



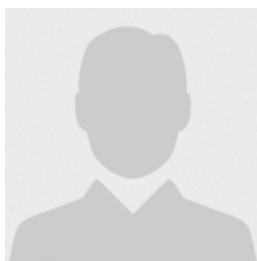
Breastfeeding Methods Among Teachers at the Female Training and Education Institutions in the Municipality of Yopougon



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Abstract

Breastfeeding is a mode of infant nutrition that must be prioritized to promote the proper growth of the baby as well as its health. With modernization, women work more and more and are often forced to abandon their babies for work. It is therefore necessary to identify the factors that promote changes in breastfeeding patterns among employed women. This research aims to determine the factors that modify breastfeeding patterns among women in the commune of Yopougon, working in women's socio-educational centers. A cross-sectional study was conducted in the form of a questionnaire survey in the four Women's Training and Education Institutions in Yopougon (city of Abidjan). It showed that before obtaining a stable civil servant job, 83,72% of the women surveyed adopted the exclusive breastfeeding mode. This proportion decreased to 16.3% after obtaining a civil servant job. The main obstacles to the practice of exclusive breastfeeding by these women are the distance between the place of residence and the place of work, and the insufficient duration of maternity leave. It is important to set up breastfeeding areas and facilitate the transport of women with their babies from home to the place of work for the continuity of exclusive breastfeeding.

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1 Introduction

Exclusive breastfeeding involves feeding babies exclusively breast milk until the age of six months (Kramer & Kakuma, 2012). It can be continued for up to two years, while introducing the baby to the family diet from six months onward (Turck et al., 2013). This breastfeeding method should be favored to promote the baby's healthy growth and health (Picaud, 2008). Indeed, breast milk provides a baby's nutritional needs, promotes their development, and supports their immune defenses. The composition of this milk is evolving to meet the baby's needs up to six months (Rigourd et al., 2018).

With modernization, women are working more and more. As a result, they are often forced to leave their babies at home or in specialized daycare centers, unable to take them to work. This situation, experienced by women around the world, is also a reality in Côte d'Ivoire, among employed women. As a result, it is difficult for these women, who leave home early in the morning and often return home late at night, to practice exclusive breastfeeding, even when their baby is under six months old (Allen et al., 2023).

It is therefore necessary to identify the factors that promote changes in breastfeeding patterns among employed women, as well as those that lead to changes in breastfeeding patterns. This identification could ultimately lead to solutions to promote exclusive breastfeeding.

The objective of this research is to determine the factors that modify breastfeeding patterns before and after obtaining stable, paid employment among women in the commune of Yopougon, who work in women's socio-educational centers.

2 Materials and Methods

Study Type

This cross-sectional study was conducted as a questionnaire survey in the four Women's Training and Education Institutions (IFEFs) in the municipality of Yopougon (Municipality of Abidjan) from January 25 to February 19, 2024.

Sampling

The sample of women working in the IFEFs in the municipality of Yopougon was determined by using a non-random and exhaustive method so that all women working in the four (4) IFEFs in the municipality of Yopougon were surveyed. A sample of 43 female civil servants working in the IFEFs was created so that all women who met the inclusion criteria were included in the sample. To be included in the sample, the woman had to be a civil servant, provide informed written consent, and be the mother of at least one child. Data Collection Protocol: Data collection took place from January 25 to February 19, 2021. The self-administered questionnaire was sent to the women who completed it. It was immediately collected by the investigators after completion. Survey authorization from the INJS and the IFEF managers was obtained in advance.

Data Collection Tools

The survey was conducted using a self-administered questionnaire comprising 5 sections. This questionnaire was previously tested through a pre-survey conducted with 12 female civil servants working in the IFEFs in the commune of Attécoubé, a neighboring commune of Yopougon.

Characteristics of the Survey Form:

The survey form consisted of 4 sections. The first related to sociodemographic information. The other sections included, in order, the breastfeeding method adopted before and after the women began their employment, the reasons for choosing the breastfeeding method adopted, and the barriers to exclusive breastfeeding.

Variables

This study was designed around three main variables: the breastfeeding method adopted before and after the women started their careers, the reasons for choosing this method, and the barriers to exclusive breastfeeding.

Operational aspects of the variables:

The breastfeeding method practiced was assessed according to three modalities: exclusive breastfeeding, artificial breastfeeding, and mixed breastfeeding. Exclusive breastfeeding is when the mother feeds the baby exclusively with breast milk for the first 6 months. Artificial breastfeeding is when the baby is fed only with artificial milk. Mixed breastfeeding is when the baby is fed both breast milk and artificial milk.

The reasons for choice were assessed according to three modalities: medical reasons, professional reasons, and reasons related to insufficient breast milk. Obstacles to breastfeeding were classified into six categories: medical reasons, distance between their home and workplace, length of maternity leave, prohibition on bringing the baby to work, insufficient breast milk production, and other reasons ([Feenstra et al., 2018](#)).

Statistical Analysis

The various data were analyzed using SPSS version 21 software. The results are presented as counts and percentages. The chi-square test was used to compare proportions. The significance level was set at $p < 0.05$.

3 Results and Discussions

3.1 Results

Sociodemographic Characteristics

The results of this study showed that the age of respondents ranged from 25 to 45 years, with a high proportion of adult respondents aged 40 to 45, or 44.2%. Women in the 35-40 age group represented 30.2% of the respondents. Those aged 30 to 35 and 25 to 30 represented 20.9% and 4.7% of the respondents, respectively.

Regarding marital status, the results revealed that women living with partners (married, 62.8%; cohabiting, 18.6%) represented 81.4% of the respondents. Single women, widows, and divorced women together represented 17.6% of the respondents. Regarding educational attainment, more than half of the respondents had a higher education level (58.1%). Those with secondary and primary education represented 32.6% and 9.3% of the respondents, respectively.

Table 1
Sociodemographic characteristics of the women studied (n = 43)

Variables	Modalities	Number	Percentage
Age group	25-30	2	4,7
	30-35	9	20,9
	35-40	13	30,2

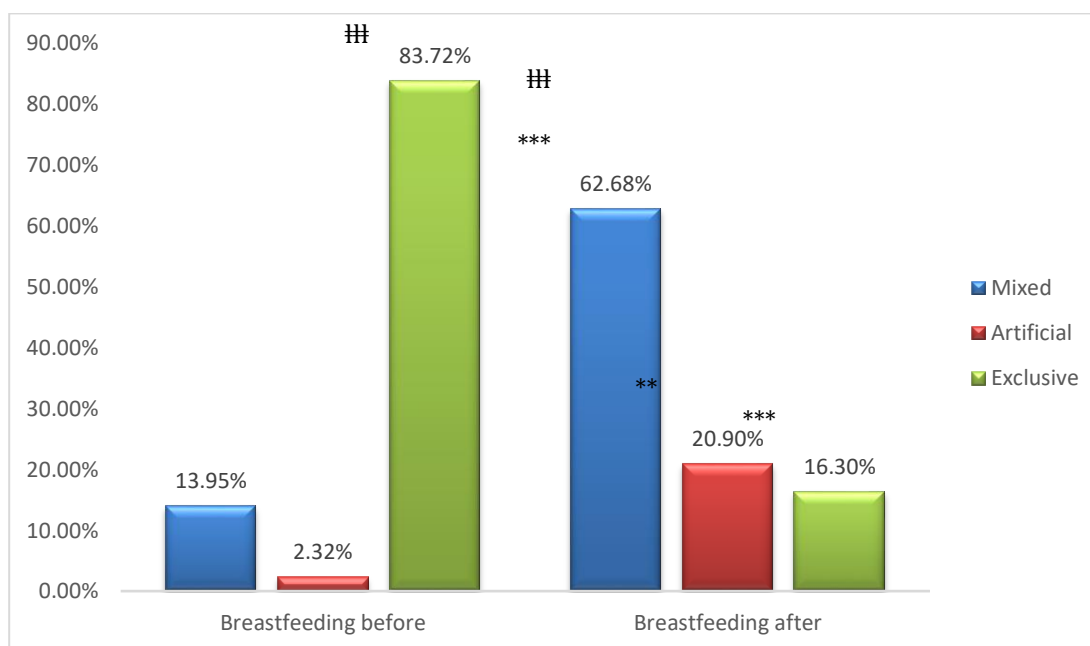
Variables	Modalities	Number	Percentage
Marital status	40-45	19	44,2
	Single	5	11,6
	Cohabiting	8	18,6
	Married	27	62,8
	Divorced	1	2,3
	Widowed	2	4,7
Education level	Primary	4	9,3
	Secondary	14	32,6
	Higher education	25	58,1

Change in Breastfeeding Mode Before and After Starting a Job

This result (Figure 1) highlights that before obtaining a stable civil service job, the majority of women surveyed adopted exclusive breastfeeding. Thus, the proportion of women adopting exclusive breastfeeding was statistically higher than that of women adopting mixed and artificial feeding (83.72% vs. 16.27%; $p < 0.001$).

After starting work, the majority of women surveyed adopted a mixed breastfeeding method (62.68%). Thus, the proportion of women who adopted a mixed breastfeeding method was statistically higher than those who adopted artificial or exclusive breastfeeding ($p < 0.001$).

A significant decrease in the proportion of women practicing exclusive breastfeeding was also observed (Figure 1) after the women started work (83.72% vs. 16.3%). A significant increase in the proportion of women adopting a mixed breastfeeding method was observed after starting work (13.95 vs. 62.68; $p < 0.01$).

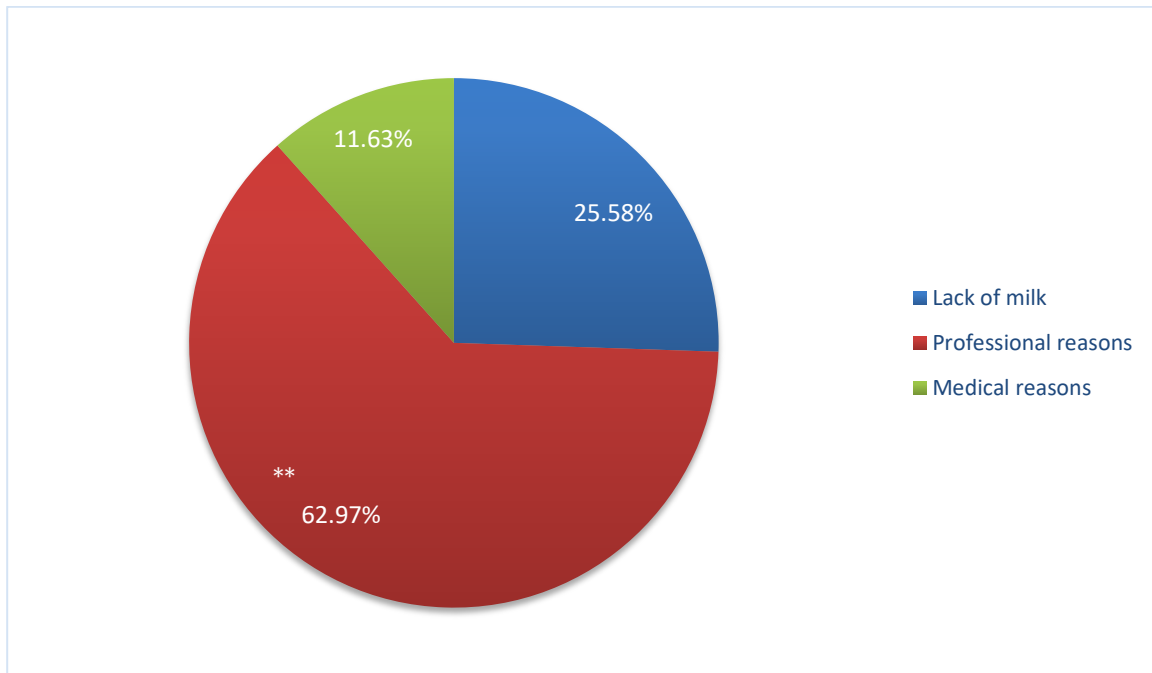


Breastfeeding before: breastfeeding method adopted before having a stable and regular job; Breastfeeding after: breastfeeding method adopted after obtaining a stable and regular job; ***: Difference with breastfeeding before, $p < 0.001$; **: Difference with breastfeeding before, $p < 0.01$; #: Difference with other breastfeeding methods, $p < 0.001$.

Figure 1. Change in the breastfeeding method adopted by women

Reason for adopting the breastfeeding method

This study showed that the main reason given by women for changing their breastfeeding method after starting their job was professional reasons (62.97%), followed by a lack of milk (25.58%). Thus, the proportion of women who cited professional reasons was statistically higher than the proportion of women who cited insufficient milk and medical reasons as reasons (62.97% vs. 37.21%; $p < 0.01$).



** : Difference with insufficient milk supply and medical reason, $p < 0.01$

Figure 2. Reason for adopting the breastfeeding method

Barriers to exclusive breastfeeding

The results highlight that the main barriers to exclusive breastfeeding are the distance between home and work, insufficient maternity leave, the ban on bringing the baby to work, and insufficient breast milk (Table 2).

Table 2
Barriers to Exclusive Breastfeeding (n = 43)

Difficulties Encountered	Number (%)
Medical reason	05 (11,62)
Distance between their place of residence and their workplace	20 (46,52)
Insufficient length of maternity leave	10 (23,25)
Prohibition on bringing the baby to the workplace	03 (06,98)
Insufficient breast milk	03 (06,98)
Other	02 04,65)

3.2 Discussion

Reliability and Validity of the Study

This study, conducted in an urban setting in Côte d'Ivoire, provides insight into the reality of female civil servants' breastfeeding experiences. It is one of the first studies to assess changes in breastfeeding patterns due to occupational status. The data collection tool, validated by the pre-test procedure and by specialized nutrition researchers, provides this study with high reliability.

Changes in Women's Breastfeeding Methods

This study highlighted changes in breastfeeding methods among the women studied. Indeed, a shift from exclusive breastfeeding to mixed or artificial feeding was observed between the period of unemployment and the period when the women held a permanent civil service job. This situation shows that work has a significant effect on mothers' breastfeeding strategies. Unemployed mothers are generally at home and experience no difficulty breastfeeding their babies, adopting exclusive breastfeeding for the most part. Very few of the women studied opt for artificial or mixed breastfeeding before starting a job, not only because it is inexpensive and easy to practice. However, once they do find employment, they primarily opt for mixed or artificial feeding, rather than exclusive breastfeeding. This situation was also highlighted by [Béranger et al. \(1998\)](#). These authors also showed that among 150 women in France, returning to work corresponded to a drop in the level of breastfeeding. Work thus induces a drop in the level of exclusive breastfeeding ([Huet et al., 2016](#)).

Reasons for Adopting Breastfeeding Mode

The decline in women's breastfeeding rates is therefore an adaptation to the constraints of the workplace. Indeed, to meet the demands of today's world, women must work ([Battagliola, 2008](#)). New living conditions mean that women work in businesses, administrations, shops, etc. In large cities like Abidjan, where transportation conditions are difficult, women must get up early and travel long distances to get to work on time. Traveling with a baby or toddler is not easy. As a result, women are forced to leave their babies alone throughout the day. Furthermore, there are no specific facilities dedicated to breastfeeding where women cannot only keep their babies but also breastfeed them while they are at work. In Conakry, Guinea-Conakry, a similar survey found that women did not have a dedicated breastfeeding room at their workplace ([Sidibé et al., 2020](#)). This situation, therefore, had a negative impact on breastfeeding rates. In France, too, [Huet et al. \(2016\)](#) highlighted that returning to work affected the practice of exclusive breastfeeding. It is therefore observed that mothers generally switch to mixed or fully artificial feeding to be able to work. This change in breastfeeding habits is strongly influenced by the workplace ([Huet et al., 2016](#)). It is noteworthy that workplaces are not designed to accommodate babies and facilitate their breastfeeding in the workplace ([Sidibé et al., 2020](#)). Mothers, even if they wanted to, would therefore not be able to come to work with their babies. Yet, a well-designed work environment that allows for breastfeeding promotes women's performance at work and limits their stress ([Basrowi et al., 2015](#)).

Barriers to Exclusive Breastfeeding

For the health of mothers and babies, the WHO recommends breastfeeding from 0 to 6 months. However, among women in the Yopougon IFEFs, work is a barrier to exclusive breastfeeding. The main barriers to breastfeeding are the distance between home and work, insufficient maternity leave, insufficient breast milk, and the ban on bringing the baby to the workplace. This finding confirms information from previous studies that have shown that returning to work has a negative effect on exclusive breastfeeding ([Huet et al., 2016](#)). The length of maternity leave is also highlighted in this study. In Côte d'Ivoire, maternity leave is 3 months, so women must return to work no later than three months after giving birth. Any baby born to a working mother can therefore only have a maximum of three months of exclusive breastfeeding if the mother practices this method of breastfeeding. Returning to work can change the method of exclusive breastfeeding. It is also

important to note that in Côte d'Ivoire, the implementation of the labor code remains unfavorable to exclusive breastfeeding. Indeed, it only grants mothers 14 weeks of maternity leave, accompanied by one hour of breastfeeding time during the workday. It is therefore necessary to revise this code, taking into account the duration of exclusive breastfeeding, as many studies identify returning to work as one of the main reasons for early weaning ([Sibeko et al., 2005](#); [Kouassi et al., 2012](#)). Furthermore, the development of areas for expressing breast milk or breastfeeding at work could help improve breastfeeding rates ([Vilar-Comte et al., 2021](#)). Facilitating the transportation of women and their babies from home to work could also help limit the early abandonment of exclusive breastfeeding. It is now necessary to establish breastfeeding areas in the workplace (both public and private sectors) to help promote exclusive breastfeeding and give all children the chance to have a better start in life.

4 Conclusion

This study revealed that obtaining employment influenced the practice of exclusive breastfeeding among women in IFEFs (feminine health centers) in the Yopougon commune. Thus, the main reason for abandoning exclusive breastfeeding while breastfeeding is the start of employment for these mothers. It is important to establish breastfeeding areas and facilitate the transportation of babies from home to work. It is also necessary to promote exclusive breastfeeding among employed women.

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