

Developing a Conceptual Framework for Factors Affecting Breastfeeding

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Abstract

Department of Health (DOH) the regulator of Abu Dhabi region in UAE launched Baby Friendly Hospital Initiative (BFHI) on March 21, 2016. Despite this drive for last 3 years, there has been no noticeable changes or initiatives in private health sector. There are different factors that affect the breastfeeding behaviors that may result in sluggish response from private healthcare sector. The purpose of this article is to develop a comprehensive conceptual model that can guide researches investigating the factors affecting breastfeeding behavior. This study will analyze different theories related to breastfeeding to identify common theoretical constructs that constitutes the breastfeeding behavior. Prominent constructs identified will be used to develop a conceptual framework. A methodical survey of existing literatures is reviewed to delineate the factors affecting breastfeeding. The factors are then categorized using the concept of bioecological systems theory to formulate the conceptual model. The conceptual model assumes the breastfeeding behavior as the resultant of interaction between the person, behavior and environment. Breastfeeding is the end behavior, while personal factors is a combination of maternal and infant synergies. Environmental factors are categorized as micro and marco-environmental factors based on their level of influences.

Keywords: *breastfeeding, breastfeeding factors, breastfeeding practice, breastfeeding theories.*

Introduction

Breastfeeding is a biological act. Breastfeeding is a natural process for infant nourishment. Breastmilk is a complete nutritional package to ensure a holistic growth and development. Undisputedly the importance of breastfeeding has been recognized internationally. The Ministry of Health (MOH), in UAE has recognized the importance of breastfeeding and is promoting breastfeeding through various initiatives. The success of any breastfeeding campaign rests in the motivation of mothers to breastfeed their newborns. The concept of breastfeeding is a heavily researched area. There is copious number of researches that speaks on the effect of breastmilk at different levels. However, it is important to know why breastfeeding occurs or what motivates breastfeeding? To answer such a question at empirical level, there should be an understanding of all the factors that contributes to breastfeeding. Different factors may have an enabling or disabling effects on breastfeeding.

The purpose of this study is to develop a conceptual framework of all factors that affect the breastfeeding behavior. Such a conceptual framework will provide the theoretical underpinning to guide empirical researches looking into the why of breastfeeding behavior. This conceptual framework will help public health workers and legislatures to promote longer and exclusive breastfeeding factors by potentiating the enabling factors and negating the disabling factors. The success of breastfeeding pronounces from a coherent approach based on all the interrelating factors.

Literature review

The weight of published researches is based on self-reported experiences by the breastfeeding mothers. Most of these factors may be related to socio-demographic characters and personal factors. The logic of this literature review is to categorize all the factors affecting breastfeeding from the time of “mother’s decision to breastfeed (intent of behavior) to actual breastfeeding (exhibition of behavior).

Review of theories applicable to breastfeeding

The theory of reasoned action was formulated in 1980s by Martin Fishbein and Icek Ajzen. This theory separates behavioral intend from the actual behavior itself. The actual behavior of breastfeeding from the time of maternal intention is modulated by multiple factors. Among the multiple factors that modulates breastfeeding behavioral intend, attitude and social norms, play a vital role in predicting the behavioral intend. An understanding of these factors helps the researcher to explain the breastfeeding behavior itself (Ajzen & Fishbein, 1980).

The origin of theory of planned behavior was from theory of reasoned action. Dr. Ajzen in 1991 expanded the concepts of behavior and behavior intend by further studying the factors that a person can and can't control. The resulting factors after mother's perceived control will promote the social behavior. The core concept of this theory dwells in a person's intent to modify a behavior. Behavioral intents can be influenced by motivation, ability to control, attitude and personal understanding of risk and benefits.

The social scientist of American Public Health Service developed the health belief model in 1950s. This model was the end result of an inquiry on why people don't adopt disease prevention strategies, when it is offered to them. This model postulates that, health behavior is related to a person's belief in the risk of encountering the illness together with his/her feeling on the efficiency of healthy behavior in preventing the illness. Every individual negotiates the benefits and risks before adoption of any healthy behavior. It is the personal/subjective interpretations that results in the adoption or negation of any behavior.

Dr. Albert Bandura developed the social cognitive theory (SCT) in 1986. The Theory was developed from Social Learning Theory that was formulated in 1960s. The SCT brings in the concept of behavior as a learning that occurs through the interaction between the person, environment and the actual behavior itself. The learning occurs through the reinforcements that a person received from the environment or at a personal level. Depending on the type of reinforcement, a person has a higher probability of exhibiting or negating a behavior. Apart from other theories, the Social Cognitive Theory also focuses about maintenance of behavior apart from the initiation of behavior.

The Bioecological Systems Theory was developed by Urie Bronfenbrenner in 2006 to describe the influence of biological and environmental systems in the development of human behavior. The bioecological system theory describes the behavior as the end result of different interacting systems. Each system has subsystems that ranges from macro to micro level factors. Each subsystem interacts within the large system defined by the laws of larger systems. Such complex interactions collectively result in behavioral exhibition.

The model by Hector, King and Webb (2005) tries to understand the direct and indirect factors that may affect breastfeeding. This is the first ever model that has incorporated the concept of mother and infant dyad. A mother and infant dyad is a complex interaction of various internal factors between the mother and the baby that may affect breastfeeding. This model has classified factors affecting breastfeeding into individual, group and societal level factors. Though this model is very holistic, it fails to address the complex interaction between person, behavior and environment. Extend of influence of behavior and behavior intend is also not addressed in this model.

Review of literatures on factors affecting breastfeeding

The UAE has a population assimilation from around the globe that is attracted by its economic prosperity. The responses of different researches are also influenced by the type of population being studied. Early initiation of breastfeeding has proved to increase the compliance and of breastfeeding practices (Ahmed & Salih, 2019). On a personal level maternal age, infant maturity and birthweight affects the initiation and continuation of breastfeeding (Al-Mutairi, Al-Omran & Parameaswari, 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 initiation and duration of breastfeeding (Radwan, 2013) and further feeding after six months (Tajir, Sulieman & Badrinath, 2006) is also

influenced by maternal education. Reduced maternity leave decreases the probability of continued breastfeeding (Radwan, 2013).

Knowledge on breastfeeding and infant behavior is the key in determining breastfeeding practices. A mother may misinterpret infant cry for hunger (Taha, Garemo & Nanda, 2018) or the ability of breastmilk to hydrate the baby in hot climates (Radwan, 2013). There is a trend to continue breastfeeding in first-born longer (Eidelman, *et.al.* 2012), while experienced mothers have higher initiation rate (Al-Mutairi, Al-Omran & Parameaswari, 2017). Privacy in work and public spaces encourages mothers to breastfeed (Eidelman, *et al.*, 2012; Radwan, 2013) along with family support (Radwan, 2013).

Mode of delivery influences breastfeeding practices (Ahmed & Salih, 2019; Al-Mutairi, Al-Omran & Parameaswari, 2017). Pethidine used in epidurals has an inhibitive effect on exclusive breastfeeding (Tajir, Sulieman & Badrinath, 2006). Post-delivery care including rooming in, use of contraception, frequent pregnancies and parity affects breastfeeding (Radwan, 2013). Early introduction of complementary feeds leads to infrequent sucking leading to reduced milk production or cessation of breastmilk (Taha, Garemo & Nanda, 2018; Eidelman, *et.al.* 2012).

Limitations in literatures

Majority of the researches reviewed in this study focuses on a narrowed aspect of maternal or rarely infant attributes. The factors 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 influence 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.

Formulation of conceptual model

The conceptual framework has been formulated and adapted from the theoretical constructs described in the review of related theories. The base of this conceptual framework is the interaction between behavior, person and environment as described in SCT. Breastfeeding as a behavior has been identified redundantly in multiple theoretical constructs described earlier in this literature.

The behavior of breastfeeding is modulated by different levels of factors as described in the bioecological theory and Hector, King and Webb (2005). Synthesizing the concepts of the social cognitive theory, Hector, King and Webb (2005) and the bioecological theory, factors affecting breastfeeding can be grouped into personal, microenvironmental and macroenvironmental factors.

Personal factors will primarily focus on maternal and infant factors that will affect the breastfeeding initiatives. Maternal factors can include but limited to maternal attitude to breastfeed, knowledge, education, breastfeeding skills, parenting experience, maternal health during postpartum, pain, and birthing experience. Infant factors include but not limited to infant health, gestation age, latching ability, and early rooming in. personal factors shapes the behavioral intend. The rigor of behavioral intend determines the probability of breastfeeding practice.

Microenvironmental factors directly influence the mother to motivate breastfeeding. These are mostly the contributing factors in the mother's immediate environment. Microenvironmental factors can be subdivided into further cohorts of interacting environments such as birthing environment, family environment, work environment, community environment and other factors. Birthing environment includes all the environmental factors during the process of delivery, such as the place of delivery, type of delivery, initiation of skin to skin contact, rooming in of baby, delay in breastfeeding, and the assistance provided to mother during immediate puerperium. Family environment is the next level microenvironment that interacts with the mother influencing her decision to breastfeed.

Familial factors can include the support and help available for mother in her daily activity, family size, space and privacy in home, family responsibilities, partner's dynamics and maternal burnout. Work environment is applicable if the mother is employed. In such a situation mother is stuck with multiple other professional commitments along with parenting responsibilities. The type of maternal

work, flexibility in work, availability of privacy, breastfeeding hours, facilities to refrigerate milk, determine the ability of continued breastfeeding. Public and private sector has different policies on the duration of maternity leave. Community environment includes the community we live-in influence maternal breastfeeding behaviors. For example, urban and rural community has different infrastructure to support maternal breastfeeding. Religion and cultural norms decide the ability of the mother to breastfeeding in public places.

Availability of parenting rooms and other facilities available to parents further adds to maternal motivation. Community environment also influences a women’s perception of body image, societal acceptability and sexuality are other contributing factors. Finally, there are other factors that act as enablers for maternal decision for breastfeeding. This includes governmental laws and compliance of employers to breastfeeding recommendations. Insurance coverage, healthcare benefits and childcare allowances further supports the mother to breastfeeding financially.

Marketing plays an important role in influencing the mother’s decision to breastfeed and to sway the public opinion on the concept of breastfeeding. Public health support and availability of support groups helps the mothers with maintaining the duration of breastfeeding.

Macroenvironmental factors may directly or indirectly affect the maternal decision for breastfeeding. Macroenvironmental factors influences microenvironmental factors. Microenvironmental systems acts as a subset, defined by the laws of larger microenvironment systems.

This can include the ethnic beliefs, global attitude to breastfeeding, advance science, breastfeeding researchers, understanding of parenting and role of women in the society. For example, availability of milk substitutes depends on the governmental regulations that favors the marketing of milk substitutes.

All the subsystems interact with each other with enabling and disabling effects. Maternal intend to breastfeeding sway the personal factor towards the breastfeeding behavior. Personal factors are the synergic result of two interacting subsystems between the mother and the baby. Maternal intend to breastfeed is mother’s determination to carryout breastfeeding.

However, micro and macro environmental systems further influence the breastfeeding behavior. A mother may or may not enjoy control on different levels of factors based on her situation. This control is called as the perceived control. The stronger the controller ability, fewer are the barriers for the mother to breastfeed. All the factors describing breastfeeding needs to be analyzed in a single context of time as they may change with time.

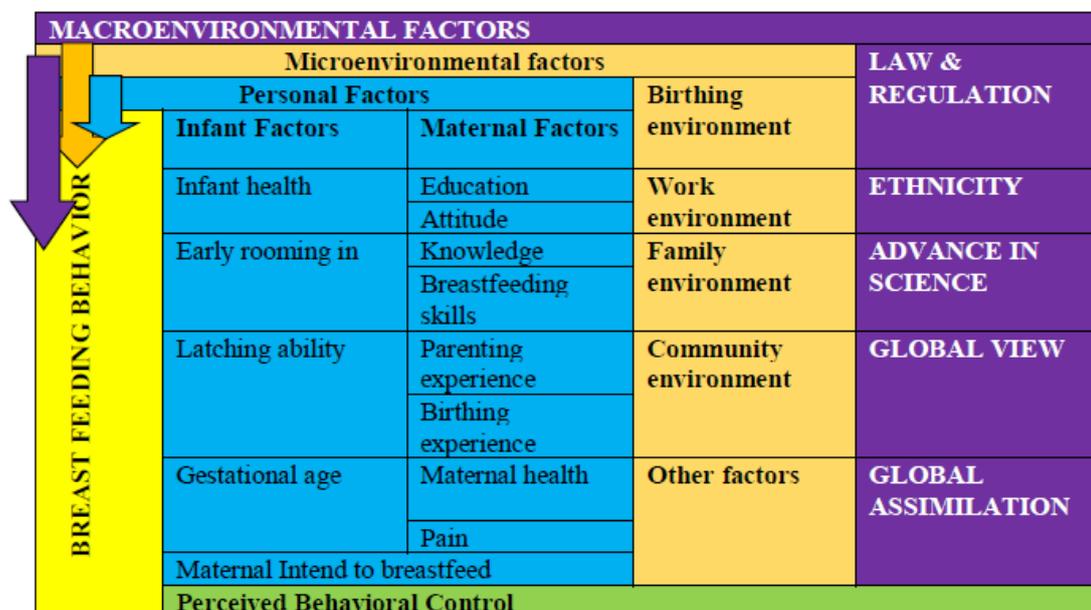


Figure 1. Graphical representation of the conceptual framework for the study

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

Applicability

Breastfeeding behavior is a complex act operating at multiple system levels. Such operating factors may enable or disable the behavior differently at any given point of time. Breastfeeding behavior is the summation of all the enabling and disabling factor at any given point of time. Hence, strategies, assumptions or interventions have an applicability limited to time framework being studied.

Breastfeeding factors are highly individualized and subjective. It is hard to assess breastfeeding factors through a cross-sectional study, education, policy implementation or through changes in healthcare practices. All these influences address only a limited area of oceanic factors contributing to breastfeeding behavior.

The conceptual framework is an aggregate of multiple concepts to define breastfeeding, however the framework needs to be put in action to further understand and develop it. Focused researches can be generated to understand the effect of each factor at a micro and macro level in influencing breastfeeding behavior. The framework in itself is complex, however, does not address the power of each concept in its ability to strengthen or weaken breastfeeding. The framework also fails to put forward any chronology on factors based on their effects on breastfeeding.

Summary

Breastfeeding is an important concept. The success of breastfeeding campaign or further researches can be potentiated by understanding various factors that contributes to breastfeeding. The conceptual framework ties the theoretical constructs in prominent researches with current literatures to classify factors into different systems. Each factor interacts within and outside the system to modulate the breastfeeding behavior. Understanding of these concepts can help in generating future researches.

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