The maternal health outcomes of paid maternity leave: A systematic review

Abstract

Paid maternity leave has become a standard benefit in many countries throughout the world. Although maternal health has become a cornerstone of the development and promotion of paid maternity leave, no review has specifically examined the impact of paid maternity leave on maternal health outcomes. The aim of this paper is to provide a systematic review of studies that examine the association between paid maternity leave and maternal health. We conducted a comprehensive search of electronic databases, including Medline, Embase, CINAHL, PsycINFO, Web of Science, Sociological Abstracts, and Google Scholar. We also searched websites of relevant organisations, reference lists of key papers and journals, and citation indices. There were no language restrictions. Studies were included if they compared paid maternity leave versus no paid maternity leave, or different lengths of leave. Data were extracted and an assessment of bias was performed independently by the authors. Seven studies were identified as relevant. Most of the studies were published in the last five years and used a cohort, cross-sectional, or interrupted time series design. Outcomes included mental health and wellbeing, general health, physical wellbeing, and intimate partner violence. The four studies that examined leave at an individual level showed evidence of maternal health benefits, whereas the three studies conducting policy-level comparisons reported either no association or evidence of a negative association. The synthesis of the results suggests that paid maternity leave provides maternal health benefits, although this varies depending on the length of leave and amount of compensation that maternity leave schemes provide mothers. This has important implications for public health and social policy. Given the small number of
studies and the methodological limitations of the current evidence, longitudinal studies are needed to further clarify the effects of paid maternity leave on the health of mothers in paid employment.

**Research Highlights**

- A global systematic review was conducted on the relationship between maternal health and paid maternity leave.
- This review suggests that there is evidence of maternal health benefits of paid maternity leave, which has important implications for public health and social policy; however, the studies had a number of methodological limitations.
- This review has highlighted the need for longitudinal research investigating the maternal health effects of paid maternity leave.

**Keywords:** Maternity leave, systematic review, maternal health, mental health
INTRODUCTION

Paid maternity leave has become a standard entitlement in many countries throughout the world, with the level of wage replacement and length of maternity leave varying greatly across countries (International Labour Office, 2010; International Network on Leave Policies and Research, 2013). Maternity leave policies are intended to provide health benefits for mothers and their children, promote gender equality, and improve women’s participation in the workforce (European Commision Network on Childcare and Other Measures to Reconcile Employment and Family Responsibilities, 1994; Productivity Commission, 2009). Maternity leave may provide maternal health benefits because it allows women more time to recover physically from childbirth, bond with their child, and adapt to new roles.

There is some evidence in the literature to suggest that maternity leave (unpaid or paid) improves maternal mental health. In a review of maternity leave and maternal health by Staehelin et al (2007), four of the studies included in the review found evidence of a positive association between longer lengths of leave and mental health. The remaining two studies in the review, which examined general health or other health indicators such as outpatient clinic visits and lack of sleep found no associations between maternity leave and these health outcomes (Staehelin et al., 2007). However, while the review by Staehelin et al. (2007) provides some evidence about the effect of maternity leave on maternal health, it did not distinguish between paid and unpaid maternity leave.

Although maternal health has become a cornerstone of the development, implementation and promotion of paid maternity leave policies, no review to date has specifically examined the impact of paid maternity leave on maternal health outcomes. A synthesis of the evidence about the association between maternal health and paid maternity leave,
specifically, is important for both public health and social policy as improved maternal health is cited as a justification for many paid maternity leave policies. Paid leave, which offers both financial security and job protection, may provide an incentive for mothers to take leave, or to take longer leave, than if they were only offered unpaid leave. A better understanding of the impact of paid maternity leave on maternal health is needed to elucidate any health benefits paid leave provides mothers. The aim of this systematic review is to provide a synthesis of the research examining the effects of paid maternity leave on maternal health.

METHODS

This systematic review was conducted according to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines (Liberati et al., 2009). Our search strategy, inclusion criteria, and methods of analysis were specified in advance and documented in a protocol registered with the International Prospective Register of Systematic Reviews (PROSPERO) (www.crd.york.ac.uk/prospero), registration number: CRD42012003187.

Eligibility criteria

Studies were considered for inclusion if they examined maternal health outcomes associated with paid postnatal maternity leave (including both government-sponsored and employer-sponsored leave). The exposure of interest was paid maternity leave, and only studies with a relevant comparison group were included, which we defined as:

1. Studies examining paid maternity leave versus no paid maternity leave;
2. Studies comparing different lengths of paid maternity leave.
Studies in which the comparison group consisted of women who were not employed before the birth of their baby were excluded because the samples were likely to be intrinsically too different, in terms of potential confounders such as age, socio-economic status, household structure, and relationship status.

All study designs were eligible, including studies in which participants were surveyed at one point in time (cross-sectional studies and ecological studies) and studies conducted over time (cohort studies, case-control studies, time-series analyses and randomised controlled trials). Both quantitative and qualitative studies that met the above criteria were examined.

Only studies describing original research were considered for inclusion. Review articles and conference abstracts were excluded. When multiple articles were found discussing the same study findings, only the main article examining maternal health outcomes and paid maternity leave was considered.

**Search strategy**

The literature searches were independently conducted by two of the authors (CG, ZA). In November 2012 and again in August 2013, a computerised search of the literature was performed using the following databases: Medline, Embase, CINAHL, PsycINFO, Web of Science, and Sociological Abstracts, using search terms for maternity leave and maternal health. Every search term for maternity leave was combined with every search term for maternal health, to generate every combination of keywords. The following search terms for maternity leave were used: “family leave”, “matern* leave”, “parent* leave”, “paid parent* leave” and “paid matern* leave”, and for maternal health: “maternal welfare”, “health”, “mental health”, “anxiety” and “depression”. There were no date or language
search restrictions. A literature search was also conducted through Google Scholar using the combinations of keywords described above. The websites of relevant organisations (International Labour Organization, World Health Organization, Word Bank, International Monetary Fund, Organisation for Economic Co-operation and Development) were searched for eligible publications. In addition, reference lists of key papers were searched as well as the citation indices, through both Web of Science and Google Scholar. The five journals yielding the highest number of articles were also hand searched.

**Process of study selection**

The selection of studies for inclusion in the review was conducted in two stages. First, the titles and abstracts of studies were screened to determine which studies were relevant. Second, articles selected were read to determine if they met the inclusion criteria. If disagreements arose, the two authors discussed the differences and came to a conclusion. When unable to come to a mutual conclusion, articles were discussed with all authors. Foreign language articles identified as relevant during the selection process were translated into English.

**Data collection process**

For all articles identified as eligible for inclusion in the review, data were extracted independently by two authors using a template adapted from the Cochrane Public Health Group Data Extraction and Assessment Template (The Cochrane Public Health Group, 2011), which summarised the key aspects of the studies in terms of their design, setting, study sample, maternity leave comparison groups, maternal health outcomes measures and key results. This template was piloted and adapted to suit the needs of the review. If any of
these data items were not clearly described in the articles, authors of the articles were contacted to obtain further information on the studies.

Methods of analysis

The results of the individual studies were compared and contrasted to form a synthesis of the evidence about the effect of paid maternity leave on maternal health. If studies included subgroups of participants who did not meet the inclusion criteria, we restricted our analysis only to the relevant subgroups (e.g. if a study included a subgroup of women who were not in paid work in their analysis, we excluded this subgroup from our review and reported only the results from subgroups that met our inclusion criteria). Studies were grouped in terms of the types of maternal health outcomes investigated, with results presented separately for mental health and wellbeing, general health and physical wellbeing, and intimate partner violence.

Risk of bias

A quality assessment of the included studies was performed independently by the authors using a tool adapted from the Cochrane Public Health Group Data Extraction and Assessment Template (The Cochrane Public Health Group, 2011). The tool assessed the selection of participants, data collection methods, measurement of the outcomes, identification of paid maternity leave comparison groups, control for potential confounders, and the execution of the analysis to assess the internal validity (risk of bias within studies) and the external validity of each study (risk of bias across studies). No studies were excluded on the basis of poor methodological quality, but the limitations of each study are discussed in the results and discussion.
RESULTS

Identified studies

The database searches yielded 990 articles. After duplicates were removed, there were 975 articles remaining, of which 835 articles were excluded on the basis of their title or abstract. The full texts of the remaining 140 articles were examined in more detail and assessed for eligibility. Of these, 134 were excluded; the main reasons for exclusion were that the study designs did not meet the inclusion criteria (n=100), the studies did not examine maternal health outcomes (n=20), the articles described studies already found (n=5), were review articles (n=8) or conference abstracts (n=1). The search identified six studies that met the inclusion criteria, including one article written in French. One more study was identified through searching the citation indices of the articles identified in the database searches. Literature searches conducted using websites of key organisations, Google Scholar, relevant journals and reference lists of identified articles did not yield any additional articles. A total of seven studies were identified for inclusion in this review (Figure 1).

---Please insert Figure 1---

Study characteristics

Study designs

All seven studies applied a quantitative methodology in their design and analysis. Three studies were cross-sectional (Chatterji & Markowitz, 2012; Kiehl & White, 2003; Saadé et al., 2010), two were cohort studies (Gartland et al., 2011; Whitehouse et al., 2013) and two used time-series analyses (Baker & Milligan, 2008; Schroeder, 2011), using random samples
of the population at different time points to compare health outcomes before and after a maternity leave policy reform.

**Study settings and samples**

The studies included participants from Australia (Gartland et al., 2011; Whitehouse et al., 2013), Norway (Kiehl & White, 2003), Sweden (Kiehl & White, 2003), the United States of America (Chatterji & Markowitz, 2012; Kiehl & White, 2003; Schroeder, 2011), Canada (Baker & Milligan, 2008), and Lebanon (Saadé et al., 2010). The paid maternity leave allowances in each study setting are described in Table 1.

--- Please insert Table 1---

Participants were recruited through maternity and paediatric services (Gartland et al., 2011; Kiehl & White, 2003; Saadé et al., 2010), or from ongoing longitudinal studies including the National Longitudinal Study of Children and Youth (Baker & Milligan, 2008), the birth cohort of the Early Childhood Longitudinal Study (Chatterji & Markowitz, 2012), the California Health Interview Survey (Schroeder, 2011), and the Longitudinal Study of Australian Children (Whitehouse et al., 2013). The size of studies varied from 147 to 5,092 mothers.

**Maternity leave comparison groups**

Three studies used data on policy allowances (aggregate data on exposure) (Baker & Milligan, 2008; Kiehl & White, 2003; Schroeder, 2011) and four studies used data collected at the individual level (Chatterji & Markowitz, 2012; Gartland et al., 2011; Saadé et al., 2010; Whitehouse et al., 2013). Paid maternity leave was categorised into any leave or no leave in three studies (Gartland et al., 2011; Kiehl & White, 2003; Schroeder, 2011), different lengths
of leave in three studies (Baker & Milligan, 2008; Chatterji & Markowitz, 2012; Saadé et al., 2010), and one study examined both (Whitehouse et al., 2013).

**Maternal health outcomes**

Mental health and wellbeing were examined in five studies. Mental health outcomes included depression (Baker & Milligan, 2008; Chatterji & Markowitz, 2012) and psychological distress (Whitehouse et al., 2013); wellbeing outcomes included mothers’ satisfaction with their life circumstances (Kiehl & White, 2003) and recovery of psychological wellbeing on return to work (Saadé et al., 2010). General health and physical wellbeing outcomes were described in four studies including questions on general health status (Chatterji & Markowitz, 2012), current health status (Baker & Milligan, 2008; Schroeder, 2011) and recovery of physical wellbeing on return to work (Saadé et al., 2010). A final study examined intimate partner violence, defined as combined physical and emotional abuse in the first 12 months postpartum (Gartland et al., 2011).

**SYNTHESIS OF RESULTS**

The results of each of the seven studies are described in Table 1.

*Mental health and wellbeing*

Two of the three studies examining maternal mental health outcomes reported evidence of a positive association between maternity leave and mental health. The Australian study found that women with increasing lengths of paid maternity leave reported reduced psychological distress; for example, among mothers who took more than 13 weeks paid leave, the odds of psychological distress were 76% lower than for mothers who took no leave (Odds Ratio (OR)=0.24, 95% CI 0.07, 0.84) (Whitehouse et al., 2013). An American
study found that having less than eight weeks paid leave was associated with a 9% increase in the geometric mean depression score (ratio of means=1.09, 95% CI 1.00, 1.20) and a 2% greater risk of a women reporting severe depression (Risk Difference (RD)=0.02, 95% CI 0.00, 0.04) compared to women who took 8 or more weeks of paid leave (Chatterji & Markowitz, 2012). The authors also conducted an instrumental variable analysis in an attempt to better control for confounding and reverse causation; in which the associations were no longer evident but the standard errors were very high. The final study, examining the mental health of Canadian women pre-policy reform (25 weeks paid leave) and post-policy reform (50 weeks paid leave), reported no evidence of an association between length of paid maternity leave and depression, longer leave was associated with a 0.27 increase in depression index (b=0.27, 95% CI -0.23, 0.77) (Baker & Milligan, 2008).

Two studies examined maternal mental wellbeing. The study in Lebanon examined recovery of mental wellbeing of mothers on return to work; the results suggested evidence of a positive association; each week increase in paid leave was associated with a 2% reduction in the odds of reporting poor mental wellbeing (OR=0.98, 95% CI 0.96, 0.99) (Saadé et al., 2010). In the second study, the authors reported no evidence of an association between paid maternity leave policy and life satisfaction; mothers in the United States of America (no paid leave) and in Norway (42 weeks paid leave) reported greater life satisfaction than mothers in Sweden (52 weeks paid leave) (F=7.58, p=0.0007) (Kiehl & White, 2003).

**General health and physical wellbeing**

The three studies examining general health reported varying results (Baker & Milligan, 2008; Chatterji & Markowitz, 2012; Schroeder, 2011). One study found evidence of a statistically significant positive association between maternity leave and general health; having less than
8 weeks paid leave was associated with an increase in the probability of being in a poorer health category (ordered probit model coefficient=0.10, 95% CI 0.02, 0.18) and evidence of this association remained in the instrumental variable analysis (Chatterji & Markowitz, 2012). The Canadian study, comparing women pre- and post-policy reform (25 versus 50 weeks paid leave) found no evidence of an association between the length of maternity leave and general health, longer leave was associated with a 0.02 decrease in health score ($b=-0.02$, 95% CI -0.16, 0.13) (Baker & Milligan, 2008). The other study examining general health compared women in California pre- and post-policy introduction (no leave versus six weeks paid leave) reported some evidence of a negative association between paid leave and health status. Having six weeks paid leave was associated with a 25% lower probability of women reporting excellent or good health versus fair, poor or very poor, compared to women with no paid leave (RD=-0.25, 95% CI -0.50, 0.00) and a 59% decrease in the odds of reporting being in a better health category (OR=0.41, 95% CI 0.16, 1.03) (Schroeder, 2011).

One study specifically examined physical wellbeing, which was defined as recovery of physical wellbeing on return to work. The authors found evidence of a positive association; each week increase in length of paid leave was associated with a 4% reduction in the odds of reporting poor physical wellbeing (OR=0.96, 95% CI 0.95, 0.98) (Saadé et al., 2010).

**Intimate partner violence**

An Australian study of intimate partner violence found that women who received paid leave had 58% lower odds of reporting combined physical and emotional abuse than working women who did not have access to paid leave (OR=0.42, 95% CI 0.22, 0.82) (Personal communication with authors, 30th July 2013) (Gartland et al., 2011).
Individual-level versus policy comparisons

It is noteworthy that all studies conducted at an individual level reported evidence that paid maternity leave was beneficial to mothers’ health (Chatterji & Markowitz, 2012; Gartland et al., 2011; Saadé et al., 2010; Whitehouse et al., 2013). By comparison, the studies which examined leave at a policy level found either no evidence of association (Baker & Milligan, 2008; Kiehl & White, 2003), or some evidence of a negative association (Schroeder, 2011).

RISK OF BIAS

Studies were heterogeneous in terms of their study design, quality, and detail of reporting. Below we examined the risk of bias arising from each of the following: participant selection, measurement of the maternal health outcomes and paid maternity leave, confounding bias, reverse causation, and then discussed the comparability of the findings (study heterogeneity).

Participant selection

Many of the study results may be affected by selection bias due to poor response rates and, in cohort studies, low retention. Two of the studies did not report response rates (Baker & Milligan, 2008; Kiehl & White, 2003). Of the studies that did, the response rates varied from 28% (Gartland et al., 2011) to 74% (Chatterji & Markowitz, 2012; National Center for Education Statistics, 2013). The retention rates in the cohort studies ranged from 71% (Growing up in Australia, 2013; Whitehouse et al., 2013) to 90% (Gartland et al., 2011).

Measurement of maternal health outcomes
All primary health outcome measures were self-reported which could introduce information bias from misclassification of the outcome. We would expect variation in the extent of misclassification of the maternal health outcomes across the studies as the outcome measures recorded were different and the perception of these outcomes may be culturally sensitive. For example, mothers’ satisfaction with life circumstances (i.e. Kiehl & White, 2003; Saadé et al., 2010) is more likely to be subject to variations in definition and expectations within and between populations than depression measured on a well-defined scale. Additionally, poor mental health and intimate partner violence are likely to be socially stigmatised and may have been systematically underreported. Although differences in misclassification bias between studies are possible, misclassification of the outcomes is unlikely to be differential between the maternity leave groups. Additionally, four studies reported using validated outcome measures (Chatterji & Markowitz, 2012; Gartland et al., 2011; Kiehl & White, 2003; Whitehouse et al., 2013), which may minimise misclassification.

Schroeder (2011) compared mothers’ general health before and after the introduction of a government-sponsored paid parental leave scheme. However for pre-reform mothers the health outcome was measured at two years postpartum, whereas for post-reform mothers the outcome was measured at one year postpartum. This is problematic as maternal health has been shown to fluctuate in the postpartum period, where mothers’ health improves with longer postpartum durations (Gjerdingen & Chaloner, 1994; Klein et al., 1998). For a valid comparison it is therefore necessary to survey the two groups of mothers at similar time points postpartum. The observed negative association in this study could be an artefact of the difference in the time of survey between the comparison groups, rather than the change in policy (Schroeder, 2011).
Measurement of paid maternity leave

Self-reported length of maternity leave is unlikely to be prone to substantial measurement error, although there may be some misclassification between paid and unpaid maternity leave.

In three of the studies (Baker & Milligan, 2008; Kiehl & White, 2003; Schroeder, 2011), the comparison groups were based on aggregate-level data on policy allowance. The findings of those studies should be interpreted as the effects of leave policies rather than the effect of receiving paid maternity leave.

Confounding bias

All studies used observational designs, therefore it is possible that observed associations were affected by extraneous factors which could have led to confounding, and therefore may not represent the causal effect of paid maternity leave on maternal health. It is likely that working women who received paid maternity leave (or longer leave) were systematically different to working women who did not receive paid maternity leave (or shorter leave), some of which could not be controlled for in the analysis.

Kiehl and White’s (2003) study, which compared mothers’ satisfaction with life circumstances between three countries with different paid maternity leave policies, did not adjust for potential confounders and is likely to be substantially affected by confounding bias because of differences between countries (Kiehl & White, 2003). While authors restricted the subgroup from the United States of America to women with private health insurance in an attempt to improve comparability, many other factors are likely to differ between these countries such as cultural variations around women combining work and
family and broader labour market conditions (Pfau-Effinger, 2005). While all other studies in the review performed adjustments in the analyses, there may still be residual confounding from unmeasured or poorly measured variables.

Three studies examined women receiving different employer-sponsored maternity leave allowances (Chatterji & Markowitz, 2012; Gartland et al., 2011; Whitehouse et al., 2013). The differences in paid maternity leave between these groups of women are likely to reflect differences in employment characteristics such as skill level, job quality and employment sector. For example, a study that compared working women with access to employer-sponsored paid leave with working women without access to such leave found that those with access to leave were more likely to have higher levels of education, be in a permanent position, and have a higher salary (Martin et al., 2012). Adjustments in the analyses may have adequately controlled for these systematic differences, but there could still be residual confounding remaining. Chatterji and Markowitz (2012) additionally performed an instrumental variable analysis using state paid leave policies as their instrument in order to better account for confounding, which changed the size (and for one outcome, the direction) of the effect estimates but the standard errors became very large.

Two studies examined change in maternal health outcomes before and after a paid maternity leave policy reform (Baker & Milligan, 2008; Schroeder, 2011) and it is possible that other, broader social changes may have occurred between the two surveys which could contribute to the observed association. However, both these studies use a difference-in-differences approach which may control for time differences between the survey time points.

*Reverse causation*
The cross-sectional studies that examined leave at an individual-level may be subject to reverse causation as they simultaneously recorded information on length of paid leave and maternal health (Chatterji & Markowitz, 2012; Saadé et al., 2010). It is possible that women’s health in the postpartum period may have affected their decisions about timing of return to paid work.

**Study heterogeneity**

Heterogeneity between studies limits the comparability of the results due to differences in the samples, maternal health outcomes, and maternity leave policies and categorisations. All studies selected samples from working women, but there were differences in inclusion criteria; such as restrictions to married women (Saadé et al., 2010), women in couple relationships (Baker & Milligan, 2008; Chatterji & Markowitz, 2012; Whitehouse et al., 2013), primiparous women (Kiehl & White, 2003), singleton births (Whitehouse et al., 2013), women under the age of 30 (Schroeder, 2011), and women who had returned to work at the time of survey (Chatterji & Markowitz, 2012; Whitehouse et al., 2013). Three studies mentioned that the samples were representative of the country or state from which the samples were drawn (Baker & Milligan, 2008; Chatterji & Markowitz, 2012; Schroeder, 2011).

Maternal health outcomes varied from mental health and wellbeing, general health, physical wellbeing and intimate partner violence. Even within these subgroups, different instruments were used to measure the outcomes, making direct comparisons between the studies difficult.
Some studies compared paid leave and no leave, while others contrasted different lengths of leave. In addition, in two studies the measure of paid maternity leave was stated to be the sum of multiple types of paid leave including maternity leave, sick leave, and annual leave (Chatterji & Markowitz, 2012; Whitehouse et al., 2013).

The timing of questionnaire completion postpartum by the mothers also varied between the studies, ranging between six weeks to three years postpartum, therefore women in some studies had returned to work at the time of data collection (e.g. Chatterji & Markowitz, 2012) while women in others may not have. It is possible that the magnitude of the effect of paid maternity leave on maternal health could vary over time and on return to the labour force.

**DISCUSSION**

The seven studies included in the review examined multiple maternal health outcomes, including mental health and wellbeing, general health, physical wellbeing, and intimate partner violence. All studies that measured leave at an individual level found evidence of a positive association between paid maternity leave and maternal health (Chatterji & Markowitz, 2012; Gartland et al., 2011; Saadé et al., 2010; Whitehouse et al., 2013). Of the three studies which examined leave at a policy level, two found no evidence of an association (Baker & Milligan, 2008; Kiehl & White, 2003), and one found evidence of a negative association (Schroeder, 2011).

Of the two studies that found no difference in maternal health between the maternity leave comparison groups, the first compared a policy change from 25 to 50 weeks; it is possible that there are few, if any, added maternal health effects of an additional 25 weeks of paid
maternity leave (Baker & Milligan, 2008). The second study compared mental wellbeing across three countries with different leave policies; however individual- and country-level factors are likely to substantially confound the effect estimates (Kiehl & White, 2003). The only study that found a negative association surveyed mothers in the comparison groups at different time points; pre-policy mothers at two years postpartum whereas post-policy mothers were interviewed in the first year postpartum (Schroeder, 2011).

All studies were subject to confounding bias and many to reverse causation, therefore the results should be interpreted with caution. Evidence from longitudinal studies which survey women over time following the birth of a child to examine changes in their health according to the maternity leave they received may be more robust as they would be less prone to bias from confounding and reverse causation.

Despite the methodological limitations and the variations in health outcomes and leave measurements, this review suggests that paid maternity leave offers maternal health benefits. Pregnancy, childbirth and return to work are major transitions in women’s lives, as they adapt to multiple roles and new identities (McGovern et al., 1997). There is a complex interaction of factors that can impact on women’s health at this time. The financial support of paid maternity leave may enable women to spend additional time away from the workplace, which may assist with this transition and may help to explain the positive maternal health effects observed in this review.

*Strengths and limitations of the review*
It is possible that our review is subject to publication bias. However, to avoid missing any eligible studies, we conducted a comprehensive search strategy that included grey literature.

The strengths of this review are that we: used a systematic approach and followed the PRISMA guidelines; the literature was independently conducted by two of the authors; the risk of bias was assessed by all authors; studies from a range of countries were included; and we did not exclude studies on the basis of language.

CONCLUSION

This review is the first to synthesise the findings about the maternal health effects of paid maternity leave. It provides an international perspective and investigates a range of health outcomes including mental, physical, general health and wellbeing and intimate partner violence. Overall, the review provides some evidence of a positive association between paid maternity leave and maternal health, suggesting that longer and better remunerated leave improves maternal health and wellbeing. These findings have important implications for public health and social policy, particularly in regards to the length of leave and amount of compensation that government- and employer-sponsored maternity leave schemes provide for their workers. Nevertheless, these findings need to be viewed with some circumspection, given the small number of studies and the methodological limitations of the current evidence. To address this imbalance, longitudinal studies are needed to clarify the effects of paid maternity leave on the health of mothers in paid employment, including examining the influence of different amounts of paid leave on maternal health and which groups of mothers may benefit most from these payments.
ABBREVIATIONS

OR, Odds Ratio; PRISMA, Preferred Reporting Items for Systematic Reviews and Meta-Analyses; PROSPERO, International Prospective Register of Systematic Reviews; RD, Risk Difference; USA, United States of America
REFERENCES


TABLES AND FIGURES (captions only)

Figure 1. Literature search results

Table 1. Description of included studies

Footnote: *where only standard errors or T-statistics were presented, we used an approximate formula to calculate the 95% confidence intervals (95% CI = \( \hat{\beta} \pm 0.96*SE(\hat{\beta}) \))