# Work-Family Balance After Childbirth: The Association Between Employer-Offered Leave Characteristics and Maternity Leave Duration

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**Abstract** Early return to work after childbirth has been increasing among working mothers in the US. We assessed the relationship between access to employer-offered maternity leave (EOML) (both paid and unpaid) and uptake and duration of maternity leave following childbirth in a socio-economically diverse sample of full-time working women. We focus on California, a state that has long provided more generous maternity leave benefits than those offered by federal maternity leave policies through the State Disability Insurance program. The sample included 691 mothers who gave birth in Southern California in 2002-2003. Using weighted logistic regression, we examined the EOML-maternity leave duration relationship, controlling for whether the leave was paid, as well as other occupational, personality and health-related covariates. Compared with mothers who were offered more than 12 weeks of maternity leave, mothers with <6 weeks of EOML and those offered 6–12 weeks had five times higher odds of returning to work within 12 weeks; those offered no leave had six times higher odds of an early return. These relationships were similar after controlling for whether the leave was paid and after controlling for other occupational and health characteristics. Access to and duration of employer-offered maternity leave significantly determine timing of return to work following childbirth, potentially affecting work–family balance. Policy makers should recognize the pivotal role of employers in offering job security during and after maternity leave and consider widening the eligibility criteria of the Family and Medical Leave Act.

**Keywords** Maternity leave · Employer offered leave · Paid leave · Financial strain · Work–family policies

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# **Abbreviations**

FMLA Family and Medical Leave Act SDI California State Disability Insurance EOML Employer offered maternity leave

PTD Preterm delivery LBW Low birth weight OR Odds ratio

CI Confidence interval PFL Paid family leave

# Introduction

Today, two out of three US women work during pregnancy and most return to work within 12 weeks of childbirth [1]. Women who work full time during pregnancy are most likely to return to work within this timeframe [2]. This length of postpartum leave coincides with the amount of job-protected, *unpaid* leave offered by the federally legislated Family and

Medical Leave Act (FMLA) [3]. In contrast, the average length of job-protected leave in Europe is 14 months and most women take this amount with income replacement before returning to their pre-birth jobs [4, 5]. Since FMLA applies only to employees who have worked for at least 1,250 h during the year preceding childbirth at companies with 50 or more employees, only about 20 % of new mothers and 50 % of all mothers are covered by FMLA [6, 7]. State laws vary in coverage of government and small-company workers and in the generosity of leave. California is one of five states that offer mothers paid pregnancy and maternity leave through temporary disability insurance (State Disability Insurance (SDI) in California) funded through employee contributions. SDI is not job-protected although in many cases leave-takers get additional protections under FMLA or the California Family Rights Act. For mothers covered by these laws, unpaid and paid leave must be taken concurrently.

While some firms voluntarily provide paid time off, higher income and more educated mothers are more likely to obtain job-protected maternity leave and especially paid leave from their employers [5, 7]. Small companies often lack maternity leave policies and pregnant women who want time off have to negotiate leave with little information or support from their employers. Studies further suggest that poor working parents and working welfare recipients are more likely than others to take short leaves due to insufficient savings to cover lost wages, especially if not granted paid leave [7–9]. However, recent Census Bureau findings that mothers who receive paid leave have similar odds of returning to work within 3 months postpartum compared with mothers who receive unpaid leave [2] raise the question whether availability of leave and assurance of continuity of employment are more important determinants of timing of return to work than paid leave. Notably, little is known about the effect of the availability of employer offered maternity leave (EOML)—paid or unpaid—on actual maternity leave duration. Understanding this relationship is crucial as many companies rethink maternity leave benefits and employees struggle to balance work–family needs in a weak economy [10].

This study assesses the relationship between (1) access to and (2) duration of EOML, both paid and unpaid, and post-partum maternity leave duration in a socio-economically diverse sample of full-time working mothers in Southern California. Specifically, we inquired to what extent is access to and duration of EOML associated with returning to work within the first 12 weeks postpartum? Further, among women with EOML, does paid leave modify the relationship between the duration of EOML and the timing of return to work after childbirth? Examining these issues helps to assess how employer policies affect women's work—family decisions and can motivate discussion on modification or development of more generous leave policies. For mothers, an early return to work may help to guarantee access to job

protection, continued health insurance and wages [11]. Nonetheless, a short maternity leave may detract from time available for mothers to care for themselves and their infants. Maternity leaves of up to 12 weeks have been associated with early breastfeeding cessation [12, 13]. Longer leaves beyond 12 weeks may be an effective strategy for improving maternal-infant health [12–17].

### Methods

Materials and Methods

Participants were from a nested population-based casecontrol study, Juggling Work and Life During Pregnancy, designed to examine the relationship between antenatal maternity leave and pregnancy outcomes, and between maternity leave and breastfeeding. The dataset allowed us to cross-sectionally examine the association between EOML and postnatal maternity leave duration. Through weighting cases and controls back to their original distributions in the study population, we obtained populationlevel estimates. The study population derived from women enrolled in mid-pregnancy (15-20 weeks gestation) in California's Prenatal Screening Program (CPSP) in 3 Southern California counties (Orange, Imperial, and San Diego) and whom we could link to a live birth record. Eligible participants included all women who delivered a preterm (PTD) or low birth weight (LBW) infant (cases) according to birth records registered during July 2002 to August 2003, a random sample of controls (non-PTD/non-LBW) matched on race and month of birth and 504 PTD/ LBW cases registered during September to December 2003. Only women who were >18 years old, had a singleton birth without congenital anomalies, and had a US mailing address were eligible. Potentially eligible participants (n = 6,700) were mailed an introductory letter to which no reply was required and of the 2,915 who could be contacted by telephone, all were prescreened to ascertain that they had worked  $\geq 20$  h per week during the first 2 trimesters of pregnancy or through the date of prenatal testing. Details on sampling, prescreening for work eligibility and 45-min telephone interviews have been described elsewhere [18, 19]. Among eligible working women contacted for study (n = 1,768), the response rate was 73 %; a total of 1,214 women completed interviews. Mean and median interview time was 4.5 months after birth.

For the current study, we focused on full-time workers. We excluded part-time workers (<35 h per week) (n = 358), women who quit their jobs or were fired (n = 62), women whose infants died or were not living with them (n = 4) and women missing key exposure or outcome data (n = 99), leaving 691 women for analysis.



During the postpartum interview, participants were queried about work and family stress, demographic and occupational characteristics, including postnatal maternity leave. Bilingual Spanish–English interviewers used computerassisted telephone interviewing software to enter responses into a database and offered \$10 gift cards to participants in return for a completed interview. The study protocol was approved by the human subjects committees at University of California, Berkeley (No.2003-5-115) and at the California Health and Human Services Agency (No. 02-10-18).

# Measures and Data Collection Instruments

The outcome, duration of postpartum maternity leave uptake, was assessed with two questions, "Have you returned to work since you had the baby?" and for mothers who had returned, "When did you return to work?" The outcome was dichotomized into short-average leave (≤12 weeks) and longer leave (>12 weeks) based on policy and health considerations. In California during the study period, women could be eligible for FMLA's 12-week benefits, for SDI pregnancy-leave benefits which provide 6 weeks of leave with partial wage-replacement after a normal delivery or 8 weeks after a cesarean-section, and/or by employer offered benefits. Maternity leave duration was also treated continuously between 0 and 180 days for selected analyses.

The key exposures were whether women reported that they were offered paid maternity leave and the duration of EOML (paid or unpaid). The latter was examined as a categorical variable (<6, 6–12 and >12 weeks). In sensitivity analysis, duration of EOML was explored as a continuous variable.

Our primary socio-demographic variable was unusual financial strain, assessed with the question, "Did you have unusual financial pressures or trouble with money while you were pregnant?" This reference period was chosen since women are normally encouraged to negotiate maternity leave with their employers prior to delivery. Other socio-demographic covariates were educational attainment; maternal age; marital/cohabiting status; race/ ethnicity; number of children under age 5; whether enough help with childcare and with instrumental social support was reported. Occupational variables included type of occupation; years employed; distress related to job security; whether the employer offered health insurance; lack of health insurance coverage; work attachment; and the perceived imbalance between work effort or demands and rewards in terms of money, esteem and career opportunities derived from Siegrist's Effort Reward Imbalance scale [20, 21]. Women who reported thinking about work first thing in the morning were determined to have strong work attachment. Health variables included whether the delivery was preterm and/or by cesarean section.



Due to the nested case-control design, we were able to weight all observations by the inverse probability of sampling to obtain unbiased estimates. Analytic weights reflect known sampling probabilities before exclusion of non-workers and non-respondents.  $\chi^2$  tests and logistic regression analyses were performed using STATA version 11 (StataCorp, 2009 College Station, TX, USA) to explore associations between EOML (and other covariates) and short-average (≤12 weeks) versus longer (>12 weeks) postpartum leave, and to obtain standard errors and test statistics accounting for the sampling design. Because of the complex sample design, we used a second order Rao-Scott correction, which transforms the Pearson Chi square to an F statistic with approximate degrees of freedom. A P value of  $\leq 0.05$  was considered statistically significant.

Sixty-four women who had not yet returned to work at the time of interview were censored and included in the longer leave group. Most censored participants were interviewed 10-12 weeks postpartum. Unadjusted and adjusted logistic regression models tested the association between EOML and the dichotomous outcome. The adjusted model controlled for financial strain, cesarean delivery, PTD and work attachment, covariates that were forced in based on literature suggesting that they affect maternity leave duration [22, 23] but which did not change the coefficient on EOML by >10 %. No other variables presented in Table 1 when added to the adjusted models changed the coefficient on EOML by >10 %. In separate regression models, we restricted the analyses to mothers who were offered any leave to examine the joint association of duration of EOML and of paid leave on maternity leave duration. Paid leave was only available to mothers with EOML. We tested for interactions of financial strain with duration of EOML and whether maternity leave was paid, as well as of paid leave with duration of EOML, on maternity leave duration using Wald tests and then used the STATA lincom command to estimate odds ratios in a logistic regression model that included cross products. A P value of  $\leq 0.10$  was considered statistically significant for interaction tests. Interactions were not significant and thus not reported.

Using linear regression, we conducted sensitivity analysis to examine the association between the duration of EOML (in days) and the number of days of leave taken among women who were offered some leave. For censored women, we used the minimum possible number of leave days taken by using their interview date (the last date at which we know they had not yet returned to work). Seven women who reported being offered more than 180 days of leave were excluded from this analysis.



**Table 1** Duration of leave offered, financial strain and other socio-demographic, occupational and health characteristics by early ( $\leq$ 12 weeks) and later (>12 weeks) return to work after maternity leave

|                                | Total   |             | ≤12 week<br>leave | s postnatal | >12 week | Weighted P** |        |  |
|--------------------------------|---------|-------------|-------------------|-------------|----------|--------------|--------|--|
|                                | N = 691 | Weighted %* | N = 349           | Weighted %  | N = 342  | Weighted %   |        |  |
|                                |         | 100.00      |                   | 54.09       |          | 45.91        |        |  |
| Characteristics                |         |             |                   |             |          |              |        |  |
| Duration of leave offered      |         |             |                   |             |          |              |        |  |
| No leave offered               | 229     | 28.62       | 128               | 31.61       | 101      | 25.10        | 0.0003 |  |
| <6 weeks                       | 178     | 28.37       | 94                | 29.52       | 84       | 27.02        |        |  |
| 6–12 weeks                     | 211     | 33.03       | 107               | 35.18       | 104      | 30.50        |        |  |
| >12 weeks                      | 73      | 9.98        | 20                | 3.70        | 53       | 17.38        |        |  |
| Paid leave***                  |         |             |                   |             |          |              |        |  |
| Yes                            | 357     | 77.22       | 167               | 76.69       | 190      | 77.78        | 0.84   |  |
| No                             | 106     | 22.78       | 55                | 23.31       | 51       | 22.22        |        |  |
| Financial strain               |         |             |                   |             |          |              |        |  |
| Financial strain               | 150     | 21.02       | 96                | 25.83       | 54       | 15.35        | 0.01   |  |
| No financial strain            | 541     | 78.98       | 253               | 74.17       | 288      | 84.65        |        |  |
| Socio-demographics             |         |             |                   |             |          |              |        |  |
| Education                      |         |             |                   |             |          |              |        |  |
| High School or less            | 176     | 23.87       | 98                | 25.50       | 78       | 21.95        | 0.73   |  |
| Some college                   | 374     | 56.62       | 188               | 55.14       | 186      | 58.37        |        |  |
| Post graduate                  | 140     | 19.51       | 62                | 19.36       | 78       | 19.69        |        |  |
| Age                            |         |             |                   |             |          |              |        |  |
| 18–24                          | 97      | 13.73       | 59                | 16.83       | 38       | 10.08        | 0.24   |  |
| 25–29                          | 207     | 28.85       | 105               | 29.72       | 102      | 27.84        |        |  |
| 30–34                          | 281     | 43.20       | 132               | 40.46       | 149      | 46.44        |        |  |
| 35+                            | 106     | 14.21       | 53                | 12.99       | 53       | 15.65        |        |  |
| Marital status                 |         |             |                   |             |          |              |        |  |
| Unmarried                      | 41      | 5.73        | 27                | 7.35        | 14       | 3.82         | 0.13   |  |
| Married or cohabiting          | 650     | 94.27       | 322               | 92.65       | 328      | 96.18        |        |  |
| Race                           |         |             |                   |             |          |              |        |  |
| Latina                         | 246     | 33.34       | 147               | 37.77       | 99       | 28.13        | 0.11   |  |
| Asian                          | 113     | 13.02       | 58                | 14.00       | 55       | 11.87        |        |  |
| Black/other                    | 40      | 3.78        | 18                | 3.57        | 22       | 4.02         |        |  |
| White                          | 292     | 49.86       | 126               | 44.66       | 166      | 55.98        |        |  |
| Children <5 years              |         |             |                   |             |          |              |        |  |
| 0                              | 472     | 64.64       | 220               | 60.48       | 252      | 69.53        | 0.08   |  |
| 1+                             | 219     | 35.36       | 129               | 39.52       | 90       | 30.47        |        |  |
| Had enough help with childcare |         |             |                   |             |          |              |        |  |
| Had enough help                | 429     | 59.94       | 211               | 60.69       | 218      | 59.06        | 0.76   |  |
| Not enough help                | 261     | 40.06       | 137               | 39.31       | 124      | 40.94        |        |  |
| Instrumental social support    |         |             |                   |             |          |              |        |  |
| Had enough support             | 555     | 82.97       | 262               | 79.11       | 293      | 87.52        | 0.03   |  |
| Not enough support             | 136     | 17.03       | 87                | 20.89       | 49       | 12.48        |        |  |
| Other occupational factors     |         |             |                   |             |          |              |        |  |
| Job category                   |         |             |                   |             |          |              |        |  |
| Manager                        | 346     | 51.03       | 171               | 51.14       | 175      | 50.91        | 0.97   |  |
| Non-manager                    | 345     | 48.97       | 178               | 48.86       | 167      | 49.09        |        |  |
| Effort reward imbalance        |         |             |                   |             |          |              |        |  |
| Low effort/high reward         | 136     | 21.42       | 77                | 23.80       | 59       | 18.60        | 0.06   |  |



Table 1 continued

|  | Total   |             | ≤12 week<br>leave | s postnatal | >12 weeks | Weighted P** |      |  |
|--|---------|-------------|-------------------|-------------|-----------|--------------|------|--|
|  | N = 691 | Weighted %* | N = 349           | Weighted %  | N = 342   | Weighted %   |      |  |
| High effort/low reward                   | 106     | 15.97       | 64                | 18.96       | 42        | 12.42        |      |  |
| Low effort/low reward                    | 233     | 33.11       | 103               | 27.25       | 130       | 40.08        |      |  |
| High effort/high reward                  | 205     | 29.49       | 100               | 29.99       | 105       | 28.91        |      |  |
| Job tenure                               |         |             |                   |             |           |              |      |  |
| Up to 1 year                             | 77      | 11.91       | 38                | 12.08       | 39        | 11.72        | 0.92 |  |
| More than 1 year                         | 603     | 88.09       | 304               | 87.92       | 299       | 88.28        |      |  |
| Distress from lack of job security       |         |             |                   |             |           |              |      |  |
| Upsetting lack of job security           | 96      | 13.85       | 50                | 14.25       | 46        | 13.39        | 0.82 |  |
| Not upsetting or no lack of job security | 595     | 86.15       | 299               | 85.75       | 296       | 86.61        |      |  |
| Employer offered health insurance        |         |             |                   |             |           |              |      |  |
| Employer offered health insurance        | 520     | 80.02       | 256               | 79.65       | 264       | 80.45        | 0.85 |  |
| Employer did not offer health insurance  | 160     | 19.98       | 83                | 20.35       | 77        | 19.55        |      |  |
| Work attachment                          |         |             |                   |             |           |              |      |  |
| Yes                                      | 349     | 49.39       | 173               | 46.61       | 176       | 52.67        | 0.26 |  |
| No                                       | 342     | 50.61       | 176               | 53.39       | 166       | 47.33        |      |  |
| Health                                   |         |             |                   |             |           |              |      |  |
| Preterm delivery                         |         |             |                   |             |           |              |      |  |
| Yes                                      | 229     | 5.78        | 101               | 5.05        | 128       | 6.64         | 0.26 |  |
| No                                       | 443     | 94.22       | 240               | 94.95       | 203       | 93.36        |      |  |
| Cesarean-section                         |         |             |                   |             |           |              |      |  |
| Yes                                      | 181     | 22.00       | 89                | 23.77       | 92        | 19.91        | 0.37 |  |
| No                                       | 543     | 78.00       | 278               | 76.23       | 265       | 80.09        |      |  |

Bolded estimates denote significance at  $P \le 0.05$ 

## Results

All mothers took at least five days off before returning to work and five (<1 %) took 6–7 days off (data not shown). As shown in Table 1, 54 % returned to work within 12 weeks postpartum and 46 % returned after 12 weeks.

Approximately 29 % of mothers were not offered any maternity leave. Women offered more than 12 weeks of maternity leave were more likely to return to work after 12 weeks. Conditional on being offered maternity leave, there was no significant difference in the mean number of weeks of maternity leave duration between those offered pay (mean = 11.2; SD = 4.7) and those not offered pay (mean = 10.2; SD = 3.8) in the bivariate analysis (data not shown). Among mothers with paid leave, 55 % were offered pay through SDI, 37 % through their employer and 8 % had private insurance coverage. One-fifth (21 %) of mothers reported having experienced financial strain during

pregnancy; they were more likely to return to work within 12 weeks compared to mothers without financial strain. A return within 12 weeks was also associated with not having enough instrumental social support. Only mothers with low effort-low reward jobs were more likely to return after a longer maternity leave lasting over 12 weeks. Mothers with effort-reward imbalanced jobs returned earlier (Table 1).

The unadjusted regression model showed that compared with mothers who were offered more than 12 weeks of maternity leave, mothers whose employer offered no leave, offered <6 weeks, or offered 6–12 weeks of leave had higher odds of returning to work within 12 weeks (OR = 5.92, 5.14, 5.43, respectively) (Table 2). After adjusting for whether the mothers experienced unusual financial strain during pregnancy, a cesarean delivery, PTD and work attachment, EOML up to 12 weeks remained significantly related to a return to work within 12 weeks. Relative to EOML of more than 12 weeks, no EOML was



<sup>\*</sup> Based on inverse probability of sampling to account for oversampling of cases and frequency matching

<sup>\*\*</sup> Because of the complex sample design, the Pearson Chi square was transformed to an F statistic with approximate degrees of freedom to find the P value

<sup>\*\*\*</sup> Only among women offered maternity leave

**Table 2** Unadjusted and adjusted odds ratios and 95 % confidence intervals (CIs) of return to work by 12 weeks after birth by duration of maternity leave offered, financial strain, preterm delivery, cesarean

section delivery and work attachment among women offered and not offered postpartum maternity leave

|                         | Model | 1—unadjuste | ed N = 69 | 1 <sup>a</sup> |           | Model 2—adjusted N = 641 <sup>a</sup> |         |         |       |           |  |  |
|-------------------------|-------|-------------|-----------|----------------|-----------|---------------------------------------|---------|---------|-------|-----------|--|--|
|                         | OR    | P           | 95 % CI   |                | Wald test | OR                                    | P       | 95 % CI |       | Wald test |  |  |
| Maternity leave offered |       |             |           |                |           |                                       |         |         |       |           |  |  |
| No leave offered        | 5.92  | < 0.001     | 2.42      | 14.48          |           | 5.93                                  | < 0.001 | 2.38    | 14.81 |           |  |  |
| <6 weeks offered        | 5.14  | < 0.001     | 2.07      | 12.73          |           | 5.39                                  | < 0.001 | 2.12    | 13.67 |           |  |  |
| 6-12 weeks offered      | 5.43  | < 0.001     | 2.24      | 13.14          | 0.001     | 5.11                                  | < 0.001 | 2.07    | 12.61 | 0.0016    |  |  |
| >12 weeks offered       | 1     |             |           |                |           | 1                                     |         |         |       |           |  |  |
| Financial strain        |       |             |           |                |           | 1.86                                  | 0.03    | 1.06    | 3.25  |           |  |  |
| Preterm delivery        |       |             |           |                |           | 0.70                                  | 0.18    | 0.41    | 1.19  |           |  |  |
| C-section               |       |             |           |                |           | 1.28                                  | 0.37    | 0.75    | 2.17  |           |  |  |
| Work attachment         |       |             |           |                |           | 0.66                                  | 0.07    | 0.42    | 1.03  |           |  |  |

Bolded estimates denote significance at  $P \le 0.05$ 

**Table 3** Unadjusted and adjusted odds ratios and 95 % confidence intervals (CIs) of return to work by 12 weeks after birth by duration of maternity leave offered, unpaid leave, financial strain, preterm

delivery, cesarean section delivery and work attachment among women offered any maternity leave

|                    | Model 1—unadjusted $N = 463^a$ |         |      |       |              | Model 2—adjusted $N = 463^a$ |         |      |       |              |      | Model 3—adjusted $N = 429^a$ |      |       |              |  |
|--------------------|--------------------------------|---------|------|-------|--------------|------------------------------|---------|------|-------|--------------|------|------------------------------|------|-------|--------------|--|
|                    | OR                             | P       | 95 % | CI    | Wald<br>test | OR                           | P       | 95 % | CI    | Wald<br>test | OR   | P                            | 95 % | CI    | Wald<br>test |  |
| Maternity leave of | ffered                         |         |      |       |              |                              |         |      |       |              |      |                              |      |       |              |  |
| ≤6 weeks offered   | 5.07                           | < 0.001 | 2.06 | 12.50 |              | 5.10                         | < 0.001 | 2.07 | 12.56 |              | 5.63 | < 0.001                      | 2.21 | 14.33 |              |  |
| 6–12 weeks offered | 5.35                           | < 0.001 | 2.22 | 12.89 | 0.0007       | 5.44                         | < 0.001 | 2.24 | 13.20 | 0.0007       | 5.07 | < 0.001                      | 2.05 | 12.50 | 0.0008       |  |
| >12 weeks offered  | 1                              |         |      |       |              | 1                            |         |      |       |              | 1    |                              |      |       |              |  |
| Unpaid leave       |                                |         |      |       |              | 0.92                         | 0.80    | 0.49 | 1.74  |              | 0.78 | 0.47                         | 0.40 | 1.53  |              |  |
| Financial strain   |                                |         |      |       |              |                              |         |      |       |              | 1.88 | 0.08                         | 0.92 | 3.85  |              |  |
| Preterm delivery   |                                |         |      |       |              |                              |         |      |       |              | 1.00 | 1.00                         | 0.54 | 1.85  |              |  |
| C-Section          |                                |         |      |       |              |                              |         |      |       |              | 1.78 | 0.09                         | 0.92 | 3.44  |              |  |
| Work attachment    |                                |         |      |       |              |                              |         |      |       |              | 0.75 | 0.30                         | 0.44 | 1.30  |              |  |

Bolded estimates denote significance at  $P \leq 0.05$ 

associated with a six-fold odds of a short-average maternity leave (OR = 5.96; 2.4–14.8) and an offer of <6 weeks and of 6–12 weeks was associated with a five-fold odds of a short-average maternity leave (OR = 5.39, 2.1–13.7; OR = 5.11, 2.1–12.6, respectively). In addition, the odds of a short-average maternity leave were almost two-fold higher (OR = 1.86; 1.06–3.25) for mothers who experienced financial strain compared to those who did not.

When the sample was restricted to women with at least some EOML, the duration of EOML remained significantly related to early return to work (Table 3). Compared with mothers who were offered more than 12 weeks of maternity leave, mothers with <6 weeks of EOML had 5.07 times higher odds of returning to work within 12 weeks (2.06–12.50) and mothers offered 6–12 weeks of leave had 5.35 times higher odds of a return within 12 weeks (2.22–12.89) (Model 1, Table 3). These relationships were similar after controlling for whether only unpaid leave was offered (Model 2, Table 3), and after controlling for other covariates (Model 3, Table 3). Among women with EOML, neither unpaid leave nor financial strain was a significant predictor of a return to work within 12 weeks.

A linear regression analysis showed wide variability in the distributions of maternity leave duration and amount of



<sup>&</sup>lt;sup>a</sup> Censored data added

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EOML; on average women took more leave than was offered prior to 91 days, but took less leave than offered after that point. Despite this variability, among women who were offered up to 6 months of leave and took leave (n = 456), there was a linear and statistically significant relationship between number of days of EOML and duration of actual leave (b = 0.23; P = 0.001;  $R^2 = 0.04$ ) (data not shown).

### Discussion

Consistent with previous studies, we found that most mothers took at least one week of maternity leave following childbirth [22, 24] and 54 % returned to work within 12 weeks, which is the maximum amount allowed by FMLA. Nationally, between 2005 and 2007, almost 40 % of first-time mothers who worked during pregnancy returned to work within 3 months following childbirth [2]. Since early return to work has been steadily increasing among mothers in the last 30 years [2] and the minimal provision of employment support through FMLA conflicts with the growing number of mothers in the labor force, it is critical to identify factors that facilitate work-family balance for mothers. This study explored whether access to and duration of EOML was associated with the timing of mothers' return to work in California, a state that offers more generous maternity leave benefits than FMLA.

Our findings from both linear and logistic regression models demonstrate that access to longer EOML is associated with a later return to work following childbirth, and this association persists when controlling for whether leave was paid, unusual financial strain and personality and health characteristics. Our findings suggest that among fulltime working mothers, the duration of leave offered which carries with it assurance of continuity of employment—may be a more important determinant of timing of return to work after childbirth than whether the leave is paid. Furthermore, the findings reveal that EOML is a crucial determinant of timing of mothers' return to work even in California, a progressive state that offers income support through employee contributions to the SDI program. Earlier research found no association between unpaid EOML and return to work after childbirth [25]. However, these results from the 1980s may have been biased by the substantial number of women who changed employers between giving birth and being interviewed.

Our findings are consistent with a recent national Census Bureau study showing that most women return to work within 3 months regardless of whether the leave is paid [2]. A study using 1988 national data found that mothers with access to paid leave were less likely to return to work in the first month after childbirth compared with mothers without paid leave, but this pattern reversed with second and

subsequent months after childbirth [22]. Both studies, however, did not examine EOML and therefore cannot discern the relative importance of guaranteed job security linked to EOML versus paid leave as determinants of maternity leave duration. Perhaps paid leave weakly predicts the duration of leave because the amount of wage replacement is low and does not cover the additional expenses of a growing family. In recent years, employers have become less likely to provide full pay during maternity leave in order to incentivize mothers' earlier return [10]. Whether paid leave remains a significant predictor of short maternity leave among poor working parents requires further investigation [7–9]. Yet, from a policy perspective our findings indicate that more efforts need to be put into advocating for broader eligibility for FMLA by expanding the number of companies included, and reducing work tenure and hours-worked restrictions. While working toward income replacement during maternity leave is an important goal, an unmet need for guaranteed job security remains, which advocacy efforts must pursue to expand access to family leave.

Our study also showed that despite having SDI for pregnancy disability in California, 29 % of mothers who delivered between 2002 and 2003 lacked EOML and these mothers were most likely to return to work within 12 weeks. Disparities in access to maternity leave protection not only influence maternal decisions on timing of return to work but may also affect disparities in maternal and infant health outcomes [12–17]. We previously found that a postpartum maternity leave of ≤6 weeks or 6–12 weeks was associated, respectively, with a fourfold and twofold higher odds of failure to establish breast-feeding, after adjusting for covariates [12].

The economic cost of taking time out from the labor market may be higher in the US than in other industrialized countries with stronger safety nets, and can exacerbate financial strain, thereby intensifying pressure to return to work early [11]. According to our findings, mothers who reported unusual financial strain had almost twice the odds of returning to work within 12 weeks compared to mothers who experienced no financial strain, after controlling for EOML and other covariates. Government-supported paid leave programs help to offset the cost of taking time off to care for infants by providing partial wage replacement. California's paid family leave (PFL) program, established in 2004, can be used for bonding with a new baby for an additional 6 weeks after pregnancy leave runs out. Despite its low uptake, primarily due to fear of negative employment consequences [9], PFL appears to have increased maternity leave duration by an additional 3-4 weeks in California—and even longer for socio-economically disadvantaged mothers [26].

Our findings require cautious interpretation. Cross-sectional data temper our ability to make causal inferences.



We relied on a self-reported measure of access to EOML and did not evaluate the extent of wage replacement. We also did not examine the effects of antenatal leave, though a previous study from the same population suggests that 15 % of full-time workers took maternity leave in the ninth month of pregnancy [19]. Furthermore, we lacked information on partners' leave taking. Women whose partners had access to more generous leave policies may have reduced their own leave taking in order to optimize their childcare and employment options. Our data were collected prior to the implementation of California's PFL program in 2004. However, since women who use PFL tend to increase leave duration by 3-4 weeks on average after the 6-8 week pregnancy leave runs out, it is unlikely that our assessment of the association between EOML duration and maternity leave duration dichotomized as <12 weeks or >12 weeks would have changed the results substantially. Furthermore, since only a few states mandate paid leave, our results are still relevant for the majority of states.

Strengths of our study include a socio-economically and ethnically diverse population, and an analysis restricted to women who worked pre-birth and planned to return or had returned to work for the same employer. Evidence shows that women who work during pregnancy have greater odds of working within 3–5 months following birth than mothers who do not work during pregnancy [2].

In sum, full-time working mothers are often forced to make tough compromises between work and mothering. According to our findings, women who are offered no or short maternity leave by their employers are highly likely to return to work within 12 weeks, regardless of whether the leave is paid. The duration of EOML is a key determinant of timing of return to work after childbirth, affecting mothers' ability to balance work and family needs. Policy makers need to recognize the pivotal role of employers in offering job security during and after maternity leave and consider widening the eligibility criteria of FMLA.

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