

Analyzing the Correlation Between Maternal Knowledge of Breastfeeding and Infant Age

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Abstract

Aim of the study is to determine the Relationship between the age of infants and the knowledge of Breastfeeding mothers. Knowledge of breastfeeding mothers is a vital part of the infant's life. Infant care depends on the handling of an infant by the mother. Mother's education prevents the infants from infectious diseases. A secondary survey of the demographics of Pakistan 2013 to 2014 revealed that 1072 children aged 3 years and under were conducted. Multiple logistic regression analysis was applied to test the data. A secondary analysis of the demographics of Egypt revealed that 41% of infants were exclusively breastfed. 9% of infants had ARI symptoms. The sample size was 1340 infants under the age. The cross-sectional analytical study was conducted to check the correlation in Indonesia between the age of infants and the knowledge of breastfeeding women. A total of 50 mothers were selected for a research study. 76% of women were less knowledgeable. The attitude of women was 54 %. Working mothers comprised 66% of the population, and SMS education women comprised 44%. P-value was <0.02 of the alpha value of 0.05. The method and materials of the study are as follows. This research design is a cross-sectional analytical study on the role of an educated mother in breastfeeding. The setting of the study is a health facility in Karachi. The duration of the study is 3 months. Mothers of the area of Primary Health care in Karachi who have a breastfeeding child are the population of the study. The size of the study is 160, which included 80 breastfeeding women and 80 non-breastfeeding women. Sampling technique of the study is non probability purposive sampling? Inclusion criteria of the study included Breast feeding mothers who are having 0-2 year old child. Non-breastfeeding mothers who are having 0-2 year old child. Exclusion criteria of the study are that the Mothers are not having breastfeeding child. Mothers are not willing to participate. Structure questionnaire form was used to collect the data for this cross sectional analytical study. **Conclusion** on average infants whose caregivers lack breastfeeding knowledge are older (15.22 months) compared to those whose caregivers have such knowledge (12.50 months). While both age distributions are roughly symmetrical, they show slight skewness in opposite direction. These variance and

standard deviation are relatively close, indicating a similar range of ages in both groups. These findings may indicate a pattern where caregivers of younger infants are more likely to possess breastfeeding knowledge, or it could reflect a gradual decline in knowledge as the child grows older.

Keywords: Correlation, Breastfeeding, Maternal knowledge, Infants age and Analysis

Introduction

Breast feeding and nutrition are very vital things for growth and development of infants. Knowledge of mothers regarding breastfeeding to child is very vital thing for mothers. First primary and best natural nutrition for newborns is breast feeding. Exclusive breast feeding means the baby is on breastfeeding only he/she is not on other meals (Rosasusanti et al., 2025). A cross sectional study was conducted in Turkey reveals that 46.1% women received training during the postpartum period and 46.2% women of 7 and 12 months of infants received training. 51.2% Women left the breastfeeding when insufficient milk formation regression 0.340 and p value <0.01. There was negative relationship breastfeeding evaluation scale and beck depression inventory total score. (Resmiye and Rukiye. 2025).

A cross sectional descriptive study was conducted in Pakistan on factors affecting on breastfeeding. Binary logistic regression was applied to determine the independent and dependent variable. Study revealed that exclusive breastfeeding is common in Pakistan and it is best for improving postnatal care. Logically exclusive breastfeeding is compulsory in six months than mother should be start the weaning diet to the infants for growth and development. (Sidra Arif et al., 2021). A secondary survey of demographic of Pakistan 2013 to 2014 revealed that 1072 children age 3 years and under was conducted. Multiple logistic regression analysis was applied to test the data. (B Syeda et al., 2021). A secondary analysis of demographic of Egypt revealed that 41% of infants were exclusively on breastfed. 9% of infants were having ARI symptoms. Sample size was 1340 under the age of infants. (NH Farrag et al., 2024). The cross sectional analytical study was conducted to check correlation in Indonesia toward correlation between age of infants and breastfeeding women knowledge. Total 50 mothers were selected for research study. 76% women were knowledge less. Attitude of women 54 % were agreed. Working mothers were 66% and SMS education women 44%. P-value was <0.02 of alpha value of 0.05. (Simamata et al., 2024).

Problem statement

A cross sectional study was conducted in Turkey reveals that 46.1% women received training during the postpartum period and 46.2% women of 7 and 12 months of infants received training. 51.2% Women left the breastfeeding when insufficient milk formation regression 0.340 and p value <0.01. There was negative relationship breastfeeding evaluation scale and beck depression inventory total score. (Resmiye and Rukiye. 2025). Hence there is the need of checking predictor analysis among breastfeeding mothers and age of infants. A cross sectional descriptive study was conducted in Pakistan on factors affecting on breastfeeding. Binary logistic regression was applied to determine the independent and dependent variable. Study revealed that exclusive breastfeeding is common in Pakistan and it is best for improving postnatal care. Logically exclusive breastfeeding is compulsory in six months than mother should be starting the weaning diet to the infants for growth and development. Mothers become careless as baby grows. Knowledge of breastfeeding mothers for hygiene care was 45% mothers were having knowledge. Therefore, there is need of conducting research on predictor analysis among breastfeeding mothers and age of infants (Sidra Arif et al., 2021).

Research question

What is the relationship between knowledge of breastfeeding mothers and age of infants?

Hypothesis

Alternate: There is the relationship between knowledge of breastfeeding mothers and age of infants

Null: There is no relationship between knowledge of breastfeeding mothers and age of infants

Research objectives

To determine the relationship between knowledge of breastfeeding mothers and age of infants.

Significance of the study

This study will be explored the relationship between age of infants and breastfeeding mothers. It can provide valuable inside for healthcare provider, care givers and public health policy makers. Understanding how breastfeeding patterns change as infants grow older can inform strategies to promote optimal breastfeeding duration and techniques. It is helpful for findings of the study will help to identify challenges faced by mothers toward breastfeeding of infant. According to WHO recommendations this research will help to contribute in health awareness programs for the breastfeeding women. Findings of this research will help to prevent the infectious diseases of infants which are caused by poor breastfeeding. These researches will formulate the hypothesis for future researches. It is beneficial for identify the predictors among breastfeeding mothers and age of infants.

Purpose of the study

The aim of this study is to explore the relationship between knowledge of breastfeeding mothers and age of infants. The findings will help identify the challenges mother face during breastfeeding and contribute to health awareness initiatives in line with WHO recommendations. This research may also aid in the prevention of infectious diseases in infants that result from inadequate breastfeeding practices. Additionally, the study will help generate hypothesis for future research and identify key predictors related to infant age and breastfeeding behaviors. A significant concern with the lack of awareness among breastfeeding mothers regarding proper infant care during breastfeeding, as many do not adequately support their babies' growth and development.

Literature review

Cross sectional survey of WHO (world health organization) was conducted in America. This survey was conducted in different states of America to find out the prevalence of EBF exclusive breast feeding and mixed breast feeding. 36.8% prevalence of exclusive breast feeding was reported and 46% prevalence of mixed breastfeeding was reported in the survey(Meira, dos Santos Buccini et al. 2021)Prospective cohort study was conducted in Galicia Spain on breastfeeding mother's knowledge and age of infants. 297 women with pregnancy and no pregnancy were selected 98.4% women were pregnant and 28% women were delivered their babies. Level of knowledge among mothers are mostly acceptable. Mother knew about the exclusive breastfeeding for infants 0-6monts. Cross sectional survey was conducted in Ethiopia among breastfeeding mothers and infants. Researcher conducted the quasi experimental study after conducting the survey. Study was conducted on knowledge, attitude and self-efficacy of others toward breastfeeding 516 women were selected 258 for control group and 258 for experiment group were selected. Result of p value was

<0.05. According to the book breastfeeding of an infant should be consists of exclusive breastfeeding till the six months of life. Breastfeeding mothers should be maintaining personal hygiene to prevent the baby from infectious diseases(Suárez-Cotelo, Movilla-Fernández et al. 2019, O'Connor 2021, Gizaw, Sopory et al. 2022). Cross sectional survey was conducted in Virginia USA for checking prevalence of exclusively breast feeding mothers. Study revealed that 46% exclusively breast feeding mothers were investigated in Virginia USA (Zhu, Gupta et al. 2025). Review article on challenges and progress in breastfeeding rates was conducted in America. 56% breastfeeding mothers are fall in the category of exclusively breastfeeding mothers. 40% mothers started the weaning diet from 4 moths of the baby whereas guidelines are that till the six months exclusively breastfeeding should be provided to the infant. Many breast feeding mothers faced challenges toward breastfeeding to the child due to poverty and diseases. 52% infants were reported diarrhea during breastfeeding period. 53% of mothers were aware about personal hygiene of the mother and infant(Nist 2025). Excusive breastfeeding for child within six months of age research article was conducted and published in America. Cross sectional survey was conducted 500 breastfeeding mothers were selected for the study. 256 mothers were reported as exclusive breastfeeding mothers. 246 mothers were reported as not exclusively breastfeeding mothers they started the weaning diet and instant formula from four months of age of child. Mostly mothers were aware regarding exclusive breastfeeding is necessary for the baby within six months of age. Mostly mothers were aware regarding personal hygiene care of the baby to prevent the baby from infectious diseases(Feldman-Winter, Ware et al. 2025). This paper consists of secondary analysis of survey of 19 countries. Study was conducted to evaluate breastfeeding factors and exclusive breast feeding. 81% exclusive breastfeeding rate in Rwanda, 91% in Ghana, 52% Nigeria, 72% in south America, 51% in China, 69% in Broni, 58% in other countries. Study revealed that mothers were followed the guidelines of exclusive breastfeeding for six months old child according to report(Olapeju, Bride et al. 2025). Prospective cohort study was conducted in four different regions of Spain. 275 women were selected for this study. n=117 women were evaluated as exclusive breastfeeding mothers 75% women were not exclusively breastfeeding mothers due to they were employee in the companies. 59% mothers were housewife(Vila-Candel, Soriano-Vidal et al. 2024). Cross sectional survey was conducted in Mozambique 600 women were selected to evaluate the planned and unplanned pregnancy and breastfeeding about three out of four pregnant women were not planned for pregnancy and they delivered their babies non vaginal delivery. 70% women were planned for vaginal delivery. Mothers mostly were aware regarding exclusively breastfeeding for child till the six months of age(Mekonen 2024). Review article was published in America regarding relationship of breastfeeding with knowledge of mothers and age of infant, p value was 0.05. there is relationship between mother's knowledge and breastfeeding and age of infants, mothers were aware regarding breastfeeding of child to prevent from infectious diseases. Mothers are known about exclusive breastfeeding for infant of 0-6 months of age(Brani, Iliadou et al. 2024). The cross sectional study was conducted in University of Boulevard Latvia. Study was conducted to evaluate the relationship between pregnancy, socioeconomic status and breastfeeding among women. 1407 women were selected for the study. The data was collected from n=1407 women. Sampling technique was convenient sampling. Data collection through direct active survey. Cross sectional survey was conducted in America. Sample size was 475 women. 90% women are known about exclusively breastfeeding for child with six months of age. P values was 0.01 to investigated the relationship between breastfeeding mothers with age of infant and knowledge of mothers toward practices of mothers toward breastfeeding(Kozachenko, Kivite-Urtane et al. 2024). Factor effecting on

breastfeeding research article was published in JAMA. Duration of the study was two months' prospective cohort study was conducted. 72.4% breastfeeding mothers were followed the guidelines of exclusive breastfeeding for zero to six months old child. There were multiple factors effecting on breastfeeding: mother's illness, working women, hygiene care, insufficient milk formation in women, illness of infants, diarrheal diseases in infants, privacy, health care setups, socioeconomic status of the parents, house or shelter and behavior of mother. (Brani, Iliadou et al. 2024). 127 women were selected for the study. The data was collected from n=1407 women. Sampling technique was convenient sampling. Data collection through direct active survey. Cross sectional survey was conducted in America. Sample size was 475 women. 90% women are known about exclusively breastfeeding for child with six months of age. P values was 0.01 to investigated the relationship between breastfeeding mothers with age of infant and knowledge of mothers toward practices of mothers toward breastfeeding (Magnano San Lio, Maugeri et al. 2021). Scoping review was published in journal of pediatric in Indonesia. Mostly article retrieved regarding relationship between breastfeeding mothers and age of infant. 20 articles revealed that exclusively breastfeeding should be implemented for the baby of Zero to six months of age. 10 articles revealed that factors are effecting on breastfeeding via EBSCO literature (Hadisuyatmana, Has et al. 2021).

Methodology

Method and materials of the study are as following. The design of this research is cross sectional analytical study on the role of education mother in breastfeeding. The setting of the study is a health facility in Karachi (primary health care center). Duration of the study is 3 months. Mothers of area of Primary Health care in Karachi who are having breastfeeding child the population of the study. Size of the study is 160 which included 80 breastfeeding women and 80 non-breastfeeding women. Sampling technique of the study is non probability purposive sampling? Inclusion criteria of the study included Breast feeding mothers who are having 0-2 year old child. Non-breastfeeding mothers who are having 0-2 year old child. Exclusion criteria of the study are that the Mothers are not having breastfeeding child. Mothers are not willing to participate. Structure questionnaire form was used to collect the data for this cross sectional analytical study. The power of the test was 90 and 99% Confidence Interval. Data was analyzed by the SPSS Amos-23. Shapiro wilk test was used to check normality. Mann Whitney U test was applied to check statistical analysis on difference between breastfeeding mothers and infants age.

Study design The design of this research is cross sectional analytical study on the role of education mother in breastfeeding.

Study setting The setting of the study is a health facility in Karachi (primary health care center).

Duration of the study Duration of the study is 3 months.

Study population Mothers of area of Karachi who are having breastfeeding child the population of the study.

Study sample Sample size of this study is 160 women included 80 non breastfeeding women and 80 breastfeeding women.

Sampling technique non probability purposive sampling technique approach was employed.

Inclusion criteria inclusion criterion of this study is Breast feeding mothers who are having 0-2-year-old child. Non-breastfeeding mothers who are having 0-2 year old child.

Exclusion criteria this criterion included mothers are not willing to participate.

Study instrument Structure questionnaire form was used to collect the data for this cross sectional analytical study. The power of the test was 90 and 99% Confidence Interval.

Analysis Data was analyzed by the SPSS Amos-23. Kulmogrove test was used to check normality. . Mann Whitney U test was applied to check statistical analysis on difference between breastfeeding mothers and infants age.

Results

Test Statistics^a

	Age of infant/toddler in months	Number of siblings	Number of members in the family
Mann-Whitney U	2224.000	2804.500	2485.000
Wilcoxon W	7477.000	4515.500	7738.000
Z	-2.613	-.553	-1.700
Asymp. Sig. (2-tailed)	.009	.580	.089

a. Grouping Variable: Knowledge about the benefits of breastfeeding

Case Processing Summary

		Cases					
		Valid		Missing		Total	
	Knowledge about the benefits of breastfeeding	N	Percent	N	Percent	N	Percent
Age of infant/toddler in months	Yes	102	100.0%	0	0.0%	102	100.0%
	No	58	100.0%	0	0.0%	58	100.0%

Descriptives

	Knowledge about the benefits of breastfeeding	Statistic	Std. Error
Age of infant/toddler in months	Mean	12.50	.638
	95% Confidence Interval for Mean	Lower Bound 11.23	
		Upper Bound 13.77	
	5% Trimmed Mean	12.43	
	Median	12.00	
	Variance	41.559	
	Std. Deviation	6.447	
	Minimum	1	
	Maximum	24	
	Range	23	
	Interquartile Range	9	

No	Skewness	.370	.239
	Kurtosis	-.845	.474
	Mean	15.22	.833
	95% Confidence Interval for Mean	Lower Bound 13.56 Upper Bound 16.89	
	5% Trimmed Mean	15.38	
	Median	15.50	
	Variance	40.282	
	Std. Deviation	6.347	
	Minimum	3	
	Maximum	24	
	Range	21	
	Interquartile Range	10	
	Skewness	-.215	.314
	Kurtosis	-.886	.618

Discussion

Results Infants of caregivers without breastfeeding knowledge are older on average (15.22 months) than those with knowledge (12.50 months). Both distributions are approximately symmetric but slightly skewed in opposite directions. Variance and standard deviation are similar, suggesting comparable spread in ages. Differences might suggest a trend where knowledge about breastfeeding is more common among caregivers of younger children, or perhaps knowledge diminishes over time. Would you like help performing a statistical test (e.g., t-test) to determine if the mean age difference is significant. Cross sectional survey of WHO (world health organization) was conducted in America. This survey was conducted in different states of America to find out the prevalence of EBF exclusive breast feeding and mixed breast feeding. 36.8% prevalence of exclusive breast feeding was reported and 46% prevalence of mixed breastfeeding was reported in the survey(Meira, dos Santos Buccini et al. 2021)Prospective cohort study was conducted in Galicia Spain on breastfeeding mother's knowledge and age of infants. 297 women with pregnancy and no pregnancy were selected 98.4% women were pregnant and 28% women were delivered their babies. Level of knowledge among mothers are mostly acceptable. Mother knew about the exclusive breastfeeding for infants 0-6months. Cross sectional survey was conducted in Ethiopia among breastfeeding mothers and infants. Researcher conducted the quasi experimental study after conducting the survey. Study was conducted on knowledge, attitude and self-efficacy of others toward breastfeeding 516 women were selected 258 for control group and 258 for experiment group were selected. Result of p value was <0.05.According to the book breastfeeding of an infant should be consists of exclusive breastfeeding till the six months of life. Breastfeeding mothers should be maintaining personal hygiene to prevent the baby from infectious diseases(Suárez-Cotelo, Movilla-Fernández et al. 2019, O'Connor 2021, Gizaw, Sopory et al. 2022).Cross sectional survey was conducted in Virginia USA for checking prevalence of exclusively breast feeding mothers. Study revealed that 46% exclusively breast feeding mothers were investigated in Virginia USA (Zhu, Gupta et al. 2025).Review article on challenges and progress in breastfeeding rates was conducted in America. 56% breastfeeding mothers are fall in the category of exclusively breastfeeding mothers. 40% mothers started the weaning diet from 4 moths of the baby whereas guidelines are that till the six months exclusively breastfeeding should be provided to the infant. Many breast

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Conclusion

On average infants whose caregivers lack breastfeeding knowledge are older (15.22 months) compared to those whose caregivers have such knowledge (12.50 months). While both age distributions are roughly symmetrical, they show slight skewness in opposite direction. These variance and standard deviation are relatively close, indicating a similar range of ages in both groups. These findings may indicate a pattern where caregivers of younger infants are more likely to possess breastfeeding knowledge, or it could reflect a gradual decline in knowledge as the child grows older.

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