# ADHERENCE TO EXCLUSIVE BREASTFEEDING: A CONCEPT ANALYSIS

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## ABSTRACT

Adherence to treatment plans and nursing care plans has been proving to be difficult due to patient's multiplicity of wishes, views and biases. Positive outcomes to treatment adherence are the key standard to improve quality of nursing care. Adherence to exclusive breastfeeding has proven to be a difficult practice for most women because the meaning of the term, adherence to exclusive breastfeeding, is not fully understood. Measuring and evaluating adherence is often proving difficult since it is often a factor associated with patient biases, expectations and knowledge. The major focus or aim of this paper is to clarify the concept of adherence to exclusive breastfeeding. Only an estimated 35% breast feeding women are adhering to exclusive breastfeeding globally. A concept analysis of adherence to exclusive breast feeding was done using Walker and Avant method. The major antecedents of adherence to exclusive breastfeeding are value of perception of exclusive breastfeeding, knowledge on benefits of exclusive breastfeeding, mode of delivery, maternal age, maternal health, maternal role confidence, socioeconomic status of the mother, social support from family, and active participation of the mother. Attributes identified were ability to attach the baby to the breast, ability to provide adequate breast milk, ability to give baby only breastmilk without any other feeds, ability of baby to suckle and swallow and flow of adequate milk. The resultant consequences of adherence to exclusive breastfeeding were maintained targeted healthy infant status such as weight and height, absence of diarrhea and pneumonia related infections to the baby. This will lead to improved quality of life of the baby. Empirical referents which are fundamental to future nursing research methodology in adherence to exclusive breastfeeding and its enhancement are absence or reduced diarrheal cases, other infections, increased uptake of exclusive breastfeeding, reduced infant mortality rates, weight for age within ±2SD on the road to health card, high levels of exclusive breastfeeding adherence and high scores of quality of life measurements. The results and discussion from the analysis can be utilized as a foundation for development of adherence models, tools and theories for measuring and evaluating adherence in health care settings. Regardless of the complexity of adherence to EBF the definition provided of adherence to EBF may facilitate a clearer understanding and standardization of methods and tools of measuring the concept. Various factors that encompass a wider dimension of adherence to EBF need to be addressed when reporting adherence to EBF.



**Key words**

Adherence, concept analysis, exclusive breastfeeding, Walker and Avant.


## INTRODUCTION

Breast milk is one of the most basic and natural product that a mother can give to her child. It has several advantages to the baby, mother, family and the community as a whole. According to WHO adhering to exclusive breast feeding means 'that the infant receives only breast milk. No other liquids or solids are given-not even water-with the exception of oral rehydration solution,

or drops/syrups of vitamins, minerals or medications. WHO recommends "that infants should be exclusively breastfed for the first 6 months of life to achieve optimal growth, development and health, thereafter, infants should receive nutritionally adequate and sate complementary foods, while continuing to breast for up to two years or more". Adherence to exclusive breast feeding is one the most basic tools in the prevention of childhood illnesses and deaths among infants aged six months and below (Dumphy, Thompson, & Clark, 2016). To enable mothers to establish and adhere to exclusive breastfeeding for 6 months, WHO and UNICEF recommends initiation of breastfeeding within the first hour of life, breastfeed on baby's demand, no use of bottles, teats or pacifiers and to practice exclusive breastfeeding (Danso,2014). The AAP (American Academy of Pediatrics) Section on Breastfeeding, American College of Obstetrician and Gynecologists, American Academy of Family Physicians, Academy of Breastfeeding Medicine, World Health Organization, United Nations Children's Fund, and many other health organizations recommend exclusive breastfeeding for the first 6 months of life. However there is a difference of opinion among AAP experts on this matter of time frame. The Section on Breastfeeding acknowledges that the Committee on Nutrition supports introduction of complimentary foods between 4 and 6 months of life when foods are available (AAP, 2012). According to WHO (2010), more than 1 million infant deaths can be prevented worldwide if women with infants were to practice exclusive breast feeding for the first six months of life.

According to WHO (2010), suboptimal breastfeeding causes 45% of neonatal infectious deaths, 30% of diarrheal deaths and 18% of acute respiratory deaths among children under five in developing countries. It is also responsible for 10% disease burden in children less than five years also in the developing countries. WHO (2015) estimates that about 35% of the children worldwide are breastfed exclusively. Sub-Saharan Africa has an exclusive breast feeding rate of 33% whilst only about 41% of the infants are breastfed exclusively in Zimbabwe. This has resulted in such a high infant mortality rate of 57deaths per 1000 live births in Zimbabwe which is really a cause for concern. Analysis of the concept of adherence to exclusive breastfeeding will help to close the gap between varied definitions and the related definitions. This will bring harmony in the practice and care of infants with focus on recommended feeding methods. Adherence to exclusive breastfeeding concept analysis will stand to point out infant feeding problems and associated outcomes of intolerable feeding practices.

The purpose of this article is to clarify the attributes and characteristics of adherence to exclusive breastfeeding. To distinguish between the ordinary, medical and holistic use of the concept

**Significance and uses of the concept**

The concept of adherence to exclusive breastfeeding is now widely discussed in literature and on-going researches by health care disciplines such as nursing, medicine, pharmacy and psychology are in progress. It is very important for anyone who provides treatment, counseling, advice and support to consider adherence to exclusive breastfeeding when determining the health infant outcome goals. The practical reality of not following a recommended course of treatment or care, particularly in exclusive breastfeeding mothers is a major cause of increased infant mortality rates, poor health outcomes and increased health care costs (Simpson et al., 2006). Understanding of the concept will provide a framework for those seeking a better understanding of patient decision-making and reduction of relapse to unhealthy behaviors (Wagh, 2013).

Emphasis should be put on the development of a mutually agreed upon plan of care as a supportive ongoing relationship. Understanding of adherence to exclusive breastfeeding is essential to support rational informed decision-making and learn what motivates patients to adhere to recommended health guidelines(Asemahagn, 2016). Heath care providers need to lead the way in treating patients as partners in provision of care, learn what motivates patients to change, and reevaluate roles and relationships with patients (Tully, Holditch-Davis, Silva, & Brandon, 2016).

## METHODS

Walker and Avant's eight-step concept analysis was used. The steps include concept selection, determination of the aim or purpose of analyses, identification of all uses of the concept, determining the defining attributes, constructing a model case, constructing additional cases, identifying antecedents and consequences and defining empirical referents (Walker & Avant, 2005). A search of literature was done to review various definitions of adherence to EBF. Literature was sought from Dictionaries, PubMed® and Google Scholar®. The following phrases were used in the search for relevant literature: adherence, exclusive breastfeeding. Medline and PubMed international databases were used to identify papers with related articles. The papers that were considered were as follows: English language, health field were identified and reviewed. These were screened by their relevance to the concept down to fourteen. Seven papers were dropped because they were mainly focusing on factors affecting breastfeeding practices after 6 months. Seven papers were finally used for analysis of this concept.

## RESULTS

Results of related literature

| NUMBER | AUTHOR | YEAR | SAMPLE SIZE | POPULATION |
|---|---|---|---|---|
| **1** | American academy of pediatrics | 2005 | No sample size | No population size |
| 2 | Danso Janet | 2014 | Fulltime employed breastfeeding mothers of infants less than 6 months | Kumasi metropolis of Ghana |
| 3 | Koima W. Jepkogei | 2010 | 188 women | Nairobi, Kenya |
| 4 | Massachusetts department of public health,FNH | 2008 | No sample size | No population size |
| 5 | Okolie Uchenna | 2012 | 240 breast feeding women | Tertiary hospitals Enugu, Nigeria |
| 6 | Olayinka A.,Ayoade, T., Olore,F. | 2013 | 410 mothers breastfeeding infants less than 6 months | Rural southwest Nigeria |
| 7 | Reddy, S. & Abuka, T | 2014 | 188 women | Kenya |

## Definitions

The term adherence to exclusive breast feeding has been used in health care practice but in reality some mothers do not understand the concept(Eide et al., 2016). There are still some inconsistencies about exclusivity, duration and time of initiation of exclusive breastfeeding(Quigley, Carson, Sacker, & Kelly, 2016). This may be precipitated by such organizations which still disagree on initiation, duration and exclusivity of exclusive breastfeeding. Adherence implies active participation in the treatment regimen, collaboration and persistence in practice and maintenance of behavior (Treharne et al, 2006). The Webster's Dictionary (1997, p.16) defines adherence as "the act of adhering; attachment to a person or cause; devotion or support". In real fact adherence is intended to be non-judgmental and can be an elusive concept to measure (McDonald et al., 2012).

In compliance there is an issue of enforcement and bending towards the will of the other (Treharne et al., 2006.However, adherence is the preferred term in implementing exclusive breast feeding measures. Patients are considered adherent when they do what healthcare provider recommends (DiMatteo, 2004). Adherence stands as the most viable concept because it focuses on the outcomes of patient-healthcare provider relationships and is very critical when looking for patient's ability to follow recommended health behavior guidelines. Adherence to exclusive breastfeeding is a difficult concept to measure but many studies have attempted to quantify it through self-reports, direct observation, laboratory data monitoring and measurement of body mass index (Osterberg, 2006). The more complicated the exclusive breast feeding regimen the less likely the mother will adhere (Nice, 2010). Extensive studies are needed to measure the clinical outcomes and mothers adherence to exclusive breastfeeding behaviors than merely focusing on self-reports from mothers.

**Breastfeeding**

According to the Oxford dictionary (2013), breastfeeding refers feeding from the breast: feed (a baby) with milk from the breast. According to WHO (2015) breastfeeding refers to suckling of the infant from the mother's breast. Breastfeeding in this context refers to the giving of the baby breast milk through the action of sucking of the breast by the infant.

**Exclusive breastfeeding**

It is the giving the infant breast milk only (Webster dictionary, 2007). Exclusive breastfeeding (EBF) has been defined by WHO(2013) as the situation where 'the infant has received only breast milk from his/her mother or a wet nurse, or expressed breast milk and no other liquids, or solids, with the exception of drops or syrups consisting of vitamins, minerals supplements, or medicines. To enable mothers to establish and adhere to exclusive breastfeeding for 6 months. WHO and UNICEF recommend to adhere to exclusive breastfeeding there should be: initiation of breastfeeding within the first hour of life, exclusive breastfeeding – that is the infant only receives breast milk without any additional food or drink, not even water, breastfeeding on demand – that is as often as the child wants, day and night However some experts argue that for it to be a well adhered to exclusive breastfeeding there should be no use of a wet nurse, teats or pacifiers(Danso, 2014).. In this authors' context, breastfeeding refers to the sucking action of the breast by the infant aged six months or so as to get milk which is the only source of nutrition and nothing else taken orally except for prescribed medication. WHO and UNICEF put it straight that exclusive breast feeding should be initiated early within one hour from delivery. There is a wide inconsistency gap about how early should be a baby exclusively breastfeed(Yilmaz et al., 2016). Some authors argue that as long as the baby starts breastfeeding within 24hrs from delivery, it is

still early breast feeding (Debes et al., 2013). The Section on Breastfeeding acknowledges that the Committee on Nutrition supports introduction of complementary foods between 4 and 6 months of age when safe and nutritious complementary foods are available and still call it adherence to exclusive breastfeeding (American Academy of Pediatrics, 2005)

From the varying definitions of exclusive breastfeeding the WHO definition provides a better understanding of the concept. However it lacks on the realistic time frame in which early breast feeding should be called. In some circumstances nothing will be coming out from the breast within one hour of delivery, which will affect adherence. There should be proper suckling and swallowing of either colostrum or breast milk for it to be exclusive breastfeeding. We tend to disagree with introducing complimentary foods within 4- 6 months. The infant's gastrointestinal system will be still delicate and susceptible to wall tearing which poses risks to HIV-exposed infants (Coovadia et al., 2007). Measures of adherence to EBF include direct and indirect observation such as continuously monitoring the baby's weight, height and general health status of the baby. Each method of measurement has its advantages and disadvantages. Directly observed method is the most accurate but is impractical and time consuming. Self-reporting and questionnaires are cost effective and useful though they are subjective and have increased error due to infrequent visits.

**Defining attributes**

Attributes according to Walker & Avant (2005), are those traits or characteristics of a concept that are closely linked with it and will assist in differentiating a particular concept from any related concept. Attributes identified in literature include early skin to skin contact for warmth and opportunity to suckle, the proper attachment of the baby to the breast, the baby and mother should be comfortable (Family Health Nutrition, 2008). The mother should also breastfeed as per the baby's demand (Surender & Teshome, 2014), there should be adequate flow and swallowing of milk by the baby(Liben & Yesuf, 2016). There should be no addition of water or other foods (Misrak & Gizachew). The mother should be taught how to support the baby's head, neck, shoulders and to turn the baby's body towards her and direct baby's nose to her breast. Explaining of proper attachment of the baby to breast is essential for milk production and transfer. Characteristics of good latching include a wide open mouth, lips turned out, not rolled, baby's chin touches the breast and tongue of baby should be under the nipple (Family Health Nutrition, 2008). Scheduled or timed feedings should be avoided; frequent feeding in newborn builds up enough milk supply. Pacifiers should be avoided since they decrease the baby suckling at the breast and decrease milk supply. We managed to define adherence to exclusive breastfeeding as an act of giving early (within 24hrs) the baby breast milk only through active suckling and swallowing or by the use of a wet nurse. No foods and water or other fluids except prescribed medications by the physician should be given within the first 6 months of life.

**Antecedents**

Antecedents are events and circumstances which occur prior to the occurrence of the concept and often associated with the occurrence of the same concept (Walker & Avante, 2005). Through literature review it has been found that knowledge of the mother to benefits of adherence to exclusive breastfeeding, family support, maternal age, maternal health, maternal role confidence (Uchenna, 2012), mode of delivery of the baby, number of children the mother have and ongoing relationship between mother, health care worker (Jepkogei, 2010) and type of occupation of the mother (Olayinka, 2013) are important antecedent factors in adherence to exclusive

breastfeeding. These antecedents are consistently addressed in literature when describing adherence to health promoting behaviors such as exclusive breastfeeding. Maternal positive attitude towards her baby and motherhood on benefits of adherence to exclusive breastfeeding have positive effects on baby's health (Jepkogei, 2010). The age and health status of the mother at delivery time plays a major role in adherence to exclusive breastfeeding. Mothers who are mature enough and healthy adhere well to exclusive breast feeding (Orun et al., 2010). Vaginal delivery interacts well with adherence to exclusive breast feeding than caesarian section deliveries where the mother will be subjected to pain, stress and altered consciousness (Orun et al., 2010)

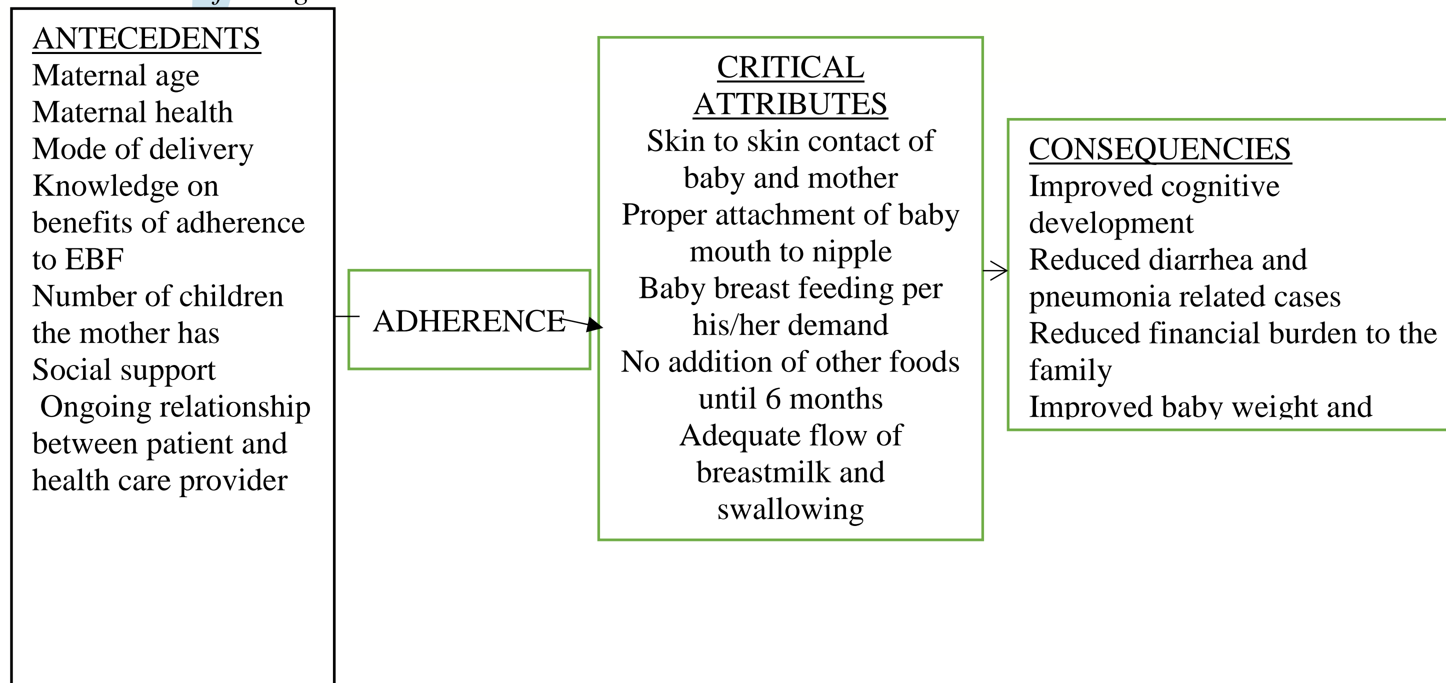
**Consequences**

Consequences are those events or incidents that occur as a result occurrence of the concept (Walker & Avant, 1995). Consequences that result from adhering to exclusive breastfeeding are numerous. Exclusive breastfeeding for the first six months of life promotes healthy newborn development, reduction of risks of infection and reduced risk of chronic diseases (Amin, 2011). Developmental benefits of adherence to exclusive breastfeeding include cognitive development and reduced risks for sudden infant death syndrome (SIDS), (Rajesh, 2014).

Consequences of adherence in the setting of collaborative relationship for breastfeeding mother include improved confidence, sense of mastery and ability to adhere to exclusive breast feeding. Healthy infant and improved health outcomes, decreased financial burden are the desired long term outcomes of adherence to exclusive breastfeeding (Reddy & Abuka, 2014).

Relationship between antecedents, attributes and consequences of adherence to exclusive breastfeeding is summarises in Fig 1 below.

*Figure 1.Relationship between antecedents, attributes and consequences of adherence to exclusive breastfeeding*



In terms of adherence to exclusive breastfeeding, three categories of consequences have been identified also in literature that is patient related, health care professional related and health care system related(Oras et al., 2016). Improved morbidity and reduced mortality, conflict resolution, attributional uncertainty, empowerment and possible improvements in quality of life constitute patient related consequences (Simpson et at, 2006). Health care professional consequences include ambivalence toward a breast feeding mother's adherence behavior, misinterpretation, disempowerment, acceptance or avoidance of adherence behavior (Hui et al, 2006). Decrease in cost and health care services use is the major consequences of the health care system.

## DISCUSSION

### Model Case

*Mrs N is a 28 year old first-time mother who has successfully adhered to exclusive breastfeeding of her child who is now a 6 month old healthy boy. The benefits of exclusive breastfeeding were fully explained to her by nurse midwives. She made concrete decision that she would follow the recommended guidelines for exclusive breastfeeding. She has given her 6 months old boy breast milk only for the first 6 months of life. She never introduced porridge or water to the baby and she was always available to breastfeed her baby. She was always seeking healthcare advice from the nearby hospital for proper care of the baby. The baby did not miss any of his due childhood immunizations. Mrs N's husband also played a pivotal role in encouraging his wife to exclusively breastfeed their beloved son. Mrs N has become a role model in the community on the adherence to exclusive breastfeeding as health workers call her to give talks to women during growth monitoring sessions.*

### Analysis

In the case of Mrs N all the characteristics of adherence to exclusive breast feeding are revealed. Mrs N received adequate health education pertaining to the benefits of exclusive breastfeeding. Nurses were offering continuous support and the husband was always there for support. Mrs N adhered to exclusive breastfeeding since she was eager to have a healthy baby and avoid any infant infections to her baby.

### Contrary Case

*A contrary case does not include any of the attributes of the concept. Ms Q is a 26 year old para one who is failing to adhere to exclusively breastfeed her four months old baby boy. She is also an HIV-positive mother who always fears that her baby would get the HIV-virus through breastfeeding. She is a professional woman who went back to work when her child was three months thus leaving her child with a maid and grandmother. The grandmother believes in giving the child water and watery porridge. The infant is also given traditional herbs to make him strong as per grandmother's belief. The baby boy shows stunted growth which always leaves the grandmother perplexed. At one moment the grandmother went secretly to consult a traditional healer about the deteriorating health of the baby. She was given a mixture of cow-dung and anthill soil to give the baby every night for seven days.*

### Analysis

From the case of Ms Q all the attributes of adherence to exclusive breastfeeding are not there. She is a professional lady who has little time to nurse her baby. She handed over the management of the baby to her mother who has strong beliefs in herbs. The baby was given different traditional concoctions by the grandmother. Ms Q has limited time to discuss feeding methods with health professionals since she is always busy at her work place. Effects of mixed feeding are also clearly shown by the stunted growth of the baby.

**Empirical referents**

The empirical referents of a concept are classes or categories of actual phenomena that by their existence demonstrate the occurrence of the concept (Walker & Avant, 1995). Absence or reduced diarrheal cases and other infections in infants indicates adherence to exclusive adherence to exclusive breastfeeding. High scores on QOL measurements and decrease in health care service use and cost are the empirical referents of adherence to exclusive breastfeeding (Sharma, Dee, & Harden, 2014). Future instrument development should take consideration of these empirical referents for evaluation of adherence to exclusive breastfeeding. Health care providers influence adherence to exclusive breastfeeding through education, goal setting and shared decision making though most health professionals lack the concept of shared decision making. In this concept analysis, it is revealed that a patient is not a passive recipient of care who just complies with health care provider's direction without questioning. Adherence does not mean loss of personal decision making or control but at the same time, it does not take away the responsibility from the health care providers. It makes a priority to education to patients so that they can make informed decisions. Health care providers may disagree with patients who are non-adherent even though it's a patient's choice. Non adherence wastes resources that lead to preventable disease and deaths.

**CONCLUSION**

The definition of adherence to EBF provided in this article will facilitate proper interpretation of adherence of exclusive breastfeeding and standardization of tools used to measure adherence to exclusive breastfeeding. It is imperative to use the definition to improve uniformity in reporting and measuring adherence to EBF. Adherence to EBF can be measured through absence of diarrheal and other infant infections and monthly weight and height gain of the infant. High quality of life of the infant can also be an indicator of adherence to exclusive breastfeeding.

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