

The Attitude of UAE Mothers towards Breastfeeding in Abu Dhabi

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Abstract

Department of Health (DOH) the regulator of Abu Dhabi region in UAE launched its Baby Friendly Hospital Initiative (BFHI) on March 21, 2016. There has been little success to this program in transforming the breastfeeding experience of Abu Dhabi mothers. This paper tries to analyze the attitude of Abu Dhabi mothers towards breastfeeding and to explore the factors that modulates maternal attitude. A quasi experimental design has been with mixed methods approach to guide this study. A convenient sampling of 384 women visiting maternal clinics were recruited to answer an IOWA questionnaire. The overall breastfeeding experience of UAE mothers are suboptimal. The UAE mother prefers formal feeding over breastfeeding due to their professional commitments. Multiple factors modulate maternal attitude to breastfeeding.

Keywords: breastfeeding, attitude, breastfeeding attitude, breastfeeding factors, breastfeeding practices.

Introduction

The first two years of life are critical for a child's growth and development. Breastfeeding has been defined by Scott and Mostyn (2003) as

“a biological act but is also known to be socially and culturally conditioned, meaning that the context in which it takes place is an important determinant of the behavior.”

Breastfeeding has been recommended in global health policies of the developing and developed countries as safe and appropriate for the initial stages of life (Radwan, 2013). Breastfeeding as a natural and biological process of providing nutrients to infants has been recognized internationally. Organizations like World Health Organizations (WHO) and American Academy of Pediatrics (AAP) highly recommends infant breastfeeding. Benefits of breastfeeding has been augmented in multiple researches.

As a modern society, United Arab Emirates (UAE) is a hotspot for expatriates from around the world for career and growth opportunities. As a rich country with high purchasing power, its population has tremendous choices to afford from bottle-feeding to other supplementary feedings (Radwan, 2013). On the contrary, this

might have a reciprocal effect by persuading the UAE mothers for other modalities of infant feeding by threatening the existing exclusive breastfeeding practice, which otherwise is the norm of the country. As an Islamic country, it is the Quranic recommendation to breastfeed children up to the first two years of age. Al Ketbi *et. al.*, (2018) have positively correlated breastfeeding in Muslim mothers with Islamic tradition. Belligerent social marketing, feministic ideologies, cultural and psychological views may also affect maternal perception of breastfeeding (Gallagher, 2012).

The United Arab Emirates have promoted and recommended baby friendly initiatives since 1993 (Sharjah Baby Friendly Office, 2019/5). Department of health (DOH), the regulator of healthcare sector in the Emirate of Abu Dhabi have launched Baby-Friendly Hospital Initiative on March 21st, 2016. Even though Abu Dhabi has an advance and modern healthcare sector, only few hospitals are recognized or certified as baby-friendly hospitals. Even though the concepts of Baby-Friendly Hospital Initiatives have been adopted in Abu Dhabi since 2016, there is no comprehensive strategy to monitor the progress of breastfeeding initiatives or surveillance systems in the Abu Dhabi. There is

a need of proper strategies, plans or actions and national targets to promote breastfeeding education, knowledge and attitude among women. The absence of a holistic and unified surveillance system between healthcare providers and the regulatory bodies makes it hard to analyze the progress of breastfeeding initiatives in the UAE. A lackadaisical progress of Baby-Friendly Hospital Initiative can be assumed to be the resultant of an undermining data collection methodology, lack of support systems that are available for breastfeeding mothers and the absence of a national strategic plans based on actionable data.

Radwan (2013) has conducted a study on factors contributing to suboptimal breast feeding and complementary practices of the local UAE population. A very limited number of journals are available in public domain on maternal factors contributing maternal breastfeeding practices in the UAE. Also, there is almost no evidence that correlates maternal breastfeeding practices in the UAE to Baby-Friendly Hospital Initiative that has been adopted by Department of health. Through this study, the researcher aims to identify the attitude of UAE mothers towards breastfeeding and there by contribute to the breastfeeding initiatives in UAE.

Literature review

The practice of breastfeeding ages backs in the Middle Eastern population, this practice is driven the Islamic teaching, culture and traditions. The Holy Quran recommends breastfeeding upto the age of two years in children. Aggressive marketing by baby food lobby has contributed to derailing the mothers from breastfeeding and understanding of factual concepts of infant nutrition. Breastfeeding have been the primary source of nutrition of infants from late 1970s (Taha, 2017). During 1980s mixed feeding, had gained momentum. Multiparous women had a higher rate of breastfeeding compared to novice mothers. (The National Child Health Survey: UAE, 1988). Bottle feeding started gaining momentum in 1990s and was considered as the norm childrearing. The drive of breastfeeding regained its momentum following the Innocenti Declaration in 1990. Following Innocenti declaration, the Ministry of Health facilitated and adopted the promotion of Baby Friendly Hospitals in the United Arab Emirates.

The sluggish progress of breastfeeding initiative in the United Arab Emirates is alarming. Based on the study conducted by Al Mazroui, Oyejide, Bener and Cheema (1997), 70% of samples in a cohort study in the Emirate of Al-Alin was fed on non-milk supplements during the first month of life. A study by Fikri and Farid (2000) showed an improvement in breastfeeding to 34% of infants being exclusively breastfeed for four months of their initial life. Further improvement in breastfeeding was noticed by Al Tajir, Sulieman, and Badrinath (2006) with 48.4 % of babies being breastfeed during the first month of their life in the Emirate of Sharjah. Another study was conducted by Radwan in 2013 on the initiation and prevalence of breastfeeding. Rawdan (2013) has noticed a high initiation rate (98%) of breastfeeding among Emirati mothers with a progressing breastfeeding duration upto 8. 6 months. However, 83.5% of mothers have initiated their infants with solid foods before 6 months of age. About 42% of the UAE mother were believe to breastfeed infants during the first month of life (Taha, 2017). In another cross-sectional study by Taha, Garemo and Nanda (2018), most of the children (95.6%) were introduced to breastfeeding as per WHO recommendation.

As a developed country, the UAE understands the importance of education. The UAE have given substantial effort in its female education. As more and more female receive territory education, there is a substantial increase female employment rate following by a positive economic transition. Female employment rate in the country has increased from 29.2 % in 1990 to 40.9% in 2017. The increase in employment and education rate has a reciprocal impact on the breastfeeding practices considering employment requirements acting as a barrier in maternal breastfeeding (Taha, Garemo & Nanda, 2018; Eidelman, et. al 2012).

The duration and initiation breastfeeding also have an impact by maternal education (Radwan, 2013). Also, maternal education has been identified as the key determinant for deciding breastfeeding behavior at or after 6 months (Tajir, Sulieman & Badrinath, 2006). Breastfeeding practices also depends on the duration of maternity leaves availed in each facility. Public sectors generally provide higher maternity benefits compared to private facilities.

Mixed feeding has now emerged as the norm among employed couples (Radwan, 2013).

Family plays a key role in modulating the behavior of couples. Extend of support and motivation to the mother helps the mother to initiate and continue with higher duration of breastfeeding. It has been noted that mothers tend to breastfeed their first-born infant for longer (Eidelman, et.al. 2012). New mothers have higher adherence to breastfeeding than experienced mothers (Al-Mutairi, Al-Omran & Parameaswari, 2017). Aggressive marketing has a devastating effect on breastfeeding practices. Due to the availability and promotion of follow on milk as a safe alternative and as a means to support working mothers compels the general public for early adoption of complementary foods. Many women now prefer to delivery surgically when compared to long painful natural birthing process (Taha, Garemo & Nanda, 2018).

A notable attention to breastfeeding researches can be pointed to breastfeeding practices in the Kingdom of Saudi Arabia (KSA). According to Ahmed and Salih (2019), breastfeeding practices in KSA is influenced by region and hence the prevalence of breastfeeding practices varies between the regions. Researches have noted a positive correlation between developed areas and adoption of mixed method breastfeeding practices. This correlation is the resultant of increased purchasing power, socio-economic growth and the availability of milk substitutes in developed areas (Ahmed & Salih, 2019; WBTi, 2016). Breastfeeding initiation rate in KSA is as high as 96% (Ahmed & Salih, 20119), however, majority of women preferred mixed methods feeding over formula feed and exclusive breast-feeding practices (AlMutairi, Al-Omran & Parameaswari, 2017).

Majority of the researches reviewed in this study focuses on a narrowed aspect of maternal or rarely infant attributes. The effect of knowledge of breastfeeding and the factors that modulates knowledge are solely depended on a self-reported reason that may be influenced by their limited insight into the concept of breastfeeding. Many a times a woman may be unaware about the broader environmental and socio-economic influences that may affect their breastfeeding behavior. Survey questions may limit women's response on their perception or may choose to not answer socially less

acceptable responses such as loss of breast shape (McLennan, 2001) or having a dysfunctional family.

Methodology

The effect of attitude to breastfeeding and the factors that modulated breastfeeding attitude in Abu Dhabi mothers were analyzed through qualitative and quantitative approach. A quasi-experimental design was selected using mixed methods approach. The primarily validation can be confirmed through quantitative approach, however, qualitative information can be used to further validate the constructs identified in conceptual framework. In combination both these approaches can help to triangulate the data where quantitative analysis can interpret empirical findings by showing the level of significance of relationship while qualitative information explores interpretation of the phenomena.

In the absence of a well-tested research tool to access breastfeeding attitude that may affect the middle eastern population, a questionnaire was adapted from IOWA Infant Feeding Attitude Scale. With the introduction of Healthy People 2020 by the U. S. Department of Health and Human Services in 1990 there emerged a need to measure breastfeeding attitude to increase the breastfeeding initiation rate in USA. The IOWA Infant Feeding Attitude Scale has been well tested for its reliability and validity in assessing attitudes towards infant-feeding methods with Cronbach's alpha ranging from 0.85 to 0.86 (De La Mora et al, 1999). The scale is very easy to use and can be administered easily as a survey questionnaire. However, there has been no reported use of this tool in middle eastern population. A written approval was obtained from the researches to use IOWA Infant Feeding Attitude Scale in this study with exact replication to avoid the loss of confidence in reliability and validity in measure maternal attitude towards breastfeeding. The IOWA Infant Feeding Attitude Scale is a five-point Likert Scale with 17 items. The responses are summed and categorized based on their attitude to breastfeeding. Each questionnaire took around 25 minutes to fill out and were provided to participants in Arabic or English as per their language preference.

A convenience sampling was used to recruit samples to this study. A total of 384 samples

were recruited with a confidence level of 95% and margin of error percentage at 5% from the antenatal clinic of a healthcare group in Abu Dhabi. Study cohort included all nationalities, age, and socio-economic groups visiting the healthcare facility from June 2019 to November 2019. The following inclusion criteria was used to recruit the samples

1. All women visiting the OBGYN clinics in NMC facilities in Abu Dhabi
2. All women who gave birth to a live infant
3. Is willing to participate
4. All women above age of 18 years
5. All women who are legally married
6. All women who are breastfeeding

All results will be presented as descriptive statistics for sociodemographic data. Impact of attitude and other modulating factors was analyzed using both inferential and descriptive statistics. Impact of knowledge, education and attitude among participants will be analyzed through chi square-test (χ^2) and ANOVA. Regression and correlation statistics will be used on analyses the effect of the variables on the breastfeeding practice. Association of dependent variable “breastfeeding behavior” and independent variables was estimated using multivariate logistic regression analysis.

Results and discussions

A total of 384 completed questionnaires were analyzed. The mean age of the participants were 29 years, while the age group with highest participation was between 25-29 years with a representation of 36%. The key difference of this study with other similar studies conducted in the UAE is in its sample selection. The samples selected in this study only includes breastfeeding mothers, while other studies have included non-breastfeeding mothers also. Based on the analysis on breastfeeding attitude using IOWA questionnaire, mothers showed a positive attitude to formula feeding. The prevalence of inclination towards formula feeding among breastfeeding mothers indicates mixed feed practices where women chooses to breastfeed along with formula feeding. This brings up a cardinal observation that most women start with a strong breastfeeding intend, however, fails to maintain its exclusivity.

Excusive breastfeeding is recommended up to six months of infant age. Al Ketbi, et al. (2018), in their study cites a positive attitude among

breastfeeding mothers, however, has concluded the study with suboptimal breastfeeding experience due to failure of women in maintaining exclusivity. The conflict in findings between the finding of Al Ketbi et al (2018) and this study is due to difference in population as this study only included breastfeeding mothers. However, both studies have the same conclusion that UAE mother’s fails to maintain their exclusivity leading to suboptimal breastfeeding experiences. On the contrary a study conducted in middle eastern population in Kingdom of Saudi Arabia (KSA) by Boshra and Samah (2018) shows a positive attitude to breastfeeding. This can be easily understood with the cultural difference between KSA and UAE. The employment rate and education of women in KSA and UAE largely differs. Hence the choices women face in both countries between professional and personal priorities largely differs. The key difference of this study with other similar studies conducted in the UAE is in its sample selection.

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This study analyzed the impact of nine predetermined factors in their ability to modulate breastfeeding knowledge and attitude. Out of the nine factors, maternal age, educational preparedness, employment, employer, salaries and number of kids influences maternal breastfeeding knowledge and attitude. While gender of child, gestational age, mode of delivery and living conditions does not modulates maternal breastfeeding knowledge and attitude.

Most of the participating mothers have university or higher education and were employed. It is well known that education brings in knowledge. A highly educated feminine

community have also demonstrated higher breastfeeding knowledge and attitude (Radwan, 2013). Considering the educational preparedness, the age is a complementary factor as in most scenarios educational advancements are proportional to the advancement of age. There is an association between education and employment, which was also noted by Radwan (2013) in her study. Though employment has an impact on breastfeeding knowledge, it has an indirect, but negative impact on breastfeeding practices. The study conducted by Al Ketbi, *et al.* (2018) finds employment as a less predictive factor to breastfeeding.

The thematic analysis in this study reveals employment as an inhibitive factor due to competing professional and personal choices. Since employment is the key factor for financial stability, it offers women a better purchasing power and choices. Taha (2017) cites breastfeeding as the current norm of employment couples. This statement can be further correlated to the purchasing power of the couples.

Table 1 denotes the self-reported reason by UAE mothers for breastfeeding their child.

Table 1. Distribution of patient based on their self-reason for breastfeeding

Why would you like to breastfeed	Frequency (f)	Percentage
Religious Background	149	39%
Healthcare providers	119	31%
Child Health	345	90%
Cleanliness and easy preparation	107	28%
Personal determination and experience	15	4%
Encouragement from others	80	21%
Encouragement from husband	73	19%
Others	49	13%
I don't know	173	45%

Table 2 denotes the relation of various factors being analyzed in this study with knowledge and attitude along with their respective *P* value.

Table 2. Relation of various factors affecting knowledge and attitude

Parameters	Attitude (<i>P</i>)
Maternal Age	0.0025
Educational Preparedness	0.031
Employment	0.063
Employer	0.009
Salaries	0.0007
Number of Children	0.0032
Gender of Child	0.52
Gestational Age	0.25
Mode of Delivery	0.067
Breastfeeding hours	0.83
Living conditions	0.057

The relation of employer and employment to breastfeeding has a strong negating effect on breastfeeding and has been identified as the strongest perceived barrier in breastfeeding. Glenn (2015) have studied the attitude of employers to breastfeeding mothers. The overall employer attitudes and practices towards breastfeeding mothers are discouraging. Most women fail to adapt with employment stress and breastfeeding.

This can be further explored through the studies by Dozier, Nelson and Brownell (2012), where they have identified stress as a hindering factor for breastfeeding. Stress impacts maternal bonding, breastfeeding duration and exclusivity. As per the analysis of this study, employment has a relation to breastfeeding attitude, however, thematic analysis further explains this as a hindering relation.

It is the norm of Arabic communities to have multiple number of kids. The responses from thematic analyses suggests maternal burnout and lack of family support as most identified barriers for breastfeeding. A high proportion of the samples in this study are employed and living with their husband and kids only. In such a cultural context, women usually assume the child rearing and family care giver role, which adds to maternal burnout when there is deterring support from the partner. This may result in suboptimal breastfeeding experience with employment and number of kids as consistent to the findings of other similar studies (Fleming, Smart, Eide, 2011; Taha, 2017; Radwan, 2013).

The attitude of women to breastfeeding is influenced by their maternal experiences. Almost all the studies mentioned in this report maintain a positive maternal intent to breastfeed. In this study, also women do understand the need of breastfeeding. However, the translation of breastfeeding attitude to practice was not measured in any of the other studies. Intent to breastfeeding is only an enabling factor.

However, in reality, the women in study have chosen to practice mixed breastfeeding to keep up with other competing priorities in life (Employment, parental role for other kids, family caretaker etc...). This is evidenced by a translation of maternal intent to a mixed breastfeeding practice and failure to commit to exclusive breastfeeding. In summation, maternal experience is an enabling factor for maternal attitude but may have a mixed effect to breastfeeding.

Experienced mother favors mixed methods feeding rather than exclusive breastfeeding. This can be relooked with the help of studies conducted by Al-Ketbi et. al. (2018), where salaries has been correlated with couple's affordability of maids. Housemaids relieves the pressure on the mother and affects the mothers' attitude to breastfeeding. It should be also noted that 94% of women suggested burnout as a major challenge in qualitative analysis. This further make a compelling argument when we investigate the family structure of UAE population. Families in this study have 2-4 kids, which put a lot of parenting efforts on the couples.

Family income gives the couples the choices of hiring maids, support system and access better breastfeeding knowledge and a variety of infant nutritional products. Depending on the study population there is a possibility of mixed results on their breastfeeding attitudes. The studies by Boshra and Samah (2018) showed a positive relation between family income and breastfeeding.

Participating women in study belong to a middle-class family bracket. In general, it is assumed that mother in low and high socioeconomic status favors breastfeeding. A low socioeconomic status reduces the availability of infant nutritional products, while a high socioeconomic status provides women with adequate breastfeeding support and

knowledge. The perspective of middle-class family representing in this study favors bottle feeding on IOWA scale, but practices mixed feeding.

Gestation age of the baby has a strong direct proportional relation with breastfeeding relationships. Higher gestational age is the direct indication of fetal maturity. A matured new born can bond with the mother and has matured suckling reflex to breastfeed. The gestational age of mothers in UAE is alarming considering the mean gestational age is 35 weeks, which is considered as a premature delivery. Ahmed and Salih (2019) associates successful breastfeeding with a birthweight above 2.5 Kg or higher. A 35-week baby gains an average weight of 2.6 Kg. This means 65% of babies in this study lay in the borderline for successful breastfeeding considering marginally satisfactory weight with premature delivery. In this study, there was no correlation between gestational age as a factor affecting maternal knowledge or attitude.

Breastfeeding hours is a decisive factor for breastfeeding but does not influence knowledge or attitude. Most of the time breastfeeding hours are allotted as one-hour break, but breastmilk pumping must be synchronous with infant's demand feeding to maintain the milk flow. This affects the mother's ability to pump breastmilk in periodic intervals. Cessation or insufficient of breastmilk has been identified as common problem among working mothers in some studies (Al Ketbi, et al. 2018; Radwan, 2013), which consistent with the thematic analysis presented in this study. If we assume that women are given periodic breaks by their respective employers for pumping breastmilk, still based on the findings from qualitative responses many women struggle with privacy and storing of milk at their employment places.

Summary and conclusion

In conclusion, the breastfeeding experience among UAE mothers are suboptimal. There is strong association between attitude and breastfeeding. However, the translation of breastfeeding intent to behavior is affected mainly by employment, maternal burnout and lack of support from the family. Review the conceptual framework there are number of factors that enables maternal intent however the effect of maternal employment is so devastating that the overall perceived control to promote the

translation of breastfeeding intend to behaviors is weak.

This study concludes with the note that the reason for suboptimal breastfeeding experience is not within the healthcare system rather is within the economics and employment structure of modern employed community. Although a common set of factors have been studied, their effects of knowledge and attitude have different strengths of relationship. Hence, different factors have a mixed effect on breastfeeding knowledge and attitude and may act as an enabling or disabling factor based on the context at which it is being analyzed.

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Appendix

Appendix 1. Graphical representation of the conceptual framework for the study

MACROENVIRONMENTAL FACTORS				
Microenvironmental factors				Law & Regulation
Personal Factors			Birth environment	
BREAST FEEDING BEHAVIOR	Infant Factors	Maternal Factors	Work environment	Ethnicity
	Infant health	Education	Work environment	Ethnicity
		Attitude		
	Early rooming in	Knowledge	Family environment	Advance in science
		Breastfeeding skills		
	Latching ability	Parenting experience	Community environment	Global view
		Birth experience		
	Gestational age	Maternal health	Other factors	Global assimilation
	Pain			
	Maternal Intend to breastfeed			
	Perceived Behavioral Control			

The figure is a graphical representation of factors affecting breastfeeding practices. The figure attempts to explain multiple levels of factors affecting breastfeeding behavior.