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Balancing Work and Family: The Effect of Employment Characteristics on Breastfeeding

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Presenter Disclosures

Chinelo Ogbuanu, MD, MPH, PhD

No relationships to disclose

Introduction

- Proven benefits of breastfeeding for maternal and child health
- Economic and Environmental benefits
- US Breastfeeding rates - still below national goals
- Work-related issues are major barriers

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Benefits and Statistics

- Benefits
 - 21% reduction in infant mortality (IM) rates (AAP, 2005)
 - Narrowing of black-white disparity in IM (Forste et al., 2001)
 - Annual health care savings of \$3.6 million (AAP, 2005)
- Breastfeeding rates (NIS)
 - Among children born in 2004:
 - 73.1% at birth, 42.1% at 6mos; 21.4% at 12mos
 - Early Postpartum - Hispanics: 80.3%; NH Whites: 73.5%, NH AAs: 55.7%

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Breastfeeding Recommendations

- WHO
- AAP
- HP 2010 Breastfeeding Objectives

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Women and Labor Force Participation

- Mothers – fastest growing group
- In 2006 - > 50% of mothers of infants participated in the work force

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Employment Status, Job Types

- Part-time work, not working, and self-employment - associated with increased initiation and duration
- Professional occupations – associated with prolonged duration

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Knowledge Gap

- Previous studies have either used data that are not nationally representative or dated
- Few studies have looked at the effect of employment characteristics on predominant breastfeeding

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Hypothesis

- Professional job types, working part-time, and not working at all are positively associated with breastfeeding initiation and duration

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Study Design: Overview of the ECLS-B

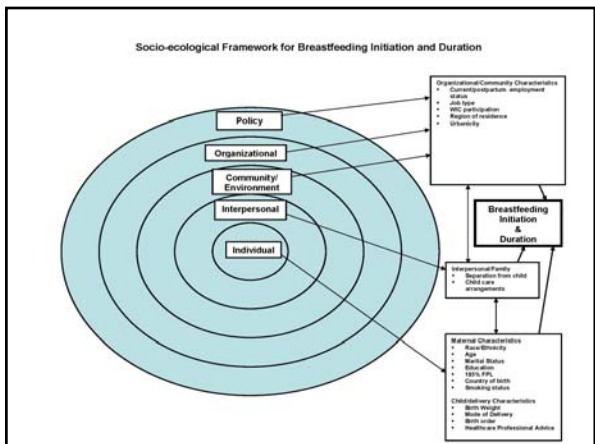
- Early Childhood Longitudinal Study-Birth Cohort (ECLS-B)
- Nationally representative of children born in 2001 (birth certificates)
- Oversampling of special populations
- Data were collected at multiple time points (5), from multiple sources, through multiple methods
- Overall N ~ 10,700 at 9-month wave (initially ~ 14,000)

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Study Sample

- Restricted to singletons whose biological mothers were the respondents at the 9-month interview
- N ~ 8,750
- First two waves of interview used (9-month and 2-year)

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Dependent Variables

- 3 outcomes:
 - Breastfeeding initiation – Yes/No
 - Duration of predominant breastfeeding (months)
 - Duration of any breastfeeding (months)

Variable Matrix			
Hypothesis	Main Independent Variables	Approximate Sample Size	Control Variables
Employment Status and Job type	Postpartum Employment Status <ul style="list-style-type: none"> • Full-time (≥35hrs/week) • Part-time (<35hrs/week) • Not employed 	8,750	Race/Ethnicity Maternal age Marital Status Maternal Education 185% FPL Country of birth Smoking Status Birth Weight Mode of delivery Birth order Separation from child Child care arrangements HCP advice about breastfeeding WIC participation Region Urbanicity
	Occupation type <ul style="list-style-type: none"> • Management • Professional • Service • Sales • Administrative • Other 	4,500	

Analysis (I)

- Descriptive statistics
 - Frequencies, means
- Breastfeeding initiation:
 - Bivariable analysis:
 - Chi-square tests
 - Multivariable analysis:
 - Multiple logistic regression
 - Model 1: Crude/Unadjusted
 - Model 2: Adjusted for maternal characteristics only
 - Model 3: Adjusted for all control variables

Analysis (II)

- Breastfeeding duration (any and predominant):
 - Bivariable analysis:
 - Chi-square tests
 - Multivariable analysis:
 - Multiple logistic regression
 - Model 1: Crude/unadjusted
 - Model 2: Adjusted for all control variables
 - Weighting with SAS-callable SUDAAN vs. 10 (W1R0)
 - Statistical significance was tested at p=0.05

Descriptive Statistics: Dependent Variables

Characteristics	Unweighted n	Weighted Mean	Weighted %
Total Sample	8,750		100
Ever breastfed	6,000		69.5
Duration of any breastfeeding (months)	5,950	6.7	
Duration of predominant breastfeeding (months)	5,100	2.3	

Breastfeeding Initiation: Bivariable Analysis

Characteristics	Total %	% Initiating Breastfeeding	P-value
Postpartum Employment Status			0.1041
≥ 35 hrs/week	32.4	66.8	
< 35 hrs/week	20.0	71.9	
Not employed	47.7	70.3	
Occupational type			<0.0001
Management	9.9	80.5	
Professional	22.0	83.4	
Service	23.3	62.1	
Sales	12.2	63.4	
Administrative	23.9	63.4	
Other	8.7	58.4	

Breastfeeding Initiation: Multivariable Analysis

Characteristics	Model 1 (OR)	Model 2 (OR)	Model 3 (OR)
Postpartum Employment Status			
≥ 35 hrs/week	0.85 (0.69, 1.04)	0.71 (0.57, 0.87)	0.72 (0.57, 0.92)
< 35 hrs/week	1.08 (0.87, 1.34)	0.86 (0.70, 1.07)	0.86 (0.67, 1.10)
Not employed	Reference	Reference	Reference
Occupational type			
Management	2.39 (1.49, 3.81)	1.57 (0.97, 2.55)	1.56 (0.93, 2.61)
Professional	2.90 (2.03, 4.13)	1.70 (1.16, 2.49)	1.79 (1.19, 2.68)
Service	0.95 (0.68, 1.32)	1.20 (0.84, 1.72)	1.22 (0.85, 1.76)
Sales	1.00 (0.68, 1.48)	1.21 (0.79, 1.84)	1.20 (0.78, 1.84)
Administrative	Reference	Reference	Reference
Other	0.81 (0.51, 1.28)	0.89 (0.55, 1.45)	1.03 (0.64, 1.64)

Breastfeeding Duration: Bivariable Analysis

Characteristics	Any Breastfeeding		Predominant Breastfeeding	
	>6mos (%)	p-value	>3mos (%)	p-value
Postpartum Employment Status		<0.0001		0.5766
≥ 35 hrs/week	27.5		24.8	
< 35 hrs/week	42.5		27.5	
Not employed	42.9		27.3	
Occupational type		0.0540		0.2110
Management	38.1		32.2	
Professional	41.5		32.2	
Service	31.3		20.4	
Sales	25.9		25.3	
Administrative	27.6		23.9	
Other	32.7		17.6	

Breastfeeding Duration: Multivariable Analysis

Characteristics	Any Breastfeeding		Predominant Breastfeeding	
	Model 1 (OR)	Model 2 (OR)	Model 1 (OR)	Model 2 (OR)
Postpartum Employment Status				
≥ 35 hrs/week	0.51 (0.41, 0.63)	0.71 (0.51, 0.99)	0.88 (0.66, 1.17)	0.86 (0.58, 1.28)
< 35 hrs/week	0.98 (0.78, 1.24)	1.12 (0.82, 1.53)	1.01 (0.75, 1.35)	0.88 (0.61, 1.26)
Not employed	Reference	Reference	Reference	Reference
Occupational type				
Management	1.61 (0.91, 2.87)	1.19 (0.65, 2.20)	1.52 (0.84, 2.76)	1.09 (0.61, 1.94)
Professional	1.86 (1.17, 2.97)	1.13 (0.66, 1.94)	1.52 (0.86, 2.67)	0.95 (0.54, 1.67)
Service	1.20 (0.79, 1.82)	1.24 (0.74, 2.07)	0.82 (0.51, 1.31)	0.93 (0.54, 1.59)
Sales	0.92 (0.55, 1.52)	0.82 (0.48, 1.41)	1.08 (0.59, 1.97)	1.02 (0.54, 1.91)
Administrative	Reference	Reference	Reference	Reference
Other	1.28 (0.66, 2.45)	1.32 (0.64, 2.72)	0.68 (0.35, 1.34)	0.92 (0.45, 1.88)

- ### Summary of Findings
- Professional occupations
 - increased odds of breastfeeding initiation
 - Full-time workers:
 - decreased odds of breastfeeding initiation
 - decreased odds of continuation of any breastfeeding beyond 6 months

- ### Strengths of Study
- Nationally representative data
 - Longitudinal Study: Outcome of interest
 - Large sample size: Adjusted for potential confounders

- ### Limitations
- No variables on maternal attitudes towards breastfeeding (intent)
 - No assessment of occupational type before delivery
 - Unable to examine 'exclusive' breastfeeding due to the wording of the question

Public Health Implications

- Part-time option is an effective strategy to balance work and family
- Employers need to be educated about the benefits of breastfeeding, and encouraged to provide part-time options

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