



PREDICTIVE INFLUENCE OF SELF-EFFICACY ON INFANT FEEDING ATTITUDES IN POSTPARTUM MOTHERS

By

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Abstract

Appropriate infant feeding practices have been identified as key in ameliorating the illness and death rate of infants and children under 5 in low resource countries. Despite national and international efforts at encouraging appropriate infant feeding practices, many young children still suffer the direct and indirect effects of poor nutrition. The present study is a cross-sectional descriptive study involving mothers attending a primary health care centre in Ede, Osun State. One hundred and sixty-three (163) women were surveyed with regards to their attitude to infant feeding and breastfeeding self-efficacy using a set of structured questionnaires. Self-efficacy significantly predicted infant feeding attitude [$F(1, 163) = 4.31, p = .040$] with mothers in 31-50 age bracket demonstrating a more positive attitude to breastfeeding than women of other ages. Although breastfeeding practice was universal in the study area, infant feeding attitude was neutral suggesting ambivalence in adhering to recommended infant feeding guidelines. There is a need to tailor infant feeding information towards women in younger age groups towards creating awareness about the positive lifelong effect of appropriate infant feeding practice on their own children's health status.

Keywords: Mothers, infant feeding, self-efficacy, attitudes, Nigeria

Introduction

Breastfeeding, the feeding of infants with milk from a woman's breast has been identified as essential health behaviour in securing the health status of infants and children under age 5 (UN, 2020; Victora et al., 2016). Infant and Young Children feeding guidelines (Tiwari, et al., 2016) recommend that infants should be exclusively fed with breast milk only for the first six months of life and thereafter be fed nutritionally adequate complementary food with breastfeeding continuing till age two. Furthermore, exclusive breastfeeding (EBF) presents both short- and long-term benefits for the mother-infant dyad (Crenshaw, 2014; Godfrey & Lawrence, 2010; Peñacoba & Catala, 2019). The Baby-Friendly Hospital Initiative (BFHI) was introduced in 1992 as part of the Nigerian government's effort in attaining the targets of the 1990 Innocenti Declaration (Nte & Eke, 2020). The BFHI provides pregnant mothers with information and support regarding the recommended infant practices which has led to a global increase in breastfeeding initiation, duration and exclusivity (Labbok, 2012). Critical scrutiny of the literature however reveals that this increase did not sufficiently meet the Declarations' target. Further efforts at encouraging optimal infant feeding practices are reflected in the Millennium Development Goals (MDG's) 1, 4, 5 and Sustainable Development Goals (SDG's) 4. Despite these efforts, EBF rates and breastfeeding practices in Nigeria remain sub-optimal (Agunbiade & Ogunleye, 2012; Peterside et al., 2013; Uchendu et al., 2009).

Maternal and infant health researchers agree that many of the factors associated with infant feeding behaviour are non-modifiable demographic variables such as age, educational level and economic status (Al-Kandari & Ahmed, 2018; Ergin & Uzun, 2018). Consequently, there is a need to identify other predisposing factors that influence infant feeding behaviour that are more amenable to change. The concept of self-efficacy has been identified as a potential modifiable factor in improving the current infant feeding scenario. Based on Bandura's (1977) social cognitive theory, self-efficacy, an individual's confidence in their perceived ability to perform a specific behaviour (Bandura, 1997) has received considerable research attention as a precursor for engaging in health-related behaviours (Awaliyah et al., 2019; Dennis, 2003). Dennis (1999) opines that self-efficacy is a salient concept in relation to infant feeding practice as it can predict whether a mother chooses to breastfeed, how much effort she will readily expend to breastfeed and how she will respond to breastfeeding difficulties. Furthermore, self-efficacy and infant feeding share salient commonalities such as being situation-specific and

influenced by cultural norms (McCarter-Spaulding & Gore, 2009). This implies that a study of infant feeding related self-efficacy can aid an understanding of the non-demographic factors that influence infant feeding behaviour. The current study, therefore, investigates the predictive influence of self-efficacy on infant feeding attitudes and practices of a cohort of mothers in a rural Nigerian community. We hypothesize that infant feeding attitudes will differ by mother's age group and that self-efficacy will significantly predict infant feeding attitudes.

Hypotheses

1. There will be a significant difference in the infant feeding attitudes of postpartum mothers based on their age categories.
2. Self-efficacy will significantly predict infant feeding attitudes among postpartum mothers.

Methods

The study adopted a cross-sectional descriptive survey design and sampled 163 mothers from rural public primary health centres in Ede, Osun State, Nigeria. Inclusion criteria for the study were that participants should be mothers; with at least one living child with no known memory impairments. Ethical approval for the study was obtained from the ethics research panel based at the Behavioural Studies department of the Redeemer's University and the Primary Health Care Directors responsible for the primary health centres.

Research Instrument

A structured questionnaire was used in assessing infant feeding attitudes and practices among postnatal mothers. The questionnaire contained three sections;

The first section of the questionnaire was developed by the researcher based on the review of literature on infant feeding practices. The section consisted of 6 questions aimed at surveying the demographic characteristics of respondents.

The second section consisted of the Iowa Infant Feeding Attitudes Scale (IIFAS) (de la Mora et al., 1999) which was used to assess mothers' attitudes toward infant feeding. The scale consists of 17 items with a 5-point Likert scale from strongly agree to strongly disagree. Total IIFAS scores range from 17 to 85 with lower scores reflecting more positive attitudes to bottle

feeding. Total scores were grouped into three groups (1) positive to breastfeeding (70–85), (2) neutral (49–69), and positive to formula feeding (17–48). The IIFAS is a valid and reliable measure of breastfeeding knowledge and attitudes in cross-cultural settings (Abdulahi et al., 2020; AlKusayer et al., 2018; Lau et al., 2016).

The third section consisted of the Breastfeeding Self-Efficacy Scale-Short Form (BSES-SF), (Dennis, 2003) which assessed breastfeeding self-efficacy in mothers. Responses on the 14-item scale are on a 5-point Likert scale ranging from 1 = “not at all confident” to 5 = “very confident”. Higher scores indicate higher levels of breastfeeding self-efficacy (Dennis, 2010). A total score of 56 and above is determined as high self-efficacy. The BSES-SF is a valid and reliable measure of breastfeeding self-efficacy and its psychometric properties have been established across several locations (Aydin, & Pasinlioglu, 2018; Brandão et al., 2018; Khresheh & Ahmed, 2018; Gregory et al., 2008).

Data Analysis

Data were analyzed using Statistical Package for the Social Sciences (SPSS) software and results were presented in tables. One-way ANOVA was used to test for the influence of age on infant feeding attitude and a post hoc test was conducted to further confirm the variance in age. Linear regression analysis was conducted to test the prediction of infant feeding attitude by self-efficacy.

Results

Socio-Demographic Data of Respondents

The socio-demographic factors of the participants were tested and presented in Table 1. This distribution indicated the frequencies of such information as age, religion, marital status, educational qualification and occupation.

Table 1
Socio-Demographic Characteristics of Participants

| Variables | | Frequency | Percentage |
|---------------------------|----------------------------|------------------|-------------------|
| Age category | 18-30yrs | 31 | 19.0 |
| | 31-50yrs | 108 | 66.3 |
| | 51-70yrs | 20 | 12.3 |
| | 71yrs and above | 4 | 2.5 |
| | Total | 163 | 100.0 |
| Religion | Christian | 140 | 85.9 |
| | Islam | 20 | 12.3 |
| | Others | 3 | 1.8 |
| | Total | 163 | 100 |
| Marital status | Married | 147 | 90.2 |
| | Single | 3 | 1.8 |
| | Separated / Divorces | 5 | 3.1 |
| | Others | 8 | 3.9 |
| | Total | 163 | 100 |
| Educational qualification | Primary School Certificate | 30 | 18.4 |
| | SSCE/ND | 43 | 26.4 |
| | HND /First Degree | 73 | 44.8 |
| | Master's Degree | 16 | 9.8 |
| | PhD. | 1 | .6 |
| | Total | 163 | 100 |
| Occupation | Office Workers | 56 | 34.4 |
| | Business | 101 | 62.0 |
| | Artisan | 6 | 3.6 |
| | Total | 163 | 100.0 |

The sample of the present study comprised of postpartum mothers (N=163) of whom over half (66.3%) belonged to the 31–50 years age group with mean age of the participants as 35.72. A majority (90.2%) of the respondents were married with more than one-third (44%) having attained a university education. On their occupation, most of them were into various forms of businesses.

Test of Hypotheses

Table 2

Analysis of Variance showing Age Influence on Infant Feeding Attitudes

N = 163

| Source | SS | df | MS | F | p |
|---------|----------|-----|---------|--------|------|
| Between | 2017.738 | 3 | 672.579 | 12.040 | .000 |
| Within | 7485.538 | 134 | 55.862 | | |
| Total | 9503.275 | 137 | | | |

Results of the one-way ANOVA revealed a significant difference in infant feeding attitudes based on age category of respondents [$F(3, 134) = 12.04, p < .01$]. This implied that age was a determining factor for infant feeding attitude. The result confirmed hypothesis 1. For further understanding of this, a post hoc test was conducted and presented below.

Table 3

Post Hoc Tukey HSD showing the Mean and Standard Deviation of Age Categories on Infant Feeding Attitudes Scores

| Age | N | Mean | SD | 1 | 2 | 3 | 4 |
|--------------------|----|-------|------|-------|-------|-----|---|
| 1. 18-30 years | 28 | 53.54 | 6.86 | - | | | |
| 2. 31-50 years | 86 | 59.81 | 8.44 | 6.28* | - | | |
| 3. 51-70 years | 20 | 50.60 | 2.85 | 2.94 | 9.21* | - | |
| 4. 71yrs and above | 4 | 50.25 | 1.71 | 3.29 | 9.57 | .35 | - |

* mean is significant at .05

The descriptive mean distribution revealed that mothers within the age category of 31 – 50 years had the best infant feeding attitude ($M=59.81; SD=8.44$). This was followed by those within the age of 18 and 30 years ($M=53.54; SD=6.86$). The least was among those above 70 years ($M=50.25; SD=1.71$).

Tukey HSD Post hoc comparisons revealed other significant mean differences between age categories 18-30years and 31-50 years (Mean difference - 6.28*, $p = .001$). As well as between age categories 31-50 years and 50-70 years (Mean difference - 9.21* $p = .000$). Taken

together, these results reveal significant differences in infant feeding attitudes based on the age categories of the selected mothers in Ede town Osun State.

Table 4
Linear Regression Analysis of self-efficacy on Infant Feeding Attitudes

| | | | | | | | N= 163 |
|---------------|-------|---------|-------|------|----------------|------|--------|
| Predictor | B | β | t | sig | R ² | F | p |
| (constant) | 67.96 | | 12.26 | .000 | | | |
| Self-efficacy | -.19 | -.18 | -2.08 | .040 | .034 | 4.31 | .040 |

A linear regression revealed that self-efficacy independently and significantly predicted infant feeding attitudes [$F(1, 163) = 4.31, p = .040, \beta = -.18$], accounting for 3.4% of the total variation for infant feeding attitudes in the present cohort. This was in line with hypothesis 2 and it was accepted.

Discussion

Breastfeeding self-efficacy is considered a vital component in a successful experience of breastfeeding (Dennis, 2010). The present study examined the influence of self-efficacy on infant feeding attitudes in a cohort of postpartum mothers.

Socio-demographic variables have consistently been linked to infant feeding patterns and behaviour (Simpson, Quigley, Kurinczuk and Carson, 2019; Jones, Kogan, Singh, Dee and Grummer-Strawn, 2011). Ajao, Ojofeitimi, Adebayo, Fatusi & Afolabi, (2010) in a review of demographic factors and the nutritional status of children under age five in Ile-Ife opine that since infant feeding takes place in social contexts, individual-level variables are usually interwoven with other sociodemographic measures. Maternal age has been described as a strong determinant of infant feeding practice (Sipsma, Jones and Nickel, 2017; Kitano, Nomura, Kido, Murakami, Ohkubo, Ueno and Sugimoto, 2016). In the present study, mothers between ages 31-50 obtained higher infant feeding attitude scores indicating a more positive attitude to breastfeeding. Women in this age bracket are still in their childbearing years and this result augurs well for the long term health status of the next generation.

As hypothesized, self-efficacy predicted infant feeding attitudes with higher BSES-SF scores related to more positive attitudes to breastfeeding. Studies of self-efficacy and infant feeding have reported a significant impact of self-efficacy on infant feeding practices (Brockway, Benzies & Hayden, 2017; Vincent, 2015; O'Brien & Fallon, 2005). In a study examining the predictive validity of self-efficacy on breastfeeding duration, McCarter-Spaulding & Gore (2009) found that higher self-efficacy scores are predictive of longer breastfeeding duration and more exclusive breastfeeding patterns in black women. The clinical implication for health professionals caring for pregnant and postpartum mothers is to tailor programmes to boost breastfeeding self-confidence in this cohort as they are at more risk to prematurely discontinue breastfeeding. In line with the breastfeeding self-efficacy theory (Dennis, 1999), self-confidence enhancing strategies such as the provision of consistent advice to improve intended or future breastfeeding experience and provision of anticipatory guidance to manage maternal emotions such as stress and anxiety can boost breastfeeding self-efficacy which can translate to improved breastfeeding rates. While the level of variance explained by self-efficacy is minimal, it is important to bear in mind that socio-demographic variables account for variance in infant feeding attitudes. Hence, the result of the current study represents a considerable contribution in uncovering non-sociodemographic variables impacting the Nigerian infant feeding landscape.

Limitations

The cross-sectional nature of the present study and the relatively small sample size may limit the generalizability of the present study. However, results obtained from the present study are useful in identifying mothers who are less likely to breastfeed for targeted breastfeeding support and intervention.

Conclusion

Even though breastfeeding was found to be highly acceptable in the study area as evidenced by overall infant feeding attitude scores, a closer look at the results reveals that younger women between age 18 and 30 who constitute the next child bearing generation may not value the notion of breastfeeding as an infant feeding method. Consequently, there is an urgent need to intensify efforts at directed infant feeding interventions to this age cohort in order to secure the general health state of the next generation. It is recommended that future studies

examine breastfeeding self-efficacy in mothers who possess unique socio-demographic characteristics such as single mothers and mothers from tribal minorities.

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