Exploring Pregnant Women Behavior Regarding Tandem Breastfeeding

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Abstract

Breastfeeding is a gold standard of feeding of newborns and infants. Tandem breastfeeding (TBF) is feeding two children of different ages at the same time. **The aim of this study** was to evaluate pregnant women's behavior regarding tandem breastfeeding. **Design**: A descriptive exploratory design. **Setting**: The study was conducted at the outpatient clinic, obstetrics & gynecology hospital, Ain Shams university, and El-Obour Suez Obest hospital. **Sample**: 644 pregnant mothers. **Data collection tools**: The 1st tool was Interviewing questionnaire sheet, the pregnant mothers' knowledge, and the 2nd tool was Likert Scale assessment sheet. **Result:** 47% of the studied pregnant women were in the age group of 26–30 years and they had a poor perception regarding tandem breastfeeding. **Conclusion**: The pregnant women had unsatisfactory level of knowledge and negative attitude regarding tandem breastfeeding. **Recommendation**: Develop educational materials that provide accurate and comprehensive information about the benefits, feasibility, and practical aspects of tandem breastfeeding including pamphlets, workshops, and community events to reach a wide audience of mothers and healthcare providers.

Keywords: Tandem breastfeeding, Pregnant mothers, Knowledge, Behavior

Introduction:

Breast milk is vital for the biological and emotional growth and development of newborns. What makes it even more valuable is that it is produced especially for the baby, and its composition changes based on the baby's age and health status, effectively customizing it for the child. The World Health Organization and the United Nations Children's Emergency Fund (UNICEF) recommend exclusive breastfeeding for the first 6 months, followed by continued breastfeeding for at least 2 years, along with safe complementary foods. It is estimated that increasing breastfeeding duration to the recommended levels could save the lives of 823,000 children under the age of 5 each year **(Koruk, 2024).**

Tandem breastfeeding (TBF) is defined as the feeding of two children who are not twins. This practice is not common among mothers worldwide. Women who practice tandem breastfeeding often face criticism and social stigma. Furthermore, healthcare professionals are often unsupportive and lack knowledge about the benefits of tandem breastfeeding and the nutritional value of human milk during this practice. Mothers may be told that human milk after a year is only "water" and devoid of nutritional value, or that breastfeeding an older child has no benefits **(Sinkiewicz-Darol et al., 2021).**

Tandem nurse of newborn and older child has many wonderful benefits, including: it help the older child feel more secure and reassured as transition into a new family dynamic, the older child help reduce the symptoms of engorgement once milk comes in, which can be quite a help if the breast tend to get very engorged, the older child help quickly drive up your milk supply if the mother ever need a boost, and nursing the older child along with the newborn is a great way to keep them occupied and out of trouble **(Wisner, 2020).**

Moreover, the amount of milk not affected by tandem breastfeeding as the rise in milk production depending on the frequency and duration of breastfeeding, tandem breastfeeding is not considered a disadvantage. However, breast milk has been shown to have a higher fat and energy content after more than a year of breastfeeding, whereas the protein content remains the same. Furthermore, there is no evidence in the literature that breastfeeding during pregnancy or

tandem breastfeeding has a negative impact on the health of the mother, infant, or fetus. Also, The American Academy of Pediatrics and AAFP support tandem breastfeeding **(The American Academy of Family Physicians, 2022).**

There is a common concern about abortion or premature labor due to continued breastfeeding during pregnancy. However, despite uterine contractions during breastfeeding, they are a normal part of pregnancy and similar contractions may occur during sexual intercourse, which is good for most women during pregnancy; so, it is safe to breastfeed while pregnant. If the mother has any complications during pregnancy, these concerns should be discussed with the caregiver **(Fouad et al., 2019).**

Besides concerns about milk supply, probably the biggest concern and challenge that mothers face while tandem nursing is how overwhelming it can feel at times. The mothers feel that they never get a break, are literally always feeding someone, and that don't have time to fulfill their own needs. Also feel "touched out" or agitated while breastfeeding **(Wisner, 2020).**

Nurses play a crucial role in supporting mothers who are considering or practicing tandem breastfeeding by providing evidence-based information about the benefits and challenges of tandem breastfeeding as well as practical tips for managing breastfeeding multiples. They also address common concerns as milk supply, positioning, latch, and feeding schedules, and offer guidance on how to establish and maintain successful tandem nursing **(Günaydın et al., 2023).**

Significance of the study

Breast milk continues to provide nutrition, assists with the immune system, provides gut comfort, social, and intellectual development for as long as the breastfeeding relationship continues and tandem feeding supports both the relationship with the new baby and continues the breastfeeding relationship with the older sibling. In short tandem feeding allows a Dyad (mother and baby) to continue to feed despite a new baby coming along **(Erdogan & Turan, 2023).**

Pregnancy during lactation is the most common reproductive health problem in Egypt and is often unplanned. Overlap between pregnancy and lactation could be associated with an increased risk for the pregnant mother, her fetus as well as her nursing child **(Melika and Attit Allah, 2019).**

Many societies failed to adequately support women to tandem breastfeeding, and as a result, the majority of the world's children-along with a majority of the world's countries-are not able to reap the full benefits of tandem breastfeeding**(Melika and Attit Allah, 2019).**

Aim of the study

The main aim of the current study was to evaluate pregnant women's behavior regarding tandem breastfeeding. Through:

1.Assess pregnant women's behavior regarding tandem breastfeeding.

Research question

What is the pregnant women's behavior regarding tandem breastfeeding?

Subjects and methods

Design: A descriptive exploratory design.

Setting: The study was conducted at the outpatient clinic, obstetrics & gynecology hospital, Ain Shams university, and El-Obour Suez Obest hospital. **Sample**: A purposive sample of **(644) pregnant** was selected according to inclusion criteria.

Tools of data collection

The data in this study was collected by using two tools:

First tool: Interviewing questionnaire: It was adapted from Rosenberg et al., (2021) and modified by the researcher and consists of two parts :

Part I: to assess general characteristic of pregnant women which containing three closed end questions (age, level of education, working status) and obstetric history which contain multiple choice questions about (gravidity, parity,

number of previous or still birth, types of delivery, and receiving treatment) .

Part II: to assess pregnant women's knowledge about tandem breastfeeding which include (advantages and disadvantages), source of knowledge including mass media, doctors, nurses and grandmothers .

Second tool. Likert scale Assessment sheet: It was adapted from Chetwynd, (2022) and modified by researcher to assess pregnant women's attitude regarding tandem breastfeeding .it was consisted of 11 statements; Each statement would be answered with (agree, not sure, disagree).

Preparatory phase:

It included reviewing of related literature, and theoretical knowledge of various aspects of the study using books, articles, internet periodicals and magazines to develop tools for data collection.

Administrative design:

To carry out this study, an official permission obtained from scientific research and ethics committee of the Faculty of Nursing, Ain-Shams University, the administration of the Hospital of Ain-Shams University and El-Obour hospital.

Ethical consideration:

Prior study conduction, approval was obtained from scientific research and ethics committee of the Faculty of Nursing, Ain-Shams University. The researcher clarified the aim of the study to the pregnant mothers who included on the study. They were assured that anonymity and confidentiality would be guaranteed, and informed about their right to refuse or withdraw from the study at any time. The study procedures do not entail any harmful effects on participants. An informed consent was obtained from each pregnant mother prior to participate in the study.

Ethical code:25.01.489

Pilot study:

It was carried out on 10 % of the studied pregnant mothers (65 pregnant women) to evaluate the applicability of the study tools and estimate the proper time required for answering the required data. All participants in the pilot study were included in the main study.

Field work:

1.Assessment phase:

It was done by the researcher for all study subjects to assess the studied pregnant mothers who meet the criteria of this study. The researcher also, firstly met them to explain the purpose of the study to gain their cooperation after taking permission from related authorities.

2.Planning phase:

The researcher made exploratory visit to study setting to put plan for carrying out the study.

3.Implementation phase:

The study was conducted during morning shifts three times/week (Sunday, Monday, and Wednesday) during the study period (four months) starting from 31/12/2023 till 28/4/2024, for two months in each hospital mentioned before. The investigator visited the previous mentioned setting 3days/week (Sunday, Monday, and Wednesday) during morning shifts from 9a.m to 2p.m. At the beginning the investigator introduced herself to available women and explain the purpose of the study to the participants and take their written approval to participate in the study prior to data collection. The investigator distributed a structured questionnaire sheet to assess pregnant women's knowledge and Likert scale assessment tool to assess pregnant women's attitude regarding tandem breastfeeding. Each pregnant mother took 45minutes to fill out the questionnaires.

Statistical design:

The collected data in pretest and posttest were organized, categorized, tabulated according to the type of each data.

Statistical analysis:

Data was entered and analyzed by using SPSS (Statistical Package for Social Science) statistical package version 22. Graphics were done

using Excel program. Quantitative data were presented by mean (X) and standard deviation (SD). Qualitative data were presented in the form of frequency distribution tables, number and percentage. It was analyzed by chi-square ($\chi 2$) test and correlation (R). Level of significance was set as P value <0.05 for all significant tests.

Result:

Table (1) reveals that 47% of the studied pregnant women are in the age category 26-30 year with the mean age (29.26±4.05), and 38.5% of them have been married for 4 to 5 years. Furthermore, 71.3% of them are living in an urban area, 87.4% have secondary education and 59.2% of them are not working. In addition, 64.1% of them have insufficient income.

Figure (1) shows that 14% of the studied pregnant women had satisfactory level of knowledge about tandem breastfeeding. While, 86% of them had unsatisfactory level.

Figure (2) shows that 28% of the studied pregnant women have positive attitude about tandem breastfeeding. While, 72% of them had negative attitude.

Table (2) reveals that, there is a high statistically significant relation between pregnant women's total attitude level and their total knowledge level with p-value < 0.01.

Table (3) Shows that, there was a high positive significant correlation between pregnant women's total knowledge and attitude (p- value < 0.01) as when one variable increases the other variable also increases.

Table (1): Distribution of Studied pregnant women regarding their socio-demographic characteristics (n=644).

Item	No	%
Age in year		
20 -24 year	151	23.4
25-29 year	303	47.0
30-34 years	156	24.2
>34 years	34	5.3
Mean± SD 29.26±4.05		
Residence		
Urban	459	71.3
Rural	185	28.7
Duration of marriage		
1-3years	184	28.6
4-6years	248	38.5
>6years	212	32.9
Education		
Secondary	563	87.4
University	81	12.6
Occupation		
Working	263	40.8
Not working	381	59.2
Income		
Sufficient	231	35.9
insufficient	413	64.1

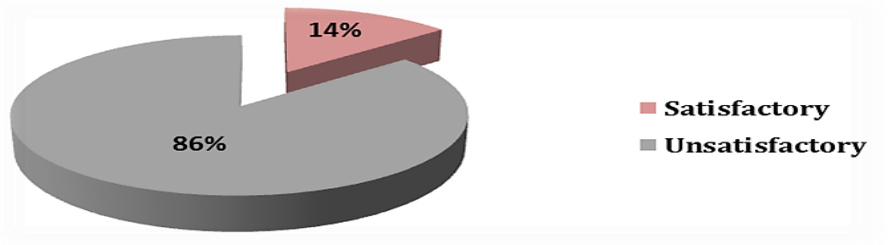

Figure (1): Percentage distribution of the studied pregnant women regarding their total knowledge score level about tandem breastfeeding (n=644).

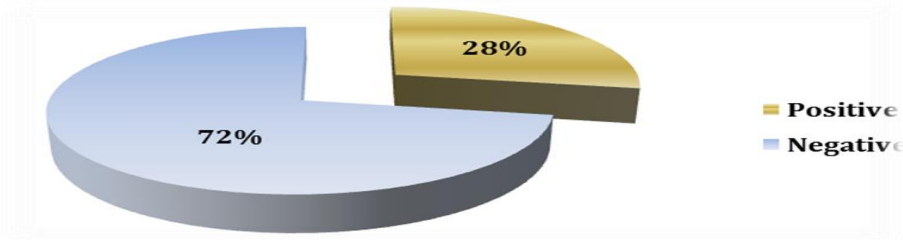

Figure (2): Percentage distribution of the studied pregnant women regarding their total attitude score level about tandem breastfeeding (n=644).

Table (2): Relation between total pregnant women's attitude level score and their total knowledge level score.

Total knowledge level	Total attitude level				Chi-square		
	Positive		Negative		x^2	p-value	Sig.
	No.	%	No.	%			
Satisfactory	68	10.6	24	3.7	113.75	0.000**	HS
Unsatisfactory	111	17.2	441	68.5			

Table (3): correlation between total pregnant women's attitude level score and their total knowledge level score.

Items	Total attitude level score	
	Pearson Correlation	p- value
Total knowledge level score	0.420	0.000**

Discussion:

Regarding the studied pregnant women's socio-demographic characteristics, the present study revealed that nearly half of the studied sample was in the age category of 26-30 year with the mean age (29.26±4.05) and that more than a quarter of them had been married for 4 to 5 years. Moreover, the present study findings demonstrated that, nearly three-quarters of the sample lived in urban areas, and most of them had a secondary education.

This finding in the previous paragraph is consistent with **(Fouad et al., 2019)** who conducted a study "Counseling Program about Tandem Breastfeeding for Pregnant Lactating Mothers" in Egypt with a sample size of 100 mothers divided into two groups, and concluded that 52% of mothers aged 26-28 years for control group, and 56% for study group and 82% of them lived in urban area. This agreement may be due both studies were conducted at the same setting that may share the same sample characteristics.

Contrary, the pervious results were not consistent with **(Sinkiewicz-Darol et al., 2021)** who conducted a study on "tandem breastfeeding: A Descriptive Analysis of the nutritional value of milk when feeding a younger and older child" in Poland with a sample size of 13 tandem breastfeeding mothers, and reported that the

average age of the tandem breastfeeding mothers was (31.6 ± 4), all of them were from rural areas and 94.4% of them had a university degree.

Furthermore, the present study finding demonstrated that, more than half of the sample was not working and had insufficient income; this result is supported by (**Fouad et al., 2019)** who stated that 64% were housewives for the control group and 72% for the study group, and all of the sample had a low socio-economic status, and with **(Essam, 2022)** who conducted a study entitled "Effect of conception-lactation overlap on the current pregnancy outcome" in Egypt with a sample size of 110 women and stated that most of the sample were of low economic status and housewives.

In relation to the total knowledge score level about tandem breastfeeding, the present study revealed that most of the pregnant women had an unsatisfactory level of knowledge about tandem breastfeeding. According to the researcher's point of view, this may be due to lack of information, cultural taboos, limited support, misconceptions and a lack of personal experience about tandem breastfeeding.

In congruence with the foregoing (**Aker et al., 2024),** in a study of "Mothers' experiences of tandem breastfeeding: A phenomenological study" in Turkey, it was concluded that mothers have poor knowledge and information about tandem breastfeeding. Also, the findings were consistent with previous research **"**In tandem: breastfeeding knowledge and thinking from Southern Africa" by (**Burns, 2021),** which found that Southern African women have poor knowledge and misconceptions about tandem breastfeeding.

In terms of total attitude score level about tandem breastfeeding, the present study revealed that more than two thirds of pregnant women had a negative attitude about tandem breastfeeding. According to the researcher's point of view, this may be due to the fact that many women don't have access to accurate and comprehensive information about tandem breastfeeding leading to misconceptions and uncertainty about its feasibility and benefits. Also, cultural and societal attitudes toward breastfeeding multiple children simultaneously contribute to negative perceptions.

In this respect, **(Liu et al., 2023)**, who studied "levels and determinants of antenatal breastfeeding attitudes among pregnant women: across-sectional study" in China, found that the participants had a negative attitude about tandem breastfeeding. While, these results are not compatible with **(Sinkiewicz-Darol et al., 2021)** who concluded that there is a positive perception among mothers regarding tandem breastfeeding, despite some challenges.

As regard relation between pregnant women's total attitude level and their total knowledge level**,** the present study found that there was a high positive statistically significant relation between pregnant women's total attitude level and their total knowledge level**.** This finding was similar to the findings of **(Sinkiewicz-Darol et al., 2021)** who mentioned that there is a significant relation between women's knowledge and attitude about tandem breastfeeding and supported by **(Shaaban et al., 2020)** who concluded that there is a relation between mothers' knowledge and attitude about breastfeeding two children simultaneously.

Conclusion

The current study concluded that the pregnant women had unsatisfactory level of knowledge and negative attitude regarding tandem breastfeeding. Also, there was a strong relation between pregnant women's knowledge and attitude about tandem breastfeeding. Finally, the research findings answered on the research questions

Recommendation

In the light of the study findings, the following recommendations are suggested:

- Develop educational materials and campaigns that provide accurate and comprehensive information about the benefits, feasibility, and practical aspects of tandem breastfeeding including online resources, pamphlets, workshops, and community events to reach a wide audience of mothers and healthcare providers.

- Encourage healthcare providers to receive training on tandem breastfeeding

and to provide nonjudgmental evidence-based support to mothers who express interest in this approach

- Work with community leaders, cultural influencers and media outlets to challenge negative attitudes toward tandem breastfeeding and promote acceptance and understanding.

- Advocate for workplace policies that accommodate tandem breastfeeding as providing private lactation spaces and flexible break times for mothers who are nursing multiple children.

- Encourage research on the long-term health outcomes and benefits of tandem breastfeeding for both mothers and children

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