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Impact of Paternal Knowledge and Attitude towards Exclusive Breastfeeding Practice among Fathers in a Selected Hospital, Ajman, UAE.

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Abstract

Introduction

Breastfeeding is universally recognized as the gold standard for infant nutrition, providing essential nutrients and immune protection that contributes to the overall health and well-being of both infants and mothers. The World Health Organization (WHO) emphasizes the importance of exclusive breastfeeding for the first six months of an infant's life, followed by continued breastfeeding alongside complementary foods for up to two years or more[1]. Breastfeeding is the normal way of providing young infants with the nutrients they need for healthy growth and development. Improving Breastfeeding rates around the world could save the lives of more than 820,000 children under age 5 every year, the majority (87 percent) being under 6 months of age [2].

Objectives of the study

- Assess paternal level of knowledge on exclusive breastfeeding.
- Determine paternal attitude towards exclusive breastfeeding.
- Correlate paternal level of knowledge and attitude towards exclusive breastfeeding and practice of exclusive breastfeeding.
- Associate selected paternal demographic variables with paternal level of knowledge and attitude towards exclusive breastfeeding.

Methods

This study used a quantitative, descriptive cross-sectional survey to assess paternal knowledge and attitudes towards exclusive breastfeeding among fathers of infants aged zero to six months at Thumbay University Hospital, Ajman, UAE. The study included 80 fathers attending postnatal wards, newborn clinics, and immunization clinics, selected through convenience sampling.

Results

Descriptive statistics revealed that the majority of the samples were Muslim, held Bachelor's degrees, and had 1-2 children. Nearly half were exposed to breastfeeding information, with 57% of births being vaginal and 59.5% of infants being in their first month.

Pearson's correlation showed no significant relationship between knowledge and attitude ($r = 0.066$, $p = 0.563$). Logistic regression found that fathers of infants aged 4+ months and those who had Caesarean sections were less likely to have good knowledge, while delayed breastfeeding initiation (after a day) was linked to better knowledge. Attitudes were significantly poorer among fathers in non-health professional/teacher occupations. The study suggests public health interventions to promote early breastfeeding initiation and provide ongoing support for breastfeeding mothers, and recommends further qualitative research to explore cultural, social, and environmental factors affecting breastfeeding decisions.

Conclusion
The prevalence of early breastfeeding initiation is 52%, indicating a positive trend, but the current sustained breastfeeding rate is 48.1%, revealing a gap between initiation and sustained breastfeeding. Fathers of infants aged 4 months or older and those delivered via Cesarean section demonstrated poorer knowledge about exclusive breastfeeding, highlighting the need for paternal involvement in education and support programs. Fathers in "Others" occupations such as accountancy, business, engineering etc displayed significantly poorer attitudes towards exclusive breastfeeding compared to health professionals or teachers, underscoring the importance of tailored interventions for different occupational groups. This highlights the need for targeted interventions to improve paternal knowledge and attitudes. For the Association between paternal knowledge towards exclusive breastfeeding the majority of respondents had low knowledge of 51.9% Similarly, majority had a low attitude of 49.4% towards exclusive breastfeeding. This highlights the need for targeted interventions to improve paternal knowledge and attitudes.

Introduction

Breastfeeding is universally recognized as the gold standard for infant nutrition, providing essential nutrients and immune protection that contribute to the overall health and well-being of both infants and mothers. The World Health Organization (WHO) emphasizes the importance of exclusive breastfeeding for the first six months of an infant's life, followed by continued breastfeeding alongside complementary foods for up to two years or more. Breastfeeding is the normal way of providing young infants with the nutrients they need for healthy growth and development. Improving Breastfeeding rates around the world could save the lives of more than 820,000 children under age 5 every year, the majority (87 percent) under 6 months of age [2].

Children who are not breastfed within the first hour of life are at a greater risk of common infections. A study involving over 4,000 children in Tanzania found that delayed breastfeeding initiation was linked to a higher likelihood of coughing and nearly a 50% increased risk of respiratory difficulties in the first six months of life compared to those who started breastfeeding within the first hour of birth.[4] Breastfeeding stimulates the release of prolactin in the mother, a crucial hormone for milk production, ensuring a steady food supply for the infant. The breast milk produced in the first few days, known as colostrum, is highly nutritious and rich in antibodies, serving as the infant's first vaccine and offering essential protection against illness and mortality.

"Breastfeeding promotes optimal brain development in infants, enhancing their cognitive and sensory capabilities." This early cognitive development has lasting effects, positively impacting academic performance in children [3].

The worldwide public health guidance strongly advocates exclusive breastfeeding during the initial six months of an infant's life. In line with this, the United Arab Emirates' breastfeeding policy stipulates that infants should be exclusively breastfed for the first six months. Within the context of Islam, breastfeeding is considered an expectation of parents, with an emphasis on encouraging women to breastfeed their infants for a duration of two years. Given the UAE's Islamic identity, it actively promotes breastfeeding across its healthcare system. In fact, in 2014, the UAE's Federal National Council introduced a proposed provision in child rights legislation, making it obligatory to breastfeed for the initial two years of an infant's life (FNC 2014) [5].

Aim of the Study

The study aimed to assess the impact of knowledge and attitude of fathers towards exclusive breastfeeding practice, in UAE.

Objectives of the Study

- Assess paternal level of knowledge on exclusive breastfeeding.
- Determine paternal attitude towards exclusive breastfeeding.
- Correlate paternal level of knowledge and attitude towards exclusive breastfeeding and the practice of exclusive breastfeeding.
- Associate selected paternal demographic variables with paternal level of knowledge and attitude towards exclusive breastfeeding.

Methodology

The study aimed to evaluate paternal knowledge and attitudes towards exclusive breastfeeding using a quantitative research approach with a descriptive cross-sectional survey design. The target population consists of fathers of newborns and infants aged 0-6 months attending postnatal, newborn, and immunization clinics in a selected hospital in the UAE. The inclusion criteria specify fathers of normal newborns delivered by both vaginal and cesarean section, while exclusion criteria include fathers of preterm or sick babies.

The sample size was 80 fathers selected through convenience sampling. Instruments for data collection included structured questionnaires to assess socio-demographic profiles of the fathers and paternal knowledge. An opinionnaire is used to assess the attitude towards exclusive breastfeeding using a 5 point likert scale – Strongly Agree, Agree , Not sure , Strongly Disagree and Disagree.

These questionnaires were validated through translation and expert review, with reliability assessed via a pilot study, r=0.786. Ethical considerations included obtaining ethical clearance from the Institutional Research Committee,Gulf Medical University, permissions from healthcare setting, and informed consent from participants and ensured confidentiality and anonymity of collected data.

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Table 1 : Sociodemographic characteristics of the fathers (n=80)

Variable	Characteristics	Number	Percentage
Religion	Christian	25	31.6
	Hindu	4	5.1
	Muslim	50	62.0
	Atheist	1	1.3
Education Level	Undergraduate	15	19.0
	Vocational Education	4	5.1
	Bachelor's Degree	41	50.6
	Master's Degree	20	25.3
Number of children	1-2	57	70.9
	3-4	20	25.3
	5+	3	3.8
Exposure to information on Breastfeeding	No	41	50.6
	Yes	39	49.4
Mode of Delivery	Vaginal Birth	46	57.0
	Cesarean Section	34	43.0
Infant age (In Months)	1	48	59.5
	2	9	11.4
	3	15	19.0
	4	2	2.5
	5	1	1.3
	6	5	6.3
Birth order of the infant	1st	33	40.5
	2nd	23	29.1
	3rd	9	11.4
	4th	9	11.4
	5th	3	3.8
	6th	2	2.5
	8th	1	1.3
Initiation of Breastfeeding	Immediately	42	51.9
	After 1 hour	21	26.6
	after 1 day	11	13.9
	after 2 days	3	3.8
	weeks	1	1.3
	never	2	2.5
Current Infant Breastfeeding practice	Breastmilk	39	48.1
	Formula feeds	12	15.2
	Breastmilk and Formula feeds	29	36.7
Occupation	Teacher/health professional	14	17.7
	Others	66	82.3

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Table 2 : Factors associated with Paternal Knowledge on Exclusive Breastfeeding.(n=80)

Variables	Knowledge of infant breast feeding		COR with 95% CI	P-value	Adjusted OR with 95% CI	P-value
	Poor	Good				
Infant (age in months)						
1	22	26	Ref		Ref	
2	5	4	0.646 (0.15, 2.71)	0.551	0.40 (0.08, 2.01)	0.269
3	8	7	0.707 (0.22, 2.27)	0.560	0.39 (0.096, 1.59)	0.189
4+	7	1	0.115 (0.01, 1.01)	0.051	0.09 (0.009, 0.88)	0.038**
Initiation of Breastfeeding						
Immediately	25	17	Ref		Ref	
After 1 hour	11	10	1.420 (.49, 4.11)	0.517	1.72 (0.52, 5.75)	0.375
After a day	5	12	3.750 (1.11, 12.67)	.033**	9.33 (1.88, 46.40)	0.006**
Mode of delivery						
Vaginal Birth	20	26	Ref		Ref	
Cesarean Section	21	13	2.02 (.82, 5.01)	0.129	0.30 (0.09, 0.95)	0.040**
Educational level						
Undergraduate	8	7	Ref		Reference	
Vocational Education	2	2	1.14 (0.13, 10.39)	0.91	0.31 (0.02, 4.10)	0.377
Bachelor's Degree	22	19	1.03 (0.32, 3.40)	0.96	1.26 (0.30, 5.34)	0.755
Master’s Degree	10	10	1.14 (0.30, 4.37)	0.845	1.049 (0.20, 5.45)	0.954
Age in years			1.01 (0.95, 1.07)	0.755	1.015 (0.95, 1.09)	0.675

Table 2 describes Fathers with infants aged 4+ months have lower knowledge about exclusive breastfeeding (AOR = 0.09). Cesarean delivery is also linked to poorer knowledge (AOR = 0.30). Delaying breastfeeding initiation beyond the first day increases knowledge (AOR = 9.33). Education level and father's age show no significant impact (p > 0.05).

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Table 3 : Factors associated with attitude of exclusive breastfeeding (n=80)

Variables	Attitude of infant breast feeding		COR with 95% CI	P-value	Adjusted OR with 95% CI	P-value
	Poor	Good				
Initiation of Breastfeeding						
Immediately	23	19	Ref		Ref	
After 1 hour	10	11	1.41 (.49, 4.04)	0.527	1.17 (0.34, 3.99)	0.807
After a day	6	11	2.34 (.73, 7.55)	0.154	1.22 (0.30, 4.96)	0.783
Educational level						
Undergraduate	7	8	Ref		Reference	
Vocational Education	1	3	2.63 (.22, 31.35)	0.446	3.44 (.23, 51.96)	0.373
Bachelor's Degree	17	24	1.18 (.36, 3.90)	0.782	0.90 (0.24, 3.36)	0.869
Master's Degree	14	6	0.38 (.09, 1.51)	0.168	0.39 (0.08, 1.79)	0.223
Occupation						
Health professional/ Teacher	4	10			Ref	
Others	35	31	.34 (.10, 1.21)	0.095	0.22 (0.05, 0.99)	**0.049***
Exposure to information on Breastfeeding						
No	23	18			Ref	
Yes	16	23	1.95 (.80, 4.76)	0.145	1.64 (.58, 4.64)	0.350
Birth order						
1st	14	19			Ref	
2nd	9	14	1.21 (.41, 3.60)	0.732	1.43 (.41, 4.94)	0.575
3+	16	8	0.39 (.13, 1.17)	0.092	0.54 (0.15, 1.93)	0.340
Age in years			0.96 (.90, 1.02)	0.157	0.95 (0.88, 1.0)	0.122

Table 3 Describes Those in the "Others" occupational category have significantly lower odds of a positive attitude toward breastfeeding compared to health professionals and teachers (AOR = 0.22, 95% CI 0.05, 0.99). Factors like initiation of breastfeeding, educational status, exposure to information, birth order, and father's age showed no significant association with attitudes toward exclusive breastfeeding ($p > 0.05$). The "Others" category includes various professions like sales, engineers, accountants, and stay-at-home parents.

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Table 4 Association between Paternal knowledge towards exclusive breastfeeding

Knowledge						
		Frequency	**Percent**	**Valid Percent**	**Cumulative Percent**	**Cutoff score (Mean value)**
Valid	Low	42	51.9	51.9	51.9	4.33
	High	38	48.1	48.1	100.0	
	Total	80	100.0	100.0		

Table 4 describes that A mean value of 4.33 is used as the cutoff score to differentiate between "Low Knowledge" and "High Knowledge" categories. This means that respondents with scores below 4.33 are classified as having low knowledge, while those with scores equal to or above 4.33 are classified as having high knowledge.

- Low Knowledge: 42 respondents, which accounts for 51.9% of the total responses.
- High Knowledge: 38 respondents, which represents 48.1% of the total responses.

Table 5 Association between Paternal attitude towards exclusive breastfeeding (n=80)

Attitude						
		Frequency	**Percent**	**Valid Percent**	**Cumulative Percent**	**Cutoff score (Mean value)**
Valid	Low	39	49.4	49.4	49.4	34.23
	High	41	50.6	50.6	100.0	
	Total	80	100.0	100.0		

From table 5 The mean value of 34.23 is being used as the cutoff score to distinguish between "Low Attitude" and "High Attitude" categories.

- Low Attitude: 39 respondents, accounting for 49.4% of the total valid responses.
- High Attitude: 41 respondents, representing 50.6% of the total valid response

Discussion

Our study found that fathers of infants aged 4 months or older were less likely to have good knowledge about exclusive breastfeeding compared to those with younger infants (AOR = 0.09, 95% CI 0.009, 0.88), consistent with previous studies highlighting decreased knowledge as infants grow older Additionally, fathers of Caesarean-born infants had lower knowledge levels compared to those of vaginal births (AOR = 0.30, 95% CI 0.09, 0.95), contrasting with findings from Chennai, India [7].

Moreover, fathers who delayed breastfeeding initiation beyond a day post-birth had better knowledge (AOR = 9.33, 95% CI 1.88, 46.40), which contradicts existing literature emphasizing early initiation [8].

Fathers in professions outside of healthcare and teaching had significantly lower odds of having a positive attitude towards breastfeeding (AOR = 0.22, 95% CI 0.05, 0.99), consistent with studies showing that professional exposure influences attitudes [9]. No significant associations were found between paternal attitudes and variables such as breastfeeding initiation, educational status, exposure to breastfeeding information, birth order, and father's age, aligning with similar studies [10].

Our correlation analysis revealed a negligible positive correlation ($r = 0.066$, $p = 0.563$), indicating no significant relationship between paternal knowledge and attitudes. This contrasts with studies demonstrating a strong correlation between knowledge and attitudes in health behavior research [11], yet aligns with findings from Malaysia, suggesting cultural influences in predominantly Muslim countries might play a role [12].

Conclusion

The prevalence of early breastfeeding initiation is 52%, indicating a positive trend, but the current sustained breastfeeding rate is 48.1%, revealing a gap between initiation and sustained breastfeeding. Fathers of infants aged 4 months or older and those delivered via Cesarean section demonstrated poorer knowledge about exclusive breastfeeding, highlighting the need for paternal involvement in education and support programs. Fathers in "Others" occupations such as accountancy, business, engineering etc displayed significantly poorer attitudes towards exclusive breastfeeding compared to health professionals or teachers, underscoring the importance of tailored interventions for different occupational groups. This highlights the need for targeted interventions to improve paternal knowledge and attitudes. For the Association between paternal knowledge towards exclusive breastfeeding the majority of respondents had low knowledge of 51.9% Similarly, majority had a low attitude of 49.4% towards exclusive breastfeeding. This highlights the need for targeted interventions to improve paternal knowledge and attitudes.

Ethical Considerations

- Ethical Clearance has been obtained from the Institutional Research Committee.
- Prior permission has been obtained to conduct the study in the respective health care setting.
- Informed consent has been obtained from the study samples prior to conduct of study.
- Confidentiality and Anonymity of the data collected was maintained

Conflict of Interest

There is no conflict of interest.

Contribution of Authors

The first three authors contributed to the development of the proposal and carried out the data collection while the fourth author supervised the entire research activity.

Acknowledgement

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