

Research Article

Prevalence and Some Determinants of Breast Feeding, in El-Minia City, Egypt.

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Abstract

Background: Breastfeeding is a very important practice in dealing with nutrition of infants. There is many determinant factors regarding breastfeeding such as mother education, her body mass index and her employment status. **Objectives:** this study aimed to determine the prevalence of breastfeeding and some of its determinants in El-Minia city. **Design:** A cross sectional descriptive design was used. **Subjects and Methods:** This study included 106 mothers who were visited in four main Maternal and Child Health (MCH) Centers at Minia city. One tool was utilized to collect the necessary data, A structured questionnaire interview sheet and anthropometric measurements were taken. **Results:** It was found that the majority of mothers apply breast feeding to their children with a percentage of 79.4% while those who use artificial feeding were in the minority with a percentage of 20.6%. There is a significant relation between prevalence of breast or artificial feeding and level of mother education. There is a significant relation between type of feeding and the presence of disturbed body mass index in the mother. Breast feeding was more prevalent among normal body weight mothers, while being overweight or obese has made mothers more amenable to artificial feeding for their babies. **Conclusion:** Breastfeeding was more prevalent than artificial feeding among mothers attending maternal and child health care facilities in Minia City, Upper Egypt. There is a significant relation between breastfeeding and degree of education of the mothers. Breastfeeding also was significantly related to body mass index of the mother and it may be of protective value against maternal overweight and obesity **Recommendations:** There is a dire need to arrange for health education program sessions for mothers ,especially, those with higher education level regarding importance of breastfeeding. Also there is a need for further studies regarding value of breastfeeding as a measure in combating obesity in lactating mothers to regain her pre-pregnancy body mass index.

Key words: Prevalence, Determinants , Breastfeeding and Minia

Introduction

The first two years of life are considered critical stages for a child's growth and development. Exclusive breastfeeding for six months and continued breastfeeding with safe, appropriate and adequate feeding is recommended as a global health policy in both developing and developed countries⁽¹⁾. Correct feeding practices from early childhood are important for normal physical and mental growth, to have normal development, optimum immunity, reduce atopic conditions and training the child in correct feeding habits. It is well established that under-nutrition as well as obesity in early childhood is associated with increased morbidity and mortality in later life⁽²⁾. Childhood malnutrition and growth faltering affects more than half of

children under five in developing countries, and usually starts during infancy, possibly due to improper breastfeeding and mixed feeding practices⁽³⁾.

Variables that may influence breastfeeding include race, maternal age, maternal employment, level of education of parents, socioeconomic status, insufficient milk supply, infant health problems, maternal obesity, smoking, parity, method of delivery, maternal interest and other related factors^(4,5)

Breastfeeding is said to be on decline⁽⁶⁾ and there is a trend toward bottle feeding in both urban and rural areas⁽⁷⁾. This probably is

affected not only by knowledge on breastfeeding but also by factors such as education, occupation, and socioeconomic status of the parents^(8,9).

Justification of the study:

Breastfeeding issue was a subject of health education and continuous efforts were applied both in the national (Egypt) and local (El Minia Governorate) levels regarding encouragement of breastfeeding practices. So assisting prevalence and determinants of breastfeeding practice in Minia Governorate and its capital El Minia city is very important for evaluation of those efforts.

Aim of the study

This study aimed to determine the prevalence of breastfeeding and some of its determinants in El-Minia city

Research Questions:

What is the prevalence of breastfeeding in El Minia city? What are the determinants that may help in future efforts regarding more encouragement of strict adherence to breastfeeding practices especially the new concept promoted by WHO namely exclusive breastfeeding (EBF)?

Subject and Method

Research design:

A cross sectional descriptive research design was utilized in this study.

Setting:

The present study was conducted at all the Maternal– Child Health Care Centers (MCH) at Minia City during their vaccination of their children. There were four MCH: - the north MCH centers the south, the east, and the west. The study was performed from January until the end of April 2023.

Subjects:

All mothers attending the previous mentioned setting were included in the study. Their total

number was 106 mothers after receiving their consents for participation in this study.

Criteria of inclusion:

Mothers attending the routine immunization clinic of selected center and willing to participate in the study.

Criteria of exclusion:

Those mothers who refused to participate in the study.

Tools of data collection:

After reviewing the relevant literatures, one tool was utilized to collect data pertinent to study.

A structured questionnaire interview sheet: this included three parts:

▪ **Part (1): Demographic characteristics of the mother:** as age, education, mother work, father education, father work, etc.

▪ **Part (2): Demographic characteristics of the child and anthropometric measurements:** as age, weight, height.

▪ **Part (3): Mothers Weight and height were determined and body mass index calculated:**

▪ **Method of Height and Weight measurement:**

(a) Subjects were in light clothing, without shoes.

(b) Height was recorded to the nearest centimeter, rounding up if midway, using a measuring rod. Subjects should stand upright with back against the stand, heels together and eyes directed forwards so that the top of the tragus of the ear is horizontal with the inferior orbital margin, and the measuring plate lowered onto the scalp to give the correct level.

(c) Weight was recorded to the nearest 0.1 kilogram, rounding up if midway, using the available scales, which should be on a firm, horizontal surface. The zero should be checked every day and calibration should be crudely assessed by reference to an individual of known weight (which is particularly important when the scale is transmitted to another survey site) (Gary K., et al., 1992)

* The Body Mass Index (BMI) was calculated by the use of the following equation:

$$\text{Body Mass Index} = \text{weight (kg)} / \text{height (m)}^2$$

(Bray GA., 1993)

Methods of data collection:

Preparatory phase:

- Before starting this study, it was necessary to secure the approval of authorities in the setting of the study. Therefore, permission was obtained from the director of the Department of Health in Minia Governorate. Official permission was obtained from the directors of 4 Maternal and Child Health Centers and also from the ethical committee of faculty of Medicine, Minia University.

Pilot study:

A pilot study was carried out on a sample of 10 mothers. The aim of the pilot was to test the clarity of the study tools. It has helped in making necessary changes in the tools to detect data collection problems or difficulties. It also helped to determine the time needed for filling up the questionnaire. The time needed to fill out the sheet and to make anthropometric measurements of baby and his mother was 30-40 minutes. Following the pilot study, the questionnaire was finalized and made ready for use.

Ethical Considerations:

The researcher explained to mothers the aim of the study and informed that the information obtained would be confidential and only for the purpose of the study. Mothers have ethical rights to participate or refuse participation in the study. Consent to participate in the study was written from director and oral from mothers.

Field of the study:

Data collection was done by the researcher during the period from the beginning of January until the end of April 2023. The researcher interviewed each participated mother individually to obtain the necessary information. The actual work started by meeting the mothers throughout the morning time, The questionnaire

was filled one day each week (day of routine vaccination), the researcher first introduced himself to them and gave them a complete background about the study then the sheet format, pre-designed by the researcher in Arabic Language, was distributed in order to collect the required data. The researcher was available for more clarification whenever needed.

Statistical Analysis of data:

Data were analyzed using statistical package for social sciences (SPSS) version 19. Data were presented using descriptive statistics in the form of frequencies and Quantitative data were presented by mean and standard deviation, while qualitative data were presented by frequency distribution. Correlation analysis was used for assessment of inter relationship between the total score of performance A significance level was considered at $P < 0.05$.

Results

Findings of the present study revealed that a total of 106 mothers between age group of 20 to 40 years were assessed. Among these assessed 73% were in group 21-30 years with mean \pm SD 28.4 years. In our study 70.1% were from urban and nearly one third of them were had higher education. As well as 74% were not working, finally the majority of them 73.2% were from middle socioeconomic status. About more than half 54.7% of their children were less than 6 months with mean \pm SD 4.169 months. More than one third of them 29.2% were 2nd birth order.

Regarding prevalence of breast feeding practice among our studied sample the majority of them apply breast feeding to their children with a percentage of 79.4% while those who use artificial feeding were in the minority with a percentage of 20.6% and this is shown in Fig(1).

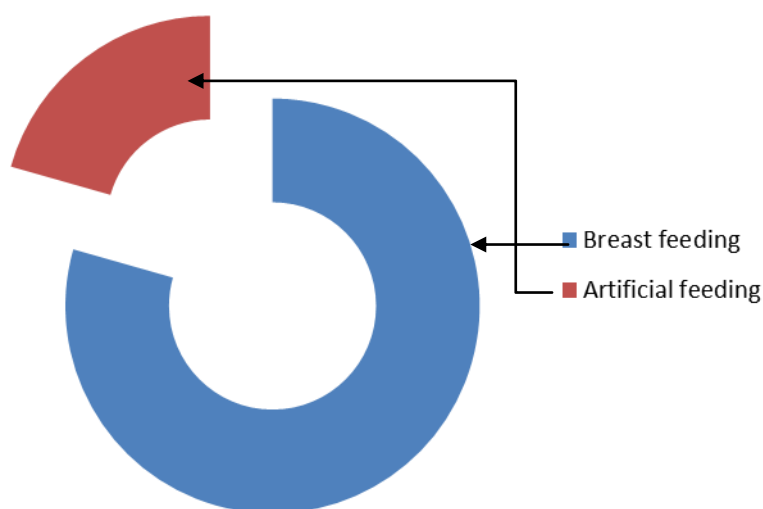


Fig. (1): Prevalence of breast feeding versus artificial feeding practice, in El-Minia City, 2013

There is a significant relation between prevalence of breast or artificial feeding and level of mother education. It was found that breast feeding was more prevalent than artificial feeding regardless of the level of mother education, but breast feeding was more prevalent among secondary school education mothers and illiterates with a percentage of

37.7% and 23.4% respectively. While artificial feeding was more prevalent among women that belongs to higher education group with a percentage of 0% in comparison to illiterates , primary and secondary education group which their percentages were 20%, 10% and 10% respectively, as shown in table (1)

Table (1): Distribution of breast feeding versus artificial feeding according to mother education in El- Minia City, 2013

Mother Education	Type of Feeding				Total	
	Breast Feeding		Artificial Feeding			
	No.	%	No.	%	No	%
Illiterates	19	23.4	0	20.0	24	22.7
Primary	4	3.9	2	10.0	6	5.2
Preparatory	0	.0	2	5.0	2	1.0
Secondary	31	37.7	4	10.0	35	32.0
higher	27	33.8	12	50.0	39	38.1
Master or above	1	1.3	0	.0	1.6	1.0

Our results show that there is a significant relation between type of feeding whether breast feeding or artificial feeding and whether mother work or not. Regarding working mothers the prevalence of breast feeding was 17 with a 78

% while artificial feeding was 8 with 32%. The prevalence of breast feeding among not working mothers was 70 with a 86.4%, while artificial feeding was 19 with a 17.9%. This is shown in table (2)

Table (2): Distribution of breast feeding versus artificial feeding according to mother work in El- Minia City, 2013

	Feeding				Total
	Breast feeding		Artificial feeding		
	No	%	No	%	
Working mother	17	68	8	32	25
Not Working mother	70	86.52	11	13.6	81
Total	87	82.1	19	17.9	106

Chi = 6.96, df= 2, P = 0.031

There is a significant relation between type of feeding and the presence of disturbed body mass index in the mother. Breast feeding was more prevalent among normal body weight mothers,

while being overweight or obese has made mothers more amenable to artificial feeding for their babies. this is shown in table (3) & fig. (3)

Table (3): Distribution of breast feeding versus artificial feeding according to Body Mass Index of mothers, in El- Minia City, 2013

Body Mass Index	Feeding				Total
	Breast feeding		Artificial feeding		
	No	%	No	%	
Underweight	2	1.3	0	0	2
Normal	49	59	0	20	54
Overweight	23	28	13	60	30
Obese I	7	9	1	0	8
Obese II	2	2.6	3	0.0	5
Total	83	79.1	22	20.9	106

Chi = 11.464, df= 4, P = 0.023

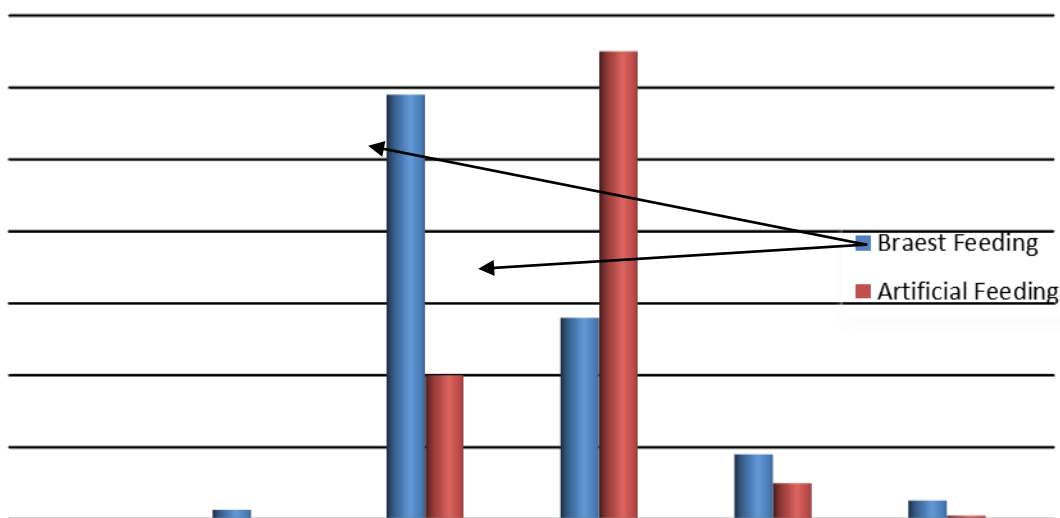


Fig. (3): Body Mass Index categories among mothers regarding artificial or breast feeding, in Al Minia City, 2013

Discussion

The results of the study give us an idea about prevalence and some determinants regarding artificial and breast feeding practices among mothers in El-Minia city, Egypt. The study shows that there is increase prevalence of breast feeding on the expense of artificial feeding in the studied population. The percentage of breast feeding was found to be a majority (79.4%) while the minority was practicing artificial feeding (20.6%). This prevalence of breast feeding versus artificial feeding agrees with the results of a recent study performed in Emirates which revealed very high prevalence of early initiation of breastfeeding (98%) that rapidly decline to equal our prevalence of breastfeeding (79%) versus artificial feeding (20%), due to various reasons namely, Mother's refusal, infant sickness and mother's returning to work⁽¹¹⁾.

In a study performed in Sri Lanka also it was found that prevalence of breastfeeding was 77% of children, while the remaining 23% were receiving artificial feeding. This was assumed to be in part due to lactating mothers working in the private sector were not enjoying same privileges as government employees who enjoy full pay maternity leave for only 12 working days, excluding weekends and public holidays⁽¹²⁾.

Although breastfeeding is a social norm and universal practice in most communities, it is also a learned behavior and may be influenced by many factors including socioeconomic, educational level and cultural⁽¹³⁾. In this aspect, our study revealed that there is a significant relation between prevalence of breast or artificial feeding and level of mother education. It was found that breast feeding was more prevalent among secondary school education mothers and illiterates with a percentage of 77.7% and 73.4% respectively. This may be due to low level of employment of both sectors namely the secondary school education mothers and illiterates. While artificial feeding was more prevalent among women that belongs to higher education group with a percentage of 20% in comparison to illiterates, primary and secondary education group which their percentages were 20%, 10% and 10% respectively. This may be due to high level of employment among those mothers with high education who must return to their work after termination of their full pay

maternity leave for only 9 working days, including weekends and public holidays.

This finding was similar to the results of a study performed among Saudi teachers in Abha city, which revealed a decreased prevalence of breastfeeding due to adverse work related issues⁽¹⁴⁾. On contrary to our findings regarding effect of mother education, and in a study performed by Ulak et al., in Nepal, mother's education status, occupation and perinatal conditions like types of delivery, birth weights were not significantly associated with EBF or predominant feeding for four months of age or beyond⁽¹⁵⁾. These differences may be due to the relation of degree of education and the opportunity of the mother to be employed in Egypt which is not the case in Nepal.

Our study revealed that There is a significant relation between type of feeding (whether breastfeeding or artificial feeding) and the presence of disturbed body mass index in the mother. Breast feeding was more prevalent among normal body weight mothers, while being overweight or obese has made mothers more amenable to artificial feeding for their babies. This finding was augmented by Previous studies that found that maternal obesity was negatively associated with prevalence of breastfeeding and its duration among white women^(16,17,18,19&20).

Conclusions

Based on the results of the present study, Breastfeeding was more prevalent than artificial feeding among mothers attending maternal and child health care facilities in Minia City, Upper Egypt. This may be try to intensive health education regarding the importance of breastfeeding for both the baby and the mother. There is a significant relation between breastfeeding and degree of education of the mothers. Breastfeeding also was significantly related to body mass index of the mother and it may be of protective value against maternal overweight and obesity, for further studies .

Recommendations

There is a dire need to arrange for health education program sessions for mothers, especially, those with higher education level regarding importance of breastfeeding. Also

there is a need for further studies regarding value of breastfeeding as a measure in combating obesity in lactating mothers to regain her pre-pregnancy body mass index.

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