Journal of Public Health | Vol. 47, No. 1, pp. e67–e76 | https://doi.org/10.1093/pubmed/fdae312 | Advance Access Publication December 27, 2024

Early employment after childbirth: a cross-sectional analysis using data from a national maternity survey in England

Rose Wyatt[1], Gracia Fellmeth[1], Maria A Quigley[2], Fiona Alderdice[2] and Sian Harrison[2]*

[1]National Perinatal Epidemiology Unit, Nuffield Department of Population Health, University of Oxford, Old Road Campus, Oxford OX3 7LF, UK
[2]NIHR Policy Research Unit in Maternal and Neonatal Health and Care, National Perinatal Epidemiology Unit, Nuffield Department of Population Health, University of Oxford, Old Road Campus, Oxford OX3 7LF, UK

Address correspondence to Sian Harrison, E-mail: sian.harrison@npeu.ox.ac.uk

ABSTRACT

Background Participation in paid work after childbirth may have important health and socioeconomic impacts on women and their families. We investigated women's employment patterns at six months postpartum and the factors that influence them.

Methods Using data from a 2018 population-based national maternity survey in England, employment status at six months postpartum was assessed. Logistic regression was used to explore sociodemographic and pregnancy- and birth-related factors associated with being in paid work by six months postpartum. Descriptive analysis was used to explore employment characteristics and motivations of women in paid work.

Results Of the 4313 participants included, 7.7% were in paid work by six months postpartum. Factors associated with being in paid work were age ≥35 years [(adjusted odd ratios (aOR):1.37, 95% confidence interval (CI):1.02–1.84], not living with a partner (aOR:0.50, 95%CI:0.28–0.90), and pre-term birth (aOR:0.38, 95%CI:0.20–0.69). The most frequently reported motivation was financial need (76%), followed by wanting to work (41%). Financial need was associated with younger age, living in a more socioeconomically disadvantaged area, not living with a partner, and lower education level.

Conclusion Postpartum employment patterns and motivations for working vary according to sociodemographic characteristics. These findings have important implications for parental leave and childcare policies, which should be equitable across different groups.

Keywords: Education; employment and skills; public health; women's health

Background

There has been a growing recognition of the importance of mothers' employment behaviors and their wider impact on maternal and child health. At a population level, women's employment patterns change significantly after childbirth.[1,2] This may include barriers to career progression or withdrawal from the workforce, which may have long-lasting socioeconomic effects on women, families, and society.

While continuous, good-quality employment after childbirth has been associated with health and financial benefits for women and their families, returning to work too soon after childbirth has been associated with poorer maternal and child mental health, shorter duration of breastfeeding, and childhood obesity.[3–10] The United Nations Children's Fund (UNICEF) recommends at least six months of paid parental leave to allow women to recover from delivery and enable exclusive breastfeeding for six months, as recommended by the World Health Organization.[11] The UK government currently offers eligible women paid maternity leave for nine months as well as other family welfare benefits, including shared parental leave, which was introduced in 2015. However, specific pay entitlements and eligibility criteria vary across employers, and UK policies have been criticized for maintaining or even widening social inequalities.[2,12] These differences in support may be contributing to variability in health behaviors that affect maternal and child health. It is, therefore, critical to understand women's postpartum employment patterns and the factors influencing them to identify the root causes of health inequalities.

Decisions around whether and when to enter paid work following childbirth are complex. Dahlgren and Whitehead's

Rose Wyatt, Specialty Registrar in Public Health
Gracia Fellmeth, Clinical Research Fellow
Maria Quigley, Professor
Fiona Alderdice, Professor
Sian Harrison, Social Scientist

model outlining the main determinants of population health can be applied to illustrate the wide range of intersecting factors that might influence women's employment decisions.[13] At an individual level, factors such as women's age, ethnicity, and educational background may influence if and when women return to work.[14] Individual preferences and gender attitudes, which will be shaped to an extent by wider community and cultural norms and attitudes, are also likely to influence employment patterns. Despite shifts in social attitudes relating to mothers as the primary caregivers, gendered attitudes to parenting persist, and it is likely that such attitudes contribute to women's decisions.[14] Financial factors are also important and might determine the necessity to work as well as the timing of taking up paid work after childbirth. At the community level, factors such as the availability, affordability, and quality of childcare will influence women's employment decisions. Living and working conditions may also influence decisions: examples include the safety and security of the work environment, the level of job satisfaction conferred, and the existence of any child and family welfare benefits for those not working.[8] Finally, national policies around maternity leave entitlements can influence women's decisions around the amount of time spent out of paid employment.[11,12,14]

There has been relatively little research from the UK exploring women's employment patterns following childbirth, particularly around the factors that might influence early employment (within six months of childbirth). Existing studies have used data from birth cohorts and have taken a segregated approach, applying either a socioeconomic or health-focused lens.[1,15–17] Key findings from these studies have shown that pre-pregnancy employment status, education, and occupation level are associated with postpartum employment patterns. What has been largely neglected is an exploration of women's health status as a determinant of employment following childbirth, as well as pregnancy- and birth-related factors. For example, women with a chronic physical or mental health condition or those who have experienced a difficult birth may be less able or less likely to engage in paid work after childbirth. A further gap in the evidence is around women's motivations for working. An exploration of these motivations would help to improve understanding of who is most likely to engage in paid work early after childbirth and why.

The objectives of this study are to estimate the proportion of women in the UK who are in paid work within six months of childbirth, to examine the sociodemographic and pregnancy- and birth-related factors associated with being in paid work within six months of childbirth, and to describe employment characteristics (e.g. work patterns, childcare arrangements, work motivations) of the women who are in paid work within six months of childbirth.

Methods

Study design and participants

Data collected from a national maternity survey in 2018 were used for this secondary analysis.[18] Conducted by the National Perinatal Epidemiology Unit (NPEU), the population-based cross-sectional survey aimed to capture women's experiences of pregnancy, birth, and the six months following childbirth. The sampling frame was all women aged ≥16 years old who had given birth during October 2017 and who were living in England at the time of their baby's birth registration. Using birth registrations of babies born within this period, the Office for National Statistics (ONS) identified a random sample of 16 000 eligible women. The time interval for eligibility was chosen to invite women at six months postpartum. Using data on infant deaths, the ONS identified and excluded from the sample any women whose babies had died after birth. Those women who did not answer questions on employment status or timing of employment after childbirth were excluded from the analysis.

Outcomes

The primary outcome (for objectives 1 and 2) was women's employment status categorized into in paid work within (up to and including) six months of childbirth ("in paid work") or not in paid work within (up to and including) six months of childbirth ("not in paid work").

Data on the following secondary outcomes were collected for women in paid work (for objective 3): (i) timing of (re)entering paid work (in weeks after childbirth); (ii) working patterns (weekly working hours) categorized into: "full-time" (≥30 hours/week) or "part-time" (<30 hours/week);[1] (iii) partner leave categorized into paternity leave, shared parental leave, or no leave; (iv) motivations for working (multiple response options, see Fig. 1); and (v) childcare arrangements (multiple response options, see Fig. 2).

Explanatory factors

A number of sociodemographic factors were explored in the analysis (objective 2). Maternal age was categorized into four groups (≤24, 25–29, 30–34, and ≥35 years). For the purpose of statistical power, country of birth (UK, outside of UK), and ethnicity (White-British, Other ethnicity) were collapsed into binary variables. Area-based social deprivation was measured using the index of multiple deprivation (IMD) based on postcode and was grouped into quintiles, with IMD

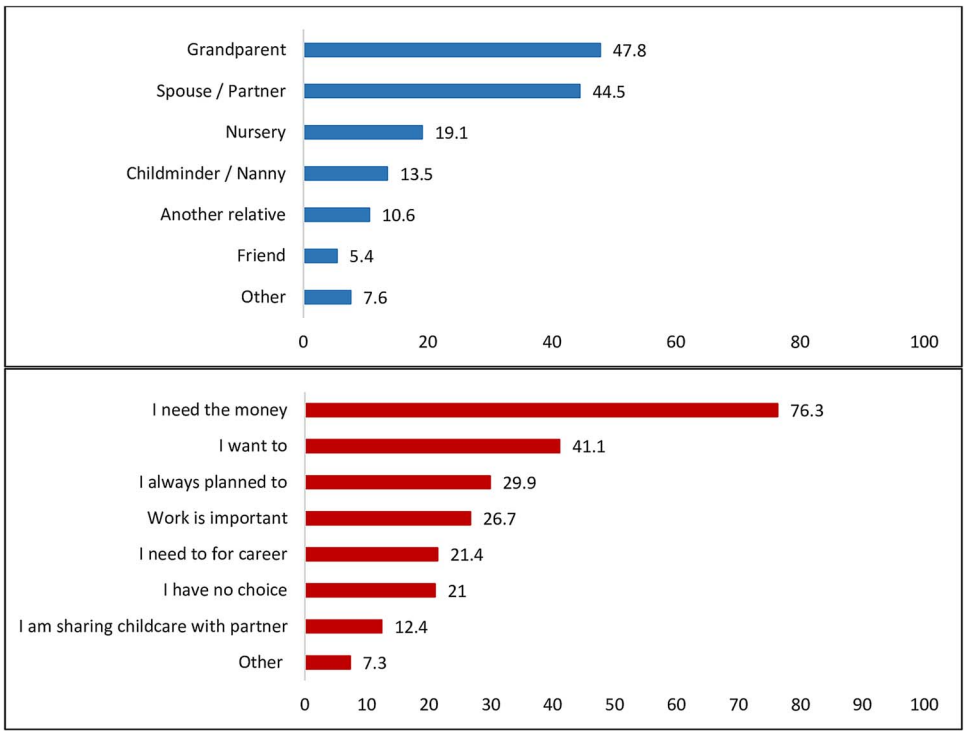

Fig. 1 Childcare arrangements and motivations for (re)entering employment for women in paid work within six months of childbirth.

1 being the least advantaged. Educational status was measured using age at completion of full-time education (≤16, 17–18, and ≥19 years). Other factors studied were living with a partner (yes, no), having a longstanding physical health condition (yes, no), having a longstanding mental health condition (yes, no), and level of social support, which was measured using a seven-point Likert scale [0 (not at all supported)—6 (completely supported)].

Pregnancy-related factors investigated were planned pregnancy (yes, no), any mental health condition during pregnancy [yes (self-reported depression, anxiety, and/or other condition), no], any physical health condition affecting pregnancy (yes, no), and any pregnancy-related complication (yes, no). Birth-related factors studied were parity (primiparous, multiparous), multiplicity (singleton, multiple births), gestation [term (≥37 weeks), preterm (<37 weeks)], birthweight [normal (≥2500 g), low (<2500 g)], admission for neonatal care (yes, no), and ever breastfed (yes, no).

Analysis

Due to demographic differences between the respondents and non-respondents, survey weights were applied to the analyses to minimize the impact of non-response bias and improve respondent representativeness. For the women included in the analyses, there was little missing data on the explanatory factors (<5%), and therefore, a complete case analysis was performed. Statistical analysis was performed using Stata version 18.

For objective 1, descriptive statistics were used to describe employment status six months after childbirth. For objective 2, logistic regression was performed to explore unadjusted and adjusted associations between each of the sociodemographic and pregnancy- and birth-related factors and employment status six months after childbirth. This produced odds ratios (OR) and adjusted OR (aOR) with 95% confidence intervals (CIs) describing the odds of being in paid work, compared to not being in paid work, six months after childbirth, according to different sociodemographic and pregnancy- and birth-related factors. A significance level of $P < .1$ for any level of the variable in the univariable analysis was used as the threshold for entry into the multivariable model. Those variables that were not significant at $P < .05$ were then removed sequentially from the multivariable model, with those least significant being removed first. This process continued until only factors significantly associated with the outcome at $P < .05$ remained. For objective 3, descriptive statistics were used to describe employment characteristics (e.g. work patterns, childcare arrangements, and work motivations) for women in paid work within six months of childbirth.

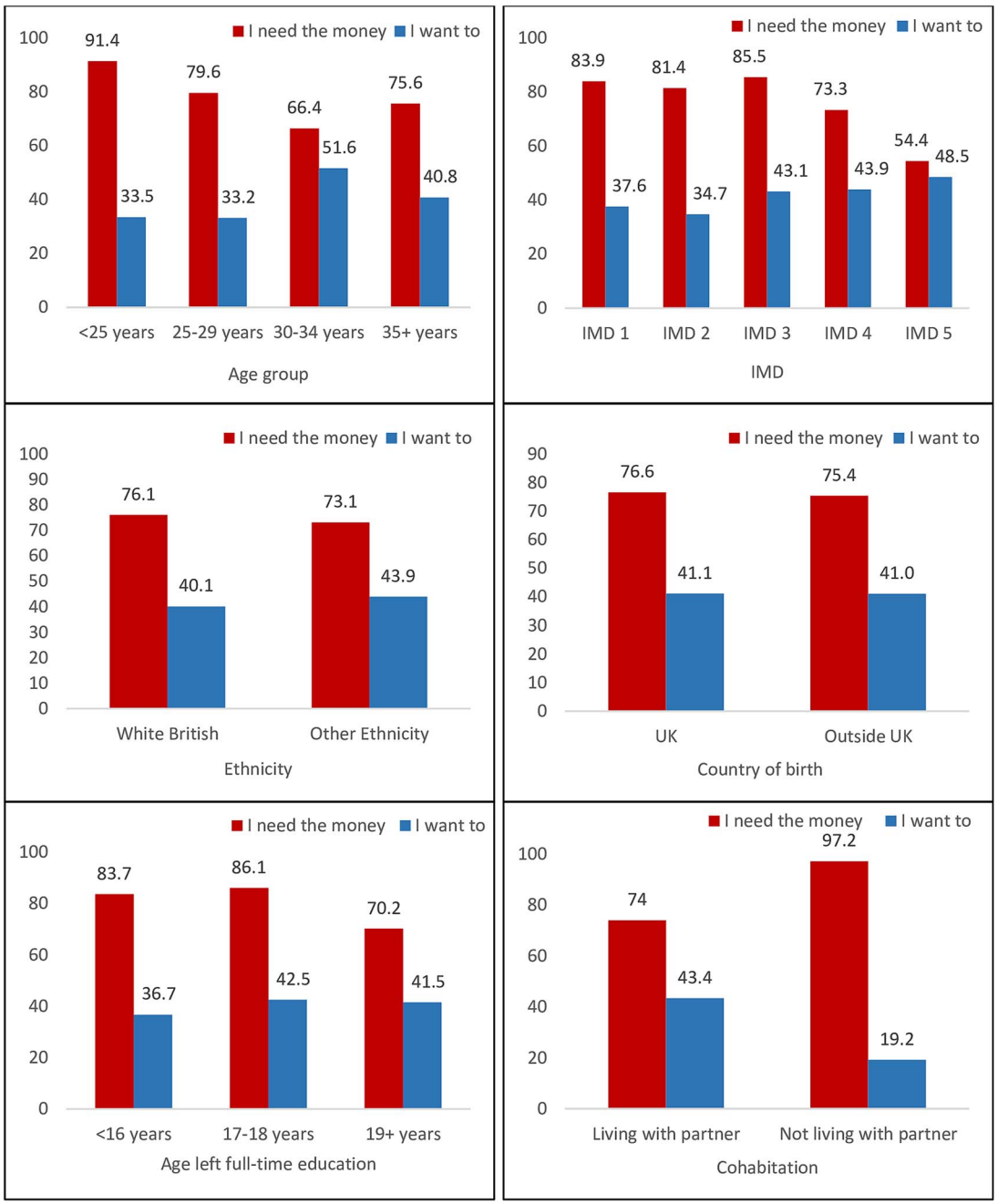

Fig. 2 Primary motivations for (re)entering paid work according to different sociodemographic factors.

Results

Participant characteristics

Of the 15 528 women invited to participate in the survey, 4509 returned the questionnaire (29.0%). The survey response time ranged from 26 to 49 weeks post-childbirth. Overall, 4313 women provided information on the primary outcome—whether or not they were in paid work within six months of childbirth—and were included in the analysis (4.3% missing). In total, 332 women (7.7%) were in paid work within six months of childbirth. Of the 3981 women who were not in paid work, 2260 (56.8%) women indicated that they were intending to be in paid work between 6 and 12 months after childbirth.

Factors associated with employment status after childbirth

Table 1 shows the sociodemographic and pregnancy- and birth-related characteristics for women in paid work and women not in paid work within six months of childbirth.

Table 1 Sociodemographic and pregnancy- and birth-related characteristics for women in paid work and not in paid work within six months of childbirth.

Factor		*In paid work* *n* = 332 *n* (%)	*Not in paid work* *n* = 3981 *n* (%)	*OR (95%CI)*
Sociodemographic				
Maternal age group	≤24 years	34 (16.2)	354 (15.7)	1.13 (0.73, 1.75)
	25–29 years	69 (24.8)	940 (27.1)	1.00 (0.71, 1.41)
	30–34 years	118 (31.1)	1536 (34.1)	1
	≥35 years	111 (28.0)	1151 (23.1)	1.33 (0.99, 1.78)*
	"Missing"	*0 (0)*	*0 (0)*	
Country of birth	UK	260 (74.6)	3115 (72.8)	1
	Outside of UK	72 (25.4)	866 (27.2)	0.91 (0.67, 1.24)
	"Missing"	*0 (0)*	*0 (0)*	
Ethnicity	White British	247 (74.1)	2958 (71.2)	1
	Other ethnicity	74 (25.9)	911 (28.8)	0.86 (0.64, 1.16)
	"Missing"	*11 (3.3)*	*112 (2.8)*	
IMD (quintile)	1 (most deprived)	41 (18.6)	606 (26.0)	0.76 (0.49, 1.18)
	2	67 (24.7)	758 (21.9)	1.19 (0.80, 1.76)
	3	64 (18.0)	846 (19.0)	1
	4	85 (21.9)	891 (17.3)	1.34 (0.93, 1.92)
	5 (least deprived)	75 (16.8)	880 (15.7)	1.13 (0.78, 1.63)
	"Missing"	*0 (0)*	*0 (0)*	
Age when left education	≤16 years	38 (13.9)	414 (13.8)	1.00 (0.67, 1.51)
	17–18 years	81 (26.4)	930 (26.7)	0.99 (0.73, 1.33)
	≥19 years	213 (59.7)	2605 (59.5)	1
	"Missing"	*0 (0)*	*32 (0.8)*	
Living with partner	Yes	313 (90.4)	3605 (82.6)	1
	No	19 (9.6)	376 (17.3)	0.51 (0.29, 0.88)*
	"Missing"	*0 (0)*	*0 (0)*	
Social support	Mean (SD)	4.8 (1.5)	4.7 (1.5)	
	Median (IQR)	5 (4–6)	5 (4–6)	1.04 (0.95, 1.15)
	"Missing"	*5 (1.5)*	*45 (1.1)*	
Longstanding physical health condition	Yes	19 (6.1)	255 (6.3)	0.96 (0.55, 1.67)
	No	313 (93.9)	3706 (93.2)	1
	"Missing"	*0 (0)*	20 (0.5)	
Longstanding mental health condition	Yes	29 (8.8)	317 (8.8)	0.99 (0.63, 1.54)
	No	301 (91.2)	3636 (90.5)	1
	"Missing"	*2 (0.6)*	*28 (0.7)*	
Pregnancy- and birth-related				
Planned pregnancy	Yes	275 (78.8)	3215 (74.2)	1
	No	55 (21.2)	730 (25.8)	0.77 (0.55, 1.08)
	"Missing"	*2 (0.6)*	*36 (0.9)*	
Mental health condition during pregnancy	Yes	56 (19.8)	676 (18.2)	1.11 (0.79, 1.56)
	No	276 (80.2)	3305 (81.8)	1
	"Missing"	*0 (0)*	*0(0)*	
Physical health condition affecting pregnancy	Yes	26 (8.1)	373 (9.4)	0.84 (0.53, 1.34)
	No	306 (91.9)	3584 (90.5)	1
	"Missing"	*0 (0)*	*24 (0.6)*	
Pregnancy-related health complication	Yes	81 (22.5)	1142 (27.9)	0.75 (0.57, 0.99)*
	No	250 (77.5)	2823 (72.1)	1
	"Missing"	*1 (0.3)*	*16 (0.4)*	

(*Continued*)

Table 1 Continued

Factor		*In paid work* *n* = 332 *n* (%)	*Not in paid work* *n* = 3981 *n* (%)	*OR (95%CI)*
Parity	Primiparous	173 (46.9)	2088 (45.8)	1.04 (0.81, 1.34)
	Multiparous	149 (53.1)	1828 (54.2)	1
	"Missing"	*10 (3.0)*	*65 (1.6)*	
Multiplicity	Singleton	327 (99.4)	3865 (97.6)	1
	Multiple birth	3 (0.6)	105 (2.4)	0.26 (0.80, 0.85)*
	"Missing"	*2 (0.6)*	*11 (0.3)*	
Gestation	Preterm (<37 weeks)	12 (2.9)	286 (7.5)	0.37 (0.20, 0.69)*
	Term (≥37 weeks)	315 (97.1)	3647 (92.5)	1
	"Missing"	*5 (1.5)*	*48 (1.2)*	
Birthweight	Low birthweight (<2500 g)	10 (2.7)	267 (7.0)	0.37 (0.19, 0.73)*
	Normal birthweight (≥2500 g)	308 (97.3)	3607 (93.0)	1
	"Missing"	*14 (4.2)*	*107 (2.7)*	
Mode of birth	Vaginal	181 (56.9)	2251 (60.6)	1
	Instrumental	48 (12.3)	576 (12.3)	1.07 (0.75, 1.53)
	Caesarean section	102 (30.8)	1151 (27.0)	1.21 (0.91, 1.62)
	"Missing"	*1 (0.3)*	*3 (0.1)*	
Neonatal unit admission after birth	Yes	32 (9.4)	483 (12.0)	0.76 (0.50, 1.17)
	No	300 (90.6)	3479 (88.0)	1
	"Missing"	*0 (0)*	*19 (0.5)*	
Ever breastfed	Yes	295 (86.0)	3550 (85.7)	1
	No	37 (14.0)	425 (14.2)	0.98 (0.66, 1.46)
	Missing	*0 (0)*	*6 (0.1)*	

n is unweighted, % weighted (except % of missing data)

*significant at $P < 0.1$

The results of the univariable logistic regression analysis are also shown: maternal age of 35 years or older (compared to 30–34 years) was associated with increased odds of being in paid work within six months of childbirth ($P < .1$). Not living with a partner, having a pregnancy-related health complication, having multiple births, a pre-term birth or a baby with low birth weight were associated with decreased odds of being in paid work within six months of childbirth ($P < .1$). These variables were therefore entered into the multivariable analysis.

Table 2 shows the results of the multivariable logistic regression analysis. After mutual adjustment, maternal age of 35 years or older (compared to 30–34 years) was associated with an increased odds of being in paid work within six months of childbirth (aOR: 1.37, 95%CI: 1.02–1.84, $P < .05$). Not living with a partner (aOR: 0.50, 95%CI: 0.28–0.90, $P < .05$), and having a pre-term birth (aOR: 0.38, 95%CI: 0.20–0.69, $P < .05$) were associated with decreased odds of being in paid work within six months of childbirth.

Employment characteristics

The median time after childbirth for (re)entering paid work among those women who had returned by six months was 17 weeks (IQR 13–26 weeks). The median weekly hours worked was 24 (IQR 12–36 hours), with 58.3% of women working part-time and 41.7% working full-time hours. Approximately two-thirds of women reported that their partner had paternity leave (62.3%) or shared parental leave (5.4%). Figure 1 shows the childcare arrangements for those women who were in paid work within six months of childbirth. The baby's grandparent(s) was the childcare option most frequently reported, followed by spouses/partners. Figure 1 also shows the motivations for (re)entering employment for those women in paid work within six months of childbirth. The most frequently selected motivation was needing the money (76.3%), followed by wanting to (re)enter employment (41.1%).

Figure 2 shows the proportion of women who indicated the two primary motivations for (re)entering paid work

Table 2 Unadjusted and aOR showing association between sociodemographic and pregnancy- and birth-related characteristics and employment status six months after childbirth.

		In paid work versus not in paid work	
		OR (95%CI)	*aOR (95%CI)*
Sociodemographic			
Maternal age group	≤24 years	1.13 (0.73, 1.75)	1.27 (0.80, 1.99)
	25–29 years	1.00 (0.71, 1.41)	0.99 (0.70, 1.42)
	30–34 years	1	1
	≥35 years	**1.33 (0.99, 1.78)***	**1.37 (1.02, 1.84)^**
Living with partner	Yes	1	1
	No	**0.51 (0.29, 0.88)***	**0.50 (0.28, 0.90)^**
Pregnancy- and birth-related			
Pregnancy-related health complication	Yes	**0.75 (0.57, 0.99)***	-
	No	1	NA
Multiplicity	Singleton	1	NA
	Multiple birth	**0.26 (0.80, 0.85)***	-
Gestation	Preterm (<37 weeks)	**0.37 (0.20, 0.69)***	**0.38 (0.20, 0.69)^**
	Term (≥37 weeks)	1	1
Birthweight	Low birthweight (<2500 g)	**0.37 (0.19, 0.73)***	-
	Normal birthweight (≥2500 g)	1	NA

^significant at $P < .05$

-Pregnancy-related health complication, multiplicity, and birthweight were removed from the final model as they were not significantly associated with employment status after mutual adjustment.

*significant at $P < .1$

according to different sociodemographic factors. For all groups of women in paid work within six months of childbirth, needing the money was the most commonly selected motivating factor. However, the proportion of women selecting this financial motivation varied by sociodemographic factors, and the gradients can be seen in Fig. 2. Younger women ($P = .008$), women living in less advantaged areas ($P = .001$), women who were not living with a partner ($P = .003$), and women who left education at a younger age ($P = .009$) were more likely to indicate that they were motivated to (re)enter paid work because they needed the money. The proportion of women who indicated that they (re)entered paid work because they needed the money did not differ by ethnicity ($P = .62$) or country of birth ($P = .85$). Figure 2 also shows that the proportion of women indicating that they were wanted to (re)enter paid work varied by sociodemographic factors. However, there were no statistically significant differences.

Discussion

Main findings of this study

This study found that a small proportion (7.7%) of women were in paid work within six months of childbirth. Women aged ≥35 years were more likely to be in paid work compared to those aged 30–34 years. Other factors found to be positively associated with being in paid work by six months postpartum were cohabitation with a partner and having a full-term pregnancy. Among women who were in paid work at six months postpartum, the median time of (re)entry into work was 17 weeks after childbirth. The most common pattern of work was part-time employment, and grandparents were the most common providers of childcare. For those in paid work, the majority cited that needing money was their main motivation for working, though a large proportion reported being motivated by a desire to work. Women who reported financial need were more likely to be younger, living in more deprived areas, not living with a partner, and to have left education at a younger age.

What is already known on this topic

The Millennium Cohort Study (MCS) of babies born in the UK in 2000–1 found that almost 40% of mothers were in paid employment by six months postpartum.[17] The UK Infant Feeding Surveys (IFS) found that 27% of women were in paid work by 4–6 months after childbirth in 2000, but this had reduced to 13% in 2005 and to 6% in 2010.[19] The reduction

over time may reflect the impact of several policies which were implemented during this period, such as the extension of statutory paid maternity leave from 26 to 39 weeks and the introduction of paid paternity leave. Our findings align with data from the most recent IFS suggesting that, in England, the rates of women (re)entering paid work within six months of childbirth have remained low. The 2007/8 Growing Up in Ireland (GUI) birth cohort found that 21% of mothers were in employment by six months postpartum.[15] In addition to the timing of the survey, which was conducted a decade earlier, this divergence from our findings could also be explained by the shorter paid maternity leave allowance in Ireland (26 versus 39 weeks).

The only sociodemographic factors that were found to be associated with employment status at six months postpartum in the current study were maternal age and cohabitation status. Our study showed older women and those living with a partner were more likely to be in paid work within six months postpartum. The current findings on maternal age are partially consistent with those from the MCS, which found that both younger and older mothers were less likely to (re)enter work within six months of childbirth,[17] whereas the GUI study found only younger mothers were more likely to (re)enter paid work in the first six months.[15] The current findings on cohabitation are consistent with the MCS and the GUI studies, which both found that single mothers were less likely to enter paid work in the first six months.[15,17]

Other studies, including the MCS and the GUI study, have found postpartum employment status to be associated with level of maternal education and socioeconomic status, although the association is complex, and some of the findings are incongruous.[15–17,20,21] Maternal education and socioeconomic status were not found to be associated with employment status in the current study. We also found no association between breastfeeding initiation and employment status. Where an association has been observed in other studies, breastfeeding initiation has been negatively associated with full-time but not part-time employment.[8,22] The majority of women who were in paid work in the current study were working part-time, which may explain the lack of association.

We found no association between women's physical or mental health before or during pregnancy and being in paid employment within six months of childbirth. However, women who reported pregnancy-related health complications were less likely to be in paid work in univariable analysis but not after adjustment for other factors. Women who gave birth to pre-term babies were less likely to be in paid employment within six months of childbirth. This is in line with findings from the MCS, which reported that mothers of low birthweight babies entered paid work later.[17] However, two studies conducted in France found no association between birth-related factors and likelihood of return to work by one year postpartum.

Our finding that grandparents were used as the primary childcare provider is compatible with findings from the 2018 Childcare and Early Years Survey and the GUI study, which also found grandparents to be the main childcare provider for children aged 0–2 years and children at nine months respectively.[15,24] Financial reasons as a primary motivation for entering paid work and variation according to sociodemographic factors has also been widely reported.[13,15,24,25]

What this study adds

This analysis is, to our knowledge, the first to examine women's employment patterns in the first six months after childbirth and the characteristics associated with (re)entering work among a nationally representative population-based sample in England. Unlike previous studies, we explored sociodemographic characteristics alongside pregnancy and birth-related factors. We also studied the motivations that influence women's decisions, as well as childcare and parental leave arrangements, to provide a richer insight into how and why women engage in paid work following childbirth.

Our results suggest that a small proportion of women in England are in paid work by six months postpartum, providing further evidence that more women are taking longer time out of employment following childbirth. Older women were more likely to be in paid work within six months of childbirth, as were those who had a full-term pregnancy and who were living with a partner. The majority of those in paid work were motivated by financial need, and this motivation was most prominent among women from more disadvantaged backgrounds, suggesting that current parental leave entitlements may benefit women from different socioeconomic backgrounds to differing extents. Parental leave policies should be reviewed to ensure they offer sufficient financial support that is equitable across different groups, to enable all women to have the choice to remain at home for six months, should they want to.[13] It is important to note that not all women choose or want to take their full maternity leave entitlement. As our findings show, many women who were in paid work within six months of childbirth were motivated by their desire to work. Therefore, policies must allow a real choice for women regardless of their background and circumstances, and women's right to choose should be encouraged and supported.

Future studies should explore the experiences of women who return to work early and who cite financial necessity as their main motivation for doing so. The experiences of women who want to (re)enter paid work after childbirth

but are unable to do so for financial or other reasons also merit further investigation. This will aid understanding of the employment needs and choices of postpartum women and what policies might help to better support them. The longer-term health impacts of different employment patterns after childbirth are also important to consider.

Limitations of this study

While this study offers important insights into the employment behaviors of women in England, there are several limitations. Due to the cross-sectional study design, the directionality of associations cannot be established. However, this was an exploratory study of associations and did not seek to establish causality. As this was a secondary analysis, variables explored were limited to those that were included in the survey. There are many other factors that have been shown in previous studies to be associated with employment after childbirth, which we were unable to include or adjust in our analysis. Examples include pre-childbirth employment status, occupation, and eligibility for maternity leave.[17,21] The health of the child may also be important in determining women's employment patterns following childbirth. Some of these unmeasured variables may have helped to explain some of the associations we identified. Finally, employment behaviors are highly heterogeneous and individually motivated, and the binary categorization of employment status at six months after childbirth may have obscured other important associations. While the overall sample size of this study was large, the number of women in paid employment was small, and a binary outcome was therefore used to maximize statistical power as well as interpretability.

Conclusion

This study adds to the growing literature focused on understanding the variation in women's employment patterns after childbirth. Our findings suggest that employment patterns and motivations for working vary according to sociodemographic and pregnancy- and birth-related characteristics. These findings have important implications for parental leave and childcare policies, which should be equitable across different groups. Future research should explore the financial pressures women face after childbirth, as well as the long-term health impacts of different employment patterns after childbirth.

Acknowledgements

Most thanks are due to the many women who responded and participated in the survey. Staff at the Office for National Statistics drew the sample and managed the mailings but bear no responsibility for analysis or interpretation of the data.

Funding

This research is funded by the National Institute for Health Research (NIHR) Policy Research Programme, conducted through the Policy Research Unit in Maternal and Neonatal Health and Care, PR-PRU-1217-21202. The views expressed are those of the authors and not necessarily those of the NIHR or the Department of Health and Social Care. GF is funded by a Clinical Research Fellowship awarded by the Nuffield Department of Population Health, University of Oxford.

Data availability

The data underlying this article are available in the article and in its online supplementary material.

Ethics approval and consent to participate

The study was approved by the London Bloomsbury NRES Committee (18/LO/0271).

Competing interests

The authors declare that they have no competing interests.

References

1. Harkness S, Borkowska M, Pelikh A. *Employment Pathways and Occupational Change after Childbirth*. London: Government Equalities Office, 2019. Available at: https://www.gov.uk/government/publications/employment-pathways-and-occupational-change-after-childbirth/main-report#contents (accessed 27 September 2024).
2. Andrew A, Bandiera O, Costa Dias M *et al*. *The Careers and Time Use of Mothers and Fathers*. London: Institute of Fiscal Studies (IFS), 2021. Available from: https://ifs.org.uk/publications/careers-and-time-use-mothers-and-fathers (accessed 27 September 2024).
3. Heshmati A, Honkaniemi H, Juárez SP. The effect of parental leave on parents' mental health: a systematic review. *Lancet Public Health* 2023;**8**:e57–75.
4. Andres E, Baird S, Bingenheimer JB. *et al.* Maternity leave access and health: a systematic narrative review and conceptual framework development. *Matern Child Health J* 2016;**20**:1178–92.
5. McCardel RE, Loedding EH, Padilla HM. Examining the relationship between return to work after giving birth and maternal mental health: a systematic review. *Matern Child Health J* 2022;**26**:1917–43.

6. Frech A, Damaske S. The relationships between mothers' work pathways and physical and mental health. *J Health Soc Behav* 2012;**53**:396–412.
7. Skafida V. Juggling work and motherhood: the impact of employment and maternity leave on breastfeeding duration: a survival analysis on growing up in Scotland data. *Matern Child Health J* 2012;**16**:519–27.
8. Franzoi IG, Sauta MD, De Luca A. *et al.* Returning to work after maternity leave: a systematic literature review. *Arch Womens Ment Health* 2024;**27**:737–49. https://doi.org/10.1007/s00737-024-01464-y.
9. Kopp M, Lindauer M, Garthus-Niegel S. Association between maternal employment and the child´s mental health: a systematic review with meta-analysis. *Eur Child Adolesc Psychiatry* 2024;**33**:3025–42. https://doi.org/10.1007/s00787-023-02164-1.
10. Fitzsimons E, Pongiglione B. The impact of maternal employment on children's weight: evidence from the UK. *SSM Popul Health* 2019;**7**:100333.
11. Earle A, Heymann J. Paid parental leave and family-friendly policies: an evidence brief. *New York: United Nations Children's Fund (UNICEF)* 2019. Available at https://www.unicef.org/media/95086/file/UNICEF-Parental-Leave-Family-Friendly-Policies-2019.pdf (accessed 27 September 2024).
12. O'Brien M, Aldrich M, Connolly S, Cook R, Speight S. *Inequalities in Access to Paid Maternity and Paternity Leave and Flexible Work*. London: National Centre for Social Research (NatCen), 2017. Available at https://natcen.ac.uk/sites/default/files/2024-02/Inequalities-Parental-Leave-Report-21st-Nov-2017-full-report-FINAL.pdf (accessed 27 September 2024).
13. Dahlgren G, Whitehead M. *European Strategies for Tackling Social Inequities in Health: Levelling up Part 2*. Copenhagen: WHO Regional Office for Europe, 2007.
14. Newton B, Tamkin P, Gloster R, Cox A, *Everett c, Cotton J. Rapid Evidence Assessment: Parents' Decisions about Returning to Work and Child Caring Responsibilities*. London: Government Equalities Office, 2018. Available at: https://www.gov.uk/government/publications/parents-return-to-work-and-childcare-responsibilities (accessed 27 September 2024).
15. McGinnity F, Murray A, McNally S. *Growing up in Ireland: National Longitudinal Study of Children: Mothers' Return to Work and Childcare Choices for Infants in Ireland: Infant Cohort*. Dublin: Department of Children and Youth Affairs, 2013.
16. Fagan C, Norman H. Trends and social divisions in maternal employment patterns following maternity leave in the UK. *Int J Sociol Soc Policy* 2012;**32**:544–60.
17. Crosby DA, Hawkes DD. Cross-National Research Using Contemporary Birth Cohort Studies: a look at early maternal employment in the UK and USA. *Int J Soc Res Methodol* 2007;**10**:379–404.
18. Harrison S, Alderdice F, Henderson J, Quigley MA. https://www.npeu.ox.ac.uk/assets/downloads/maternity-surveys/reports/Maternity-Survey-Report-2018-You-and-Your-Baby.pdf. Oxford: National Perinatal Epidemiology Unit, University of Oxford, 2020. ISBN: 978-0-9956854-5-1.
19. McAndrew F, Thompson J, Fellows L, Large A, Speed M, Renfrew MJ. Infant feeding survey 2010. *Leeds: Health and Social Care Information Centre*. 2012. Available at: https://sp.ukdataservice.ac.uk/doc/7281/mrdoc/pdf/7281_ifs-uk-2010_report.pdf (accessed 27 September 2024).
20. Knudsen L, Bradshaw F,. ScotCen Social Research. *Growing Up in Scotland: Patterns of Maternal Employment and Barriers to Paid Work*. Edinburgh: Scottish Government, 2017. Available at: https://www.gov.scot/binaries/content/documents/govscot/publications/research-and-analysis/2017/11/growing-up-scotland-patterns-maternal-employment-barriers-paid-work/documents/00526991-pdf/00526991-pdf/govscot:document/00526991.pdf (accessed 27 September 2024).
21. Wallace M, Saurel-Cubizolles MJ. Returning to work one year after childbirth: data from the mother–child cohort EDEN. *Matern Child Health J* 2013;**17**:1432–40.
22. Hawkins SS, Griffiths LJ, Dezateux C. *et al.* Maternal employment and breast-feeding initiation: findings from the millennium cohort study. *Paediatr Perinat Epidemiol* 2007;**21**:242–7.
23. Castetbon K, Boudet-Berquier J, Salanave B. Combining breastfeeding and work: Findings from the Epifane population-based birth cohort. *BMC Pregnancy Childbirth* 2020;**20**:110.
24. Early Years Analysis and Research, Department for Education. *Childcare and Early Years Survey of Parents 2018*. London: Department for Education, 2018. Available at: https://assets.publishing.service.gov.uk/media/5c1a358ee5274a4664fa77ab/Childcare_and_Early_Years_Survey_of_Parents_in_England_2018.pdf (Accessed 27 September 2024).
25. Easter A, Newburn M. *Working it out: New Parents' Experiences of Returning to Work*. London: National Childbirth Trust, 2014.