least 18 years old and that you give your consent to use your answers in research. If you have any questions about this research before or after you complete the survey, please feel free to contact Anika Lendor- anika.lendor@gmail.com.

The next few questions help to give an idea of the type of people who have responded to the survey.

1. Age ______

2. Ethnicity
   □ Afro-Trinidadian
   □ Euro-Trinidadian
   □ Indo-Trinidadian
   □ Mixed
   Other____________________

3. What is your highest educational qualification?
   □ Primary school certificate
   □ Secondary school certificate
   □ Technical or trade certificate or diploma
   □ Undergraduate University or other tertiary institute degree
   □ Postgraduate University or other tertiary institute degree
   □ Pursuing ________________________________
4. Do you work in the public or private sector?

☐ Public sector

☐ Private sector

**Knowledge**

5. Breastfeeding is an unequalled way of providing ideal food for the healthy growth and development of infants.

☐ True

☐ False

6. Exclusive breastfeeding for 6 months is the optimal way of feeding infants.

☐ True

☐ False

7. Breastfeeding contributes to the health and well-being of mothers.

☐ True

☐ False

**Attitude and Opinion**

8. Do you know that breastfeeding organizational support is offered at work in various countries in the Western world?

☐ Yes

☐ No

9. Who do you believe would benefit from breastfeeding organizational support at the workplace in Trinidad and Tobago? (✓ tick all that apply)

☐ Organization/Employer

☐ Working mothers

☐ Infant

☐ None

10. What changes should be made before implementing such a program at the work place?

☐ Educate and sensitize male employees on breastfeeding (your co-workers)
Flexible hours for working mothers
Paid lactation breaks for working mothers
Facilities for expressing and storing breast milk

11. Who should be given the privilege of utilizing breastfeeding support at the work place?
Every female employee that is less than 6 months post-partum
Only women holding supervisory and managerial positions that are less than 6 months post-partum
No one

12. What do you think are some advantages of breastfeeding support at work? (✓ Tick all that apply)
Employee is able to continuing breastfeeding for 6 months +
Reduced employee turnover
Improved staff loyalty towards organization
Improved productivity at work
Enhanced public image for organization
Decreased absenteeism at work

13. If given the opportunity, would you utilize breastfeeding workplace support at your organization?
Yes
No
Maybe

14. What do you think are some disadvantages of breastfeeding support at work? (✓ Tick all that apply)
High initial cost for organization
Less productivity from employees
Inconvenient and uncomfortable for co-workers
Time consuming
 Discrimination and harassment from co-workers
Possible contamination of expressed breast milk

15. Which of the following factors do you think would HELP YOU continue breastfeeding after returning to work? (✓ Tick all that apply)

☐ Supportive supervisor/manager
☐ Access to a private room for breastfeeding or expressing
☐ Availability of suitable equipment for expressing
☐ Availability of suitable facilities for storing milk
☐ Access to a support network among other breastfeeding employees
☐ Child care in close proximity to work
☐ Flexibility of times of usual breaks
☐ Lactation breaks as needed for breastfeeding/expressing
☐ Support from male colleagues
☐ Availability of flexible work options (e.g., job sharing, part-time, flexible hours)
☐ Extended maternity leave (6 months + post-partum)
☐ Other, please specify ____________________________

16. Overall, how do you feel about combining work and breastfeeding? (Choose one option only)

☐ I find combining breastfeeding and work a very positive initiative
☐ I find combining breastfeeding and work a positive initiative
☐ I find combining breastfeeding and work neither a positive or a negative initiative
☐ I find combining breastfeeding and work a negative initiative
☐ I find combining breastfeeding and work a very negative initiative

End of survey. Thank you for time and co-operation!