Assessment of Physical Growth of Children less than two years in Relation to their Type of Feeding During Infancy

Zainab Jaber Muklad Al Budiary

Babylon health directorate, Ministry of Health, Iraq

ABSTRACT

Background: Breastfeeding burns more calories, hastening the weight loss after pregnancy. It causes the production of the hormone oxytocin, which aids in the uterus's return to its pre-pregnancy size and may lessen postpartum uterine haemorrhage. Infants get the best nourishment from breast milk. It contains all the vitamins, proteins, and fat that baby needs to develop in a virtually ideal ratio.

Aims: To assess physical growth of children less than two years in relation to types of feeding during infancy in Babylon province.

Method: This study was conducted through a convenience sampling on (100) hospitalized child in different hospitals in alhilla city.

Results: There is about 75% of children were take artificial feeding and about fifth 21% of sample's BMI with in 85th percentile. The result show that a non-significant differences between type of feeding in relation to physical growth..

Conclusion: The large percentage of those who take bottle feeding with in normal range of MBI percentile and there is no significance differences between groups in relation to physical growth.

Recommendations: The number of educational seminars, workshops, and training sessions offered by governmental and non-governmental organisations regarding the value of breastfeeding during the first six months of life must increase.

Keywords: less than two years, physical growth, type of feeding

Introduction

WHO and UNICEF recommend that children initiate breastfeeding within the first hour of birth and be exclusively breastfed for the first 6 months of life – meaning no other foods or liquids are provided, including water (Frank et al., 2019).

Infants get the best nourishment from breast milk. It contains all the vitamins, proteins, and fat that baby needs to develop in a virtually ideal ratio. Additionally, it is all offered in a form that is easier to digest than baby formula (Mihrshahi et al., 2018).

Breastfeeding burns more calories, hastening the weight loss after pregnancy. It causes the production of the hormone oxytocin, which aids in the uterus's return to its pre-pregnancy size and may lessen postpartum uterine haemorrhage. Breastfeeding has advantages that last for up to two years, particularly for the mother. Breast and ovarian cancer risk are also reduced by breastfeeding. Mothers could experience less osteoporosis as a result (Ruowei Li et al., 2014).

Direct breastfeeding (DBF), pumping and bottle feeding (P&F), formula feeding (FF), solid food feeding (SFF), and any combination thereof are all acceptable methods of feeding infants. Detailed accounts of various feeding habits, consistency, and changes over time are necessary for a thorough examination of newborn eating (Frank et al., 2019).

Physical growth describes the rises in weight and height as well as other changes to the body that occur as children become older. Once puberty arrives, teeth erupt, fall out, and then reemerge.

Infants' physical development reflects their overall health. Inadequate physical development may be a sign of atypical circumstances including poor nutrition and long-term health issues, which may cause developmental problems with the body's organ systems.

2. Methodology

2.1Ethical considerations

Permission has been obtained from Babylon health directorate.

2.2 Design ,setting, sampling of study and data collection

A descriptive- research was done to evaluate how infant feeding type affected physical growth during the first two years. The research started from (1rd May , 2022 –10th June, 2022). 1In order to gather data using a modified tool, the research conducted in the Babylon province on 100 hospitalised children who were randomly chosen by convenience sampling.

2.3 Instrument of study

The researcher was creating a questionnaire including items on demographics, height, weight, head and chest circumferences, and infant type of feeding.

2.4 Statistical Analysis

The Statistical Package of Social Sciences (SPSS) version is used for the data analysis in this research (24). The following statistical data analysis techniques were used to the study's data in order to evaluate its findings. Results were obtained by the researchers using descriptive and inferential data analysis.

3. Result and discussion

Table 1: demographic data of the Study Sample (N =100)

Demographical data	Ranking And Intervals	F= %
Age/ month	**1-3**	**35.5**
	4-6	29.0
	7-9	12.9
	10-12	22.6
	Total	100
Gender	**Male**	**52**
	Female	48
	Total	100
Mother's age / year	**17-22**	**45.2**
	23-27	32.3
	28-32	22.6
	Total	100
Occupation	Employee	3.2
	Housewife	**96.8**
	Total	100
Income monthly	**Poor**	**46**
	Moderate	42
	Good	12
	Total	100
Type of feeding	Breast feeding	6
	Bottle feeding	**75**
	Mix feeding	21
	Total	100

Table 1 revealed that 35.5percent of the sample were between (1-3) months old. This result contrasts with that of a study carried out in Southampton by Fisk et al. (2011), which found that most children were > 6 months old. It also concurs with the study's findings regarding the gender of the children, which showed that most (53percent of the study sample) were boys. In terms of the mother's age, a greater number, 45.2%, fell between the ages of 17 and 22. This finding contrasts with research done in Bangladesh by Mihrshahi et al. (2018) to examine the relationship between newborn feeding habits and diarrhoea and respiratory disease.

In contrast to a research done in Copenhagen by Munir et al. (2016), which found that a larger proportion of children in their second month were breastfed, Table 1 showed that 75 percent of children were bottle-fed.

Table 2. descriptive statistics of sample's physical growth (N =100)

Physical growth measurements	Ranking And Intervals	F= %
MBI percentile	less than 3rd percentile	18
	3rd percentile	6
	15th percentile	16
	50th percentile	17
	85th percentile	**21**
	97th percentile	10
	More than 97th percentile	12
	Total	100
Head circumference percentile	Under normal height	25.8
	2-10 percentile	29
	25-75 percentile	**41.9**
	Over normal	3.2
	Total	100
Chest circumference	Under normal	22.6
	Normal	**64.5**
	Over normal	12.9
	Total	100

The research (Risk of Bottle-feeding for Rapid Weight Gain During the First Year of Life) done in the United States between May 2005 and June 2007 by (Ruowei Li et al., 2014) indicated that 45.97% with within normal BMI. Table 2 explores that one fifth of child MBI percentile were 85th percentile.

Table 4. differences between type of feeding in relation to physical growth(N=100).

MBI percentile	Type of feeding			p-value*
	Breast feeding	Bottle feeding	Mix feeding	
Less than 3rd percentile	0%	24.4%	0%	0.627
3rd- 97th percentile	100%	58.6%	100%	
More than 97th percentile	0%	16.2%	0%	
Total	100%	100%	100%	
*ANOVA				

Table 5 shows that there are no significant differences between types of feeding in terms of physical growth for all infants who receive breast milk and formula and more than a fifth of infants who receive bottle milk and formula with normal weights (3rd-97th percentile). This finding is consistent with a study by Zasada et al. (2019) titled "Does type of feeding impact body composition in very low birth weight."

4. Conclusion

The researchers conclude that the large percentage of those who take bottle feeding with in normal range of MBI percentile and there is no significance differences between groups in relation to physical growth.

5- Recommendations:

According to the conclusion of the current study, the researchers recommended the following

1. Because of the importance of breastfeeding during the first six months of life, the study's findings highlight the need for more educational training workshops, seminars, and courses to be offered by governmental and non-governmental organisations.
2. More study will be needed to promote breastfeeding during the early years due to the dearth of such studies in Iraq.

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