



Institute of Medicine Early Infant Feeding Recommendations for Childhood Obesity Prevention: Implementation by Immigrant Mothers From Central America

Kathleen F. Gaffney, PhD, RN, F/PNP-BC^{a,*}, Albert V. Brito, MD^b, Panagiota Kitsantas, PhD^c, Deborah A. Kermer, MA^d, Graciela Pereddo, BA^e, Katya M. Ramos, BS^a

^a School of Nursing, George Mason University, Fairfax, VA, United States

^b Inova Cares Clinic for Children, Falls Church, VA, United States

^c Health Administration and Policy Department, George Mason University, Fairfax, VA, United States

^d University Libraries, Data Services, George Mason University, Fairfax, VA, United States

^e Global and Community Health Department, George Mason University, Fairfax, VA, United States

ARTICLE INFO

Article history:

Received 31 October 2017

Revised 26 February 2018

Accepted 26 February 2018

Keywords:

Infant

Feeding style

Immigrant

Central America

Institute of Medicine

Childhood obesity

ABSTRACT

Purposes: Describe implementation of Institute of Medicine (IOM) early infant feeding recommendations for child obesity prevention by immigrant mothers from Central America; examine potential relationships with food insecurity and postpartum depressive symptoms.

Design and Methods: Using a cross-sectional, descriptive design, face-to-face interviews were conducted with 318 mothers of 2 month old infants at a large pediatric setting for low income families. Logistic regression models assessed feeding practices, food insecurity and postpartum depressive symptoms.

Results: Exclusive breastfeeding rates were low (9.4%); most mothers (62.7%) both breastfed and bottle fed their infants. Mothers who bottle fed at moderate and high intensity were twice as likely to affirm that if you give a baby a bottle, you should always make sure s/he finishes it (OR = 2.30, 95% CI = 1.13, 4.69; OR = 2.29, 95% CI = 1.26, 4.14). Food insecurity was experienced by 57% of mothers but postpartum depressive symptoms were low (Possible range = 0–30; M = 2.96, SD = 3.6). However, for each increase in the postpartum depressive symptoms score, the likelihood of affirming a controlling feeding style increased by 11–13%.

Conclusions: Immigrant mothers from Central America were more likely to both breastfeed and bottle feed (*las dos cosas*) than implement exclusive breastfeeding. Bottle feeding intensity was associated with a controlling feeding style.

Practice Implications: Infant well visits provide the ideal context for promoting IOM recommendations for the prevention of obesity among children of immigrant mothers from Central America.

© 2018 Elsevier Inc. All rights reserved.

Introduction

The Institute of Medicine (IOM, 2011) report *Early Childhood Obesity Prevention Policies* identifies early infancy as a critical time for obesity prevention and recommends that pediatric health care providers promote both exclusive breastfeeding and responsive infant feeding styles. The guideline for exclusive breastfeeding for the first six months of life is based on evidence from meta-analyses that have linked breastfeeding with a decreased risk for childhood overweight (Arenz, Rükerl,

Koletzko, & von Kries, 2004; Harder, Bergmann, Kallischnigg, & Plagemann, 2005). This IOM recommendation is consistent with guidelines from the World Health Organization (WHO, 2011), the National Association of Pediatric Nurse Practitioners (NAPNAP, 2013), and the American Academy of Pediatrics (AAP, 2012). Despite these guidelines that promote exclusive breastfeeding for the first six months, Hispanic mothers living in the U.S. have been found to supplement with formula by 2 days of infant age at higher rates than any other racial/ethnic group (Chapman & Pérez-Escamilla, 2012).

The IOM recommendation that health care providers also teach and promote responsive feeding styles during early infancy emerges from research findings that older children have the ability to regulate their food intake and that responsive feeding practices reinforce eating practices according to internal hunger and fullness cues (Black & Aboud, 2011; Engle & Pelto, 2011). The IOM posits that this ability appears to

* Corresponding author at: Kathleen F. Gaffney, PhD, RN, F/PNP-BC.

E-mail addresses: kgaffney@gmu.edu (K.F. Gaffney), Albert.Brito@inova.org (A.V. Brito), pkitsant@gmu.edu (P. Kitsantas), dekermer@gmu.edu (D.A. Kermer), gpereddo@masonlive.gmu.edu (G. Pereddo), kramosma@masonlive.gmu.edu (K.M. Ramos).

be present in infancy (Fox, Devaney, Reidy, Razafindrakoto, & Ziegler, 2006) and that the potential for self-regulation should be tapped through a responsive, non-controlling feeding style that reflects sensitivity to infant cues of hunger and satiety. Worobey, Lopez, and Hoffman (2009) found that decreased sensitivity to infant cues between 6 and 12 months of age was linked to excessive weight gain by one year, but the effect of feeding practices in early infancy has not been established. However, a subsequent systematic reviews of 30 prospective studies demonstrated an association between excessive weight gain in infancy and early childhood obesity, thus adding support to the need for identification of factors that lead to excessive weight gain in the first year of life (Weng, Redsell, Swift, Yang, & Glazebrook, 2012).

One sector of the U.S. population at disproportionate risk for early childhood obesity but underrepresented in this area of research is Hispanic children. Using the benchmark of BMI \geq 95th percentile, a recent national survey found obesity among Hispanic preschoolers (15.6%) exceeded that of black (10.4%), white (5.2%), and Asian (5.0%) children (Ogden et al., 2016). These estimates are alarming in light of a U.S. Census report that Hispanic children are now more than one-fourth of the population under 1 year of age (Passel, Livingston, & Cohn, 2012). Most mothers of these children were born outside the United States and many have come from Central America (Murphey, Guzman, & Torres, 2014). Over the past several years, migration from El Salvador, Honduras, Nicaragua and Guatemala has risen dramatically as families flee gang violence and poverty (Lesser & Batalova, 2017). Despite their growing presence in the United States, these families are underrepresented in studies related to early childhood obesity prevention.

To address this gap, we examined the implementation IOM-recommended early infant feeding practices by mothers who are immigrants from Central America. We also explored the potential relationships between these practices and maternal food insecurity and postpartum depressive symptoms, as both have been found to have associations with early infant feeding practices among mothers from diverse racial/ethnic and geographical backgrounds (Dennis & McQueen, 2009; Gross, Mendelsohn, Fierman, Racine, & Messito, 2012). We are not aware of studies that have examined these relationships among immigrant mothers from Central America.

In its position statement concerning the promotion of food security in clinical practice and health policy, the AAP (2015) asserted that the food insecurity experienced by low income populations in the United States disproportionately places them at risk for childhood obesity. Gross et al. (2012) examined the relationship between maternal food insecurity and obesogenic maternal infant feeding styles among low income families and found that maternal food insecurity was related to controlling feeding styles. Their research included infants up to 6 months of age, both Hispanic and non-Hispanic mothers as well as a combination of immigrant and U.S. born mothers. Building on their findings, we sought to examine whether a similar relationship would be found with mothers from our target population.

Prior research also has linked postpartum depressive symptoms with infant feeding practices. A systematic review of the relationship between breastfeeding practices and postpartum depressive symptoms that included 75 international studies found that women with postpartum depression symptoms were less likely to initiate breastfeeding or to do so exclusively (Dennis & McQueen, 2009). A U.S. population-based study using the Infant Feeding Practices Study II dataset found mothers with postpartum depressive symptoms were more likely to breastfeed at low intensity compared to those without depressive symptoms. A limitation of this study was the underrepresentation of Hispanic and low income mothers (Gaffney, Kitsantas, Brito, & Swamidoss, 2014). Hurlley, Black, Papas, and Caulfield (2008) assessed non-responsive feeding styles among mothers of infants and found a significant association between maternal postpartum depressive symptoms and a forceful infant feeding style. Most of the mothers in their study had completed high school and were non-Hispanic. The present study was focused on a group at high risk for early childhood obesity that has

been underrepresented in research. The purposes of this study were to describe implementation of IOM early infant feeding recommendations for child obesity prevention by immigrant mothers from Central American and examine potential relationships between feeding practices and maternal food insecurity and postpartum depressive symptoms.

Methods

The study was conducted in a large pediatric primary care setting for low income families in Virginia. Study approval was obtained from clinical and university Institutional Review Boards. Mothers who met inclusion criteria were at least 18 years old, immigrants from Central America, gave birth to a baby who weighed at least 5 lbs., was delivered at ≥ 37 weeks gestation, without medical problems that would interfere with feeding or growth, and was currently being seen for the regularly scheduled well child check when their infants were 2 months old. The sample was comprised of 318 mothers-infant dyads.

Data Collection

Following informed consent, mothers responded to survey items during structured interviews with bilingual undergraduate Nursing and Global and Community Health students who were employed as research assistants. The students prepared for this task with role playing sessions with the research team prior to actual data collection. The face-to-face approach for data collection mirrors health histories conducted at the site, and thus, was familiar to mothers and reduced potential discomfort due to low literacy. This has been an effective strategy in prior research with Hispanic populations (Gibson-Davis & Brooks-Gunn, 2006). Interviews lasted approximately 30 min. Data were collected between 2015 and 2017. Missing data for major study variables was 0.6%.

Measures

Infant Feeding Practices and Styles

The IOM feeding practice recommended for infants between birth and 6 months of age is exclusive breastfeeding. To assess implementation of this recommendation, we conducted a 24-h recall of infant feeding for a typical day and categorized results as exclusive breastfeeding, mixed feeding (both breastfeeding and bottle feeding) and bottle feeding only. Since our preliminary findings indicated that most mothers were both breast and bottle feeding (62.3%) or bottle feeding only (28.3%), we constructed a bottle feeding intensity variable to better understand the proportion of feedings that were via bottle. As done in the Infant Feeding Practices Study II, this variable was the total number of bottle feedings divided by the total number of all feedings per typical day in the past week (Li, Magada, Fein, & Grummer-Strawn, 2012). Bottle feeding intensity was categorized as low ($< 25\%$), moderate ($25 < 50\%$) or high ($\geq 50\%$).

The IOM recommendations also call for responsive feeding styles that are sensitive to infant cues of hunger and satiety and non-controlling. We measured responsive feeding styles using eight items from the Child Feeding Questionnaire that have been tested with Hispanic mothers of infants in both English and Spanish forms in prior research (Birch et al., 2001; Gross, Mendelsohn, Fierman, & Messito, 2011; Taveras et al., 2011). Mothers were asked to respond to items based on a four-point Likert scale (strongly agree, agree, disagree and strongly disagree; Table 3). Consistent with prior research, these items were each analyzed separately and not as a scale (Gross et al., 2010). After reverse coding as appropriate, mothers' answers to these feeding style items were each categorized as responsive or non-responsive.

Download English Version:

<https://daneshyari.com/en/article/8573919>

Download Persian Version:

<https://daneshyari.com/article/8573919>

[Daneshyari.com](https://daneshyari.com)