

# Timing of Return to Work and Breastfeeding in Australia

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abstract

**OBJECTIVE:** To examine the effects of timing of return to work, number of hours worked, and their interaction, on the likelihood of breastfeeding at 6 months and predominant breastfeeding at 16 weeks.

**METHODS:** A nationally representative sample of Australian mothers in paid employment in the 13 months before giving birth ( $n = 2300$ ) were surveyed by telephone. Four multivariate logistic regression models were used to analyze the effects of timing of return to work and work hours, independently and in interaction, on any breastfeeding at 6 months and on predominant breastfeeding at 16 weeks, controlling for maternal sociodemographics, employment patterns, and health measures.

**RESULTS:** Mothers who returned to work within 6 months and who worked for  $\geq 20$  hours per week were significantly less likely than mothers who had not returned to work to be breastfeeding at 6 months. However, returning to work for  $\leq 19$  hours per week had no significant impact on the likelihood of breastfeeding regardless of when mothers returned to work. Older maternal age, higher educational attainment, better physical or mental health, managerial or professional maternal occupation, and being self-employed all significantly contributed to the increased likelihood of any breastfeeding at 6 months. Similar patterns exist for predominant breastfeeding at 16 weeks.

**CONCLUSIONS:** The effects of timing of return to work are secondary to the hours of employment. Working  $\leq 19$  hours per week is associated with higher likelihood of maintaining breastfeeding, regardless of timing of return to work.

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Dr Xiang carried out the initial analyses and drafted several sections of the initial manuscript; Dr Zadoroznyj conceptualized and drafted the initial manuscript, and reviewed and revised the manuscript; Dr Tomaszewski substantially contributed to the data analyses, and critically reviewed the manuscript; Dr Martin designed the data collection instruments, coordinated and supervised data collection, and critically reviewed the manuscript; and all authors approved the final manuscript as submitted.

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**WHAT'S KNOWN ON THIS SUBJECT:** Whereas both the timing of return to work and hours of employment are known to affect breastfeeding, little is known about the relative importance of their independent and combined effects on breastfeeding outcomes.

**WHAT THIS STUDY ADDS:** The effects of timing of return to work are secondary to the hours of employment. Working  $\leq 19$  hours per week is associated with longer duration and greater extent of breastfeeding, regardless of timing of return to work.

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Despite consistent evidence of the benefits of breastfeeding for both mothers and infants,<sup>1</sup> breastfeeding initiation, duration, and exclusivity remain lower than recommended by health and medical authorities<sup>2,3</sup> in Europe<sup>4</sup> and the United States.<sup>5,6</sup> In Australia, breastfeeding initiation rates have been increasing for more than a decade and reached 96% in 2010.<sup>7</sup> However, breastfeeding rates decline rapidly in the first 6 months, such that 60% of Australian infants were still receiving some breast milk at 6 months, and only 15% were exclusively breastfed to 5 months.<sup>7</sup>

Maternal employment, particularly in the first 6 months after the birth of an infant, has been identified in a number of studies as an important barrier to the continuation of breastfeeding to 6 months.<sup>6,8-14</sup> Previous research indicates that high working hours coupled with early return to work function as barriers to mothers' ability to breastfeed.<sup>8,11-13, 15,16</sup> However, there has been little attempt to separate the effects of timing of return to work and hours worked, nor to investigate how the 2 factors might interact.

In this article, we examine the independent and combined effects of timing of return to work and hours worked on the rate of breastfeeding at 6 months and on the likelihood of predominantly breastfeeding at 16 weeks. We conduct multivariate logistic regression analysis and include a range of maternal and infant covariates known to be associated with breastfeeding outcomes.<sup>17-21</sup>

## METHODS

### Sample

Data used here are from the Baseline Mothers Survey, a random sample survey of working Australian mothers taken ~12 months after they gave birth to a child. The survey was undertaken to gather baseline

data for an evaluation of the national Paid Parental Leave scheme that commenced in January 2011.<sup>22</sup> Mothers were randomly chosen from a sampling frame of applicants for the Baby Bonus for infants born in October and November 2009. It is estimated that, at this time, ~95% of Australian mothers applied for the Baby Bonus after a birth. Mothers were included if they had worked an average of at least 1 day per week during 10 of the 13 months before the birth, part of the eligibility criteria for the parental leave scheme. Telephone interviews were conducted with 2587 mothers between late November 2010 and late February 2011. An approach letter was sent to participants before they were called and an informed consent was obtained orally before the interview proceeded. The survey had an 84% response rate. Ethics approval for the study was obtained from the Behavioral and Social Sciences Ethical Review Committee of the University of Queensland (No. 2010001298). Mothers who had never initiated breastfeeding or did not provide key data were excluded from analyses, which resulted in a final sample of 2300 participants. Table 1 presents the characteristics of the study sample compared with relevant Australian data.

### Data Collection and Variables

The duration of breastfeeding was measured by mothers' response to the question "How old was the baby when you completely stopped

breastfeeding?" The extent of breastfeeding was measured through the question "How old was the baby when he/she was first given infant formula (bottle) or solids?" Because the intake of water was not included in this question, we use the term "predominant" rather than "exclusive" to describe the extent of breastfeeding. We analyze the extent of breastfeeding at the 16-week time point, because so few infants are predominantly breastfed by 6 months. The 2 main independent variables were measured in the questions "How old was the baby when you first worked in a paid job after the birth?" and "How many hours a week do you work in that job (your first job)?"

Based on previous literature, we include covariates relating to maternal sociodemographic characteristics (age, education, relationship status, country of birth, and household income), maternal work-related characteristics (occupation and employment sector), infant's characteristics (birth weight, gestational age), and parity. Maternal physical and mental health were measured by the Medical Outcomes Study Short-Form version 2.<sup>24</sup> SF-12 version 2 is a subset scale of the SF-36 health-related quality-of-life measure.<sup>25</sup> This scale includes 12 items measuring 8 dimensions of health, which are then converted to 2 component scores indicating physical and mental health condition. The component physical and mental scores are included in the model as

**TABLE 1** Characteristics of Study Sample Compared With Relevant Australian Data.

	BaMS Sample	Australian Comparison
Median maternal age at birth, y	33	31 <sup>a</sup>
University education, %	51.8	41.2 <sup>b</sup>
Parity, primiparous, %	50.9 <sup>c</sup>	41.0
Breastfeeding initiation, %	94.0, <i>n</i> = 2587	95.9 <sup>b</sup>
Any breastfeeding at 6 mo, %	58.0, <i>n</i> = 2300	60.1 <sup>b</sup>
Predominant breastfeeding <4 mo, %	48.5, <i>n</i> = 2300	47.1 <sup>b</sup>

Source: Baseline Mothers Survey (BaMS), data weighted by state.

<sup>a</sup> Australian Bureau of Statistics. Births, Australia, 2013.<sup>25</sup>

<sup>b</sup> 2010 Australian National Infant Feeding Survey.<sup>7</sup>

<sup>c</sup> Those who said "No" to the question "Whether any other children live in the household" were regarded as first-time mothers.

**TABLE 2** Mothers' Employment and Breastfeeding at 6 Months and Predominant Breastfeeding at 16 Weeks

Main Independent Variables	Any Breast Milk at 6 mo, %	Predominant Breastfeeding at 16 wk, %	Total <i>n</i> (%)
Timing of return to work			
Not returned to work at 6 mo	62.0	— <sup>a</sup>	1513 (100)
Returned to work before 3 mo	51.0	— <sup>a</sup>	363 (100)
Returned to work between 3 and 6 mo	49.8	— <sup>a</sup>	424 (100)
Not returned to work at 16 wk	— <sup>a</sup>	53.5	1807 (100)
Returned to work before 8 wk	— <sup>a</sup>	44.3	221 (100)
Returned to work between 9 and 16 wk	— <sup>a</sup>	46.0	272 (100)
Mothers' working hours after return to work, % ( <i>n</i> )			
1–19 h/wk	59.5 (333)	52.6 (211)	(100)
20–34 h/wk	47.2 (250)	41.6 (154)	(100)
≥35 h/wk	39.2 (204)	37.5 (128)	(100)
Total	58.0	51.7	2300

Source: Baseline Mothers Survey (BaMS).

<sup>a</sup> Note: The empty cell means no observations due to the categorization of dependent variables. For example, we only look at predominant breastfeeding at 16 weeks, as such no observation at 6 months.

continuous variables with a range of 1 to 100.

### Analysis

To clarify the impact of timing of return to work and working hours, we built 4 multivariate logistic regression models. In the first model, we assessed the impact of timing of return to work on breastfeeding likelihood while controlling for all the covariates. Next, we examined the impact of working hours on breastfeeding likelihood, controlling for the same set of covariates. Third, we put both of the 2 key predictors in 1 model. And finally, in the fourth model, we included the interaction of timing of return to work and working hours.

In our return to work variables, mothers who had not returned to work are treated as the reference category. As a result, the same mothers are in the reference category for our 2 key independent variables. Because of this, models 3 and 4 estimate a full range of effects for the number of hours worked (contrasting them with the mothers who had not returned to work), and also include a direct contrast between those who return to work sooner and later after the birth (ie, within 3 and 6 months for any breastfeeding at 6 months,

and 8 and 16 weeks for exclusive breastfeeding at 16 weeks). By proceeding in this way, we are able to test directly whether there is a statistically significant difference in breastfeeding odds that is associated with timing of return to work, given that the mother had returned to work and is working for a certain number of hours. We are also able to directly test whether including both key independent variables in a single model (model 3), and adding interactions between them (model 4), offers statistical improvement over more parsimonious models.

### RESULTS

The percentages of mothers who still breastfed at 6 months and predominantly breastfed at 16 weeks across key independent variables are presented in Table 2. A greater percentage of mothers who had not returned to work were breastfeeding at 6 months (62%) and predominantly breastfeeding at 16 weeks (53%). Looking at timing of return to work, although there is a substantial drop in the breastfeeding rates for all mothers who returned, breastfeeding rates at 6 months are very similar among those who returned to work within 3 months

postpartum (51%) and those who returned between 3 and 6 months (49%). A similar pattern occurs for predominant breastfeeding rates at 16 weeks. In contrast, breastfeeding rates by the number of hours that mothers worked after they returned show a more linear pattern, with a steady decrease in rates as mothers work more hours. This occurs for both predominant breastfeeding at 16 weeks and any breastfeeding at 6 months.

### The Effect of Timing of Return to Work and Working Hours on Breastfeeding

Unadjusted odds ratios (ORs) from logistic regressions for each of the 2 main predictors with outcome variables of any breast milk at 6 months and predominant breastfeeding at 16 weeks are presented in Table 3.

Adjusted ORs from multiple logistic regressions with outcome variables of any breast milk at 6 months and predominant breastfeeding at 16 weeks are presented in Table 4 and Table 5, respectively. In both tables, model 1 shows the effect of timing of return to work, model 2 shows the effect of working hours, model 3 combines the 2 key independent variables, and model 4 also included the interaction effects between the 2. All models are adjusted for the same range of control variables as described earlier. The effects of those control variables are suppressed in Tables 4 and 5 to aid clarity but are presented separately in Table 6.

Model 1 analyzes the likelihood of any breastfeeding at 6 months (Table 4). It shows that, compared with mothers who did not return to work at 6 months, those who returned to work within 3 months (adjusted OR 0.56, 95% confidence interval [CI] 0.43–0.73) and from 3 to 6 months (adjusted OR 0.60, 95% CI 0.48–0.75) had a lower odds of breastfeeding their infants at 6 months of age. Model 2 shows the main effect

**TABLE 3** Unadjusted ORs for Any Breastfeeding at 6 Months and Predominant Breastfeeding at 16 Weeks

Main Independent Variables	Any Breast Milk at 6 mo, %	Predominant Breastfeeding at 16 wk, %
	OR (95% CI)	OR (95% CI)
Timing of return to work		
Not returned to work at 6 mo	1.00 (Ref.)	— <sup>a</sup>
Returned to work before 3 mo	0.64* (0.51–0.80)	— <sup>a</sup>
Returned to work between 3 and 6 mo	0.61* (0.49–0.75)	— <sup>a</sup>
LR $\chi^2$	28.96	— <sup>a</sup>
Not returned to work at 16 wk		
Returned to work before 8 wk	— <sup>a</sup>	1.00 (Ref.)
Returned to work between 9 and 16 wk	— <sup>a</sup>	0.69** (0.52–0.92)
LR $\chi^2$	— <sup>a</sup>	10.77
Mothers' working hours after return to work (same reference group as Timing of return to work)		
1–19 h/wk	0.90 (0.71–1.15)	0.80 (0.72–1.28)
20–34 h/wk	0.55* (0.41–0.72)	0.62*** (0.44–0.86)
$\geq 35$ h/wk	0.40* (0.29–0.53)	0.52*** (0.36–0.75)
LR $\chi^2$	51.15	19.22

Source: Baseline Mothers Survey (BaMS).

<sup>a</sup> Note: The empty cell means no observations due to the categorisation of dependent variables. For example, we only look at predominant breastfeeding at 16 weeks, as such no observation at 6 months.

\*  $P < .05$ .

\*\*  $P < .01$ .

\*\*\*  $P < .001$ .

of working hours: mothers who worked full-time ( $\geq 35$  hours per week) (adjusted OR 0.36, 95% CI 0.27–0.50) and between 20 and 34 hours per week (adjusted OR 0.50, 95% CI 0.38–0.66) had a lower odds of breastfeeding at 6 months than mothers who had not returned to work. This is not the case, however, for mothers who worked 1 to 19 hours per week (adjusted OR 0.88, 95% CI 0.68–1.14).

The addition of timing of return to work and working hours together, as shown in model 3, removes the statistical significance of timing of return to work, yet the main effect of working hours remains. This suggests that once we control for the number of hours mothers work, there is no statistically significant difference in the odds of breastfeeding among the mothers who do not return to work, those who return to work in the first 3 months, and those who return between 3 and 6 months postpartum.

In the final step of analysis, shown in model 4, the interaction effects between the categories of the 2 main predictors were added, none of which were statistically significant (output

suppressed but available from authors on request).

The results from models 3 and 4 suggest that once the number of hours worked has been accounted for, including the timing of return to work might not be necessary. To test this more directly, we performed the likelihood ratio (LR) test by comparing the goodness of fit of consecutive models. In model 2, Likelihood Ratio (LR)  $\chi^2$  (24) = 215.68, whereas in model 3, LR  $\chi^2$  (25) = 215.76, and model 4, LR  $\chi^2$  (29) = 216.84. The results of the LR tests show that neither adding timing of return to work (model 3 – model 2: LR  $\chi^2$  (1) = 0.08,  $P = .77$ ) nor the interactions (model 4 – model 2: LR  $\chi^2$  (5) = 1.16,  $P = .95$ ) offer statistically significant improvements in model fit over the more parsimonious model 2.

The results for predominant breastfeeding at 16 weeks (Table 5) are similar to those for any breastfeeding at 6 months. We observe a significant drop in predominant breastfeeding rates for those mothers who return to working  $\geq 20$  hours per week. However,

there is no significant difference in predominant breastfeeding likelihood between those mothers who work 1 to 19 hours and those who stay at home (model 2). These findings hold, regardless of when the mothers return to work (within 8 weeks or between 8 and 16 weeks) (models 3 and 4). As before, the results of the LR tests show that neither adding timing of return to work (model 3 – model 2: LR  $\chi^2$  (1) = 1.24,  $P = .27$ ) nor the interactions (model 4 – model 2: LR  $\chi^2$  (5) = 4.28,  $P = .51$ ) significantly improves model fit as compared with the more parsimonious model 2.

Taken together, the findings demonstrate that, although returning to work has, on average, a significant impact on mothers' likelihood of breastfeeding (both at 6 months and predominant breastfeeding at 16 weeks), this depends entirely on the number of hours worked. In particular, working  $\leq 19$  hours removes the negative effect of return to work on the continuation of breastfeeding. By contrast, the timing of return to work does not appear to make further difference, once the number of hours worked is accounted for.

### Other Factors Associated With Breastfeeding

As with other studies, older, more educated mothers, and those in managerial or professional occupations, or self-employed are more likely to breastfeed for longer, as measured by some breastfeeding at 6 months (see Table 6). Those mothers who reported better physical (adjusted OR 1.02, 95% CI 1.01–1.03) and mental health (adjusted OR 1.01, 95% CI 1.002–1.02) also had a higher odds of breastfeeding at 6 months. Premature infants ( $\leq 37$  weeks) had a lower odds of being breastfed at 6 months than full-term infants ( $> 37$  weeks) (adjusted OR 0.72, 95% CI 0.54–0.96).

**TABLE 4** Adjusted ORs for Any Breastfeeding at 6 Months (*n* = 2300)

	Model 1: Timing of Return to Work			Model 2: Working Hours			Model 3: Timing of Return to Work and Working Hours			Model 4: Timing of Return to Work, Working Hours, and Their Interaction		
	OR	95% CI		OR	95% CI		OR	95% CI		OR	95% CI	
Timing of return to work												
Not returned to work at 6 mo	1.00	— <sup>a</sup>		— <sup>a</sup>	— <sup>a</sup>		— <sup>a</sup>	— <sup>a</sup>		— <sup>a</sup>	— <sup>a</sup>	
Returned to work before 3 mo	0.56***	0.43–0.73		— <sup>a</sup>	— <sup>a</sup>		0.96	0.70–1.30		0.76	0.42–1.37	
Returned to work between 3 and 6 mo	0.60***	0.48–0.75		— <sup>a</sup>	— <sup>a</sup>		1.00	— <sup>a</sup>		1.00	— <sup>a</sup>	
Working hours												
Not returned to work	— <sup>a</sup>	— <sup>a</sup>		1.00	— <sup>a</sup>		1.00	— <sup>a</sup>		1.00	— <sup>a</sup>	
1–19 h/week	— <sup>a</sup>	— <sup>a</sup>		0.88	0.68–1.14		0.90	0.67–1.19		0.89	0.64–1.23	
20–34 h/week	— <sup>a</sup>	— <sup>a</sup>		0.50***	0.39–0.66		0.51***	0.37–0.70		0.47***	0.33–0.69	
≥35 h/week	— <sup>a</sup>	— <sup>a</sup>		0.36***	0.27–0.50		0.37***	0.26–0.52		0.41***	0.27–0.63	
Interactions	— <sup>a</sup>	— <sup>a</sup>		— <sup>a</sup>	— <sup>a</sup>		— <sup>a</sup>	— <sup>a</sup>		— <sup>a</sup>	— <sup>a</sup>	All interactions are not significant (0.62–3.20)
LR $\chi^2$		191.90			215.68			215.76			216.84	

Source: Baseline Mothers Survey (BaMS).

<sup>a</sup> Note: The empty cells mean that the independent variable has not been included in the model or same reference category was used.

\* *P* < .001.

Consistent with the pattern for any breastfeeding at 6 months, maternal education, being self-employed, and maternal health remain as significant predictors of the odds of predominant breastfeeding at 16 weeks. Interestingly, however, the effect of maternal age, occupation, and infant’s gestational age were not significant, whereas relationship status emerged as a significant predictor. Specifically, married mothers (adjusted OR 1.82, 95% CI 1.19–2.78) had higher odds of predominantly breastfeeding at 16 weeks than single mothers.

## DISCUSSION

Although a number of previous studies have demonstrated that the longer the delay before returning to paid employment, the longer the breastfeeding duration,<sup>8,11,13, 16,20,27</sup> the relationship between working hours and the duration of breastfeeding has been the focus of fewer studies,<sup>6</sup> and their findings are somewhat more equivocal.<sup>8,9</sup> One of the reasons may be that most previous studies have used a relatively high number of hours (30–40) to simply distinguish between “part-time” and “full-time” employment.<sup>6,8,13</sup> The findings reported in this article extend previous research by testing the effects of both timing of return to work and working hours, where the latter are categorized in more detail.

For the sample of Australian women analyzed in this article, the main effect of timing of return to work on the duration and extent of breastfeeding was not significant when working hours were controlled. Furthermore, there are no interactions between the timing of return to work and working hours. Returning to work anytime within the first 6 months could significantly impair the likelihood of predominant breastfeeding at 16 weeks, and any breastfeeding at 6 months, regardless



**TABLE 5** Adjusted ORs for Predominant Breastfeeding at 16 Weeks (*n* = 2300)

	Model 1: Timing of Return to Work		Model 2: Working Hours		Model 3: Timing of Return to Work and Working Hours		Model 4: Timing of Return to Work, Working Hours, and Their Interaction	
	OR	95% CI	OR	95% CI	OR	95% CI	OR	95% CI
Timing of return to work								
Not returned to work at 16 wk	1.00	— <sup>a</sup>	— <sup>a</sup>	— <sup>a</sup>	— <sup>a</sup>	— <sup>a</sup>	— <sup>a</sup>	— <sup>a</sup>
Returned to work before 8 wk	0.57*	0.41–0.78	— <sup>a</sup>	— <sup>a</sup>	0.80	0.55–1.18	0.88	0.41–1.87
Returned to work between 9 and 16 wk	0.71**	0.54–0.92	— <sup>a</sup>	— <sup>a</sup>	1.00	— <sup>a</sup>	1.00	— <sup>a</sup>
Working hours								
Not returned to work	— <sup>a</sup>	— <sup>a</sup>	1.00	— <sup>a</sup>	1.00	— <sup>a</sup>	1.00	— <sup>a</sup>
1–19 h/week	— <sup>a</sup>	— <sup>a</sup>	0.91	0.67–1.23	0.99	0.71–1.39	1.06	0.72–1.57
20–34 h/week	— <sup>a</sup>	— <sup>a</sup>	0.54**	0.38–0.76	0.59**	0.40–0.86	0.55**	0.35–0.86
≥35 h/week	— <sup>a</sup>	— <sup>a</sup>	0.46*	0.31–0.68	0.50**	0.33–0.76	0.49**	0.29–0.80
Interaction	— <sup>a</sup>	— <sup>a</sup>	— <sup>a</sup>	— <sup>a</sup>	— <sup>a</sup>	— <sup>a</sup>	— <sup>a</sup>	All interactions are not significant (0.40–2.94)
LR $\chi^2$		101.50		110.47		111.71		114.75

Source: Baseline Mothers Survey (BaMS).

<sup>a</sup> Note: The empty cells mean that the independent variable has not been included in the model or same reference category was used.

\* *P* < .05.

\*\* *P* < .01.

\*\*\* *P* < .001.

of how soon they returned. However, as long as mothers who returned to work keep their working hours within 19 hours per week, they appear as likely as stay-at-home mothers to maintain predominant breastfeeding at 16 weeks and any breastfeeding at 6 months.

Given the time-consuming nature of breastfeeding and the documented difficulties of expressing milk in workplaces,<sup>28,29</sup> an important factor that should be taken into consideration is the lactation support in workplaces and access to working arrangements that facilitate breastfeeding for those mothers who returned to work. In workplaces that provide facilities to help mothers continue breastfeeding (eg, employer allows working from home, or provides on-site child care), working hours might be less important than otherwise.

Despite efforts to promote breastfeeding-friendly workplaces in Australia,<sup>30</sup> evidence suggests that breastfeeding support among Australian employers is relatively low.<sup>31,32</sup> Similarly low support from employers also has been found in the United States<sup>13</sup> and Hong Kong,<sup>33</sup> which suggests the findings reported in this article may be relevant to comparable contexts. In the absence of breastfeeding support from employers, mothers may need to restrict their working hours to maintain breastfeeding, particularly when they have to return to work within 6 months postpartum. Restricting working hours to a certain level (eg, ≤19 hours, as the findings in this article suggest) can provide mothers with more opportunities to be with their infants physically, to enable them to maintain breastfeeding after they return to work.

Consistent with previous findings, older, better-educated mothers in professional or managerial occupations or self-employment are more likely to be breastfeeding at 6 months.

Slightly different sociodemographic factors are implicated in predominant breastfeeding at 16 weeks, where marital status (being married) rather than maternal age and occupation, is an important predictor. Maternal physical and mental health is positively related to the likelihood of predominant breastfeeding at 16 weeks and any breastfeeding at 6 months.

There are 2 main limitations of our study. First, the mothers recruited to this study were a nationally representative sample of women whose employment levels were sufficient to meet the eligibility criteria for Australia's national Paid Parental Leave scheme.<sup>22</sup> As such, they are not representative of all Australian mothers. The sample is, as shown in Table 1, somewhat more highly educated, and more likely to be primiparous. It is not surprising that first-time mothers are overrepresented, as they are more likely than women who are already mothers, to be employed before the birth. Second, data on duration and predominance of breastfeeding are based on retrospective information from mothers at ~12 months postpartum. There might be a chance of recall bias associated with the retrospective collection of data at ≥12 months. Although a review of existing studies suggests that maternal recall is a valid and reliable estimate of breastfeeding initiation and duration when it is collected within 3 years postpartum,<sup>34</sup> it also indicates that the timing when solid food was introduced might be less reliable. As such, in common with other surveys of this kind, this potential limitation should be acknowledged.

## CONCLUSIONS

This study disentangles the effects of timing of return to work and working hours on the likelihood of predominant breastfeeding at 16 weeks and any breastfeeding at 6 months. It shows that return

**TABLE 6** Adjusted ORs of Significant Covariates in Interaction Models for Any Breastfeeding at 6 Months and Predominant Breastfeeding at 16 Weeks (*n* = 2300)

	Any Breastfeeding at 6 mo		Predominant Breastfeeding at 16 wk	
	OR	95% CI	OR	95% CI
Age, y				
18–24	1.00	— <sup>a</sup>	1.00	— <sup>a</sup>
25–34	2.23*	1.44–3.45	1.30	0.86–1.96
35–54	2.45*	1.54–3.88	1.28	0.83–1.98
Maternal education				
Completed high school or not	1.00	— <sup>a</sup>	1.00	— <sup>a</sup>
Some post high school	1.20	0.94–1.54	1.18	0.93–1.51
Bachelor's and above	1.90*	1.48–2.45	1.83*	1.43–2.34
Relationship status				
Single	1.00	— <sup>a</sup>	1.00	— <sup>a</sup>
Married	1.22	0.80–1.86	1.82**	1.19–2.78
In relationship but not married	1.09	0.70–1.69	1.54	0.99–2.39
Occupation				
Professional/managerial	1.00	— <sup>a</sup>	1.00	— <sup>a</sup>
Other white collar	0.75**	0.61–0.92	0.88	0.72–1.07
Blue collar <sup>b</sup>	0.74	0.45–1.21	1.03	0.63–1.68
Gestational age, wk				
>37	1.00	— <sup>a</sup>	1.00	— <sup>a</sup>
≤37	0.72***	0.54–0.96	0.88	0.67–1.17
Employment type				
Permanent/ongoing	1.00	— <sup>a</sup>	1.00	— <sup>a</sup>
Fixed-term contract	1.22	0.82–1.82	0.73	0.50–1.07
Casual	1.16	0.86–1.56	1.04	0.78–1.39
Self-employed	1.59***	1.1–2.31	1.46***	1.01–2.11
Maternal health				
Physical health	1.02**	1.01–1.03	1.01***	1.001–1.03
Mental health	1.01***	1.002–1.02	1.01**	1.004–1.03

Source: Baseline Mothers Survey (BaMS).

<sup>a</sup> Note: The empty cells mean that no CI was reported for the reference category.

<sup>b</sup> Blue collar is defined as per Australian and New Zealand Standard Classification of Occupations,<sup>26</sup> comprising laborers, such as machine operators, automobile drivers, and product assemblers. All other jobs are considered white collar. It should be noticed that the nonsignificant difference between Professional/managerial and Blue collar might be due to small case number in the latter category (*n* = 81).

\* *P* < .05.

\*\* *P* < .01.

\*\*\* *P* < .001.

to paid employment is a barrier to maintaining predominant and any breastfeeding, but that the effects of return to work are removed when mothers work ≤19 hours per week. Regardless of when they return to work, this relatively low level of part-time employment enabled mothers in this sample to retain the same likelihood of breastfeeding as mothers who did not return to work within the first 6 months of their child's life.

The implication of our findings is that practitioners should recommend reduced working hours for those

mothers who decide to return to work within the first 6 months postpartum. Specifically, working ≤19 hours per week should be recommended to maintain any breastfeeding at least up to 6 months. Policy makers should provide incentives for employers to improve lactation support to mothers in workplaces.

## ABBREVIATIONS

CI: confidence interval  
 LR: likelihood ratio  
 OR: odds ratio  
 SF: short-form

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