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Is partners' mental health and well-being affected by holding the baby after stillbirth? Mothers' accounts from a national survey

Julie M. Hennegan, Jane Henderson and Maggie Redshaw

Policy Research Unit in Maternal Health and Care, National Perinatal Epidemiology Unit, Nuffield Department of Population Health, University of Oxford, Oxford, UK

ABSTRACT

Objective: This study aimed to assess the effects on partners' health and well-being of holding a stillborn baby.

Background: Findings from quantitative and qualitative studies have produced inconsistent results concerning the effects of holding a stillborn baby on parents.

Methods: Secondary analyses were conducted on postal questionnaire data relating to 455 partners of women who had a stillbirth. Women answered questions about their partners' behaviour, perceptions of care, mental health and well-being at three and nine months after the stillbirth. Demographic, clinical and care characteristics were compared between partners who, according to the mothers, did and did not hold their baby. Sub-group analyses assessed hypothesised moderating effects.

Results: Mothers reported that most partners saw (92%) and held (82%) their stillborn baby. However, partners born outside the UK were less likely to have held their baby. Higher gestational age, shorter time interval between antepartum death and delivery, and mother's holding the baby all predicted a higher rate of partner's holding. There was a consistent negative effect of holding the baby across mental health and well-being outcomes, although after adjustment only higher odds of depression (OR 2.72, 95% CI 1.35–5.50) and post-traumatic stress type symptoms (OR 1.95, 95% CI 1.01–3.78) at 3 months were significantly associated with having held the baby following stillbirth.

Conclusions: This study is the first to assess the impact of holding the baby on partners' mental health and well-being. The prevalence of depression and anxiety were high, and the negative effects of holding the baby were significant 3 months later.

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Introduction

Stillbirth is a traumatic event for both women and their partners, yet much of the available literature has focused on predictors of mental health and well-being for women only (Homer,

CONTACT Maggie Redshaw  maggie.redshaw@npeu.ox.ac.uk

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Malata, & ten Hoop-Bender, 2016). Partners also experience significant grief, anxiety and anger following stillbirth (Avelin, Rådestad, Säflund, Wredling, & Erlandsson, 2013; Badenhorst, Riches, Turton, & Hughes, 2006; Erlandsson, Warland, Cacciatore, & Rådestad, 2013). Although rates are lower than those reported for mothers, qualitative studies have shown heightened distress, complicated grief and mental health issues, particularly in the short term (Avelin et al., 2013; Murphy, Shevlin, & Elklit, 2012; Turton et al., 2006). Studies have also reported increased relationship difficulties and marital dissolution following stillbirth (Gold, Sen, & Hayward, 2010; Najman et al., 1993; Turton, Evans, & Hughes, 2009) and also highlighted the importance of care during this critical time (Ellis et al., 2016; Kelley & Trinidad, 2012; Mills et al., 2014).

Evidence-based interventions and clinical guidelines for care after stillbirth have suffered from a lack of studies on the impact of care practices, particularly for partners. Holding the baby after stillbirth has been a controversial aspect of care (Cunningham, 2012). Older guidelines recommended that mothers not be routinely encouraged to hold the baby (National Institute for Health and Clinical Excellence, 2007), while recent NICE guidelines recommend that the options of seeing and holding the baby are discussed with parents (National Institute for Health and Clinical Excellence, 2014). Qualitative studies have reported that both parents highly value holding their baby (Erlandsson et al., 2013; Gold, Dalton, & Schwenk, 2007; Samuelsson, Rådestad, & Segesten, 2001), but quantitative findings have been mixed. A recent systematic review found that for mothers, there was mixed and typically low-quality evidence regarding the impact of holding the stillborn baby (Hennegan, Henderson, & Redshaw, 2015). Despite extensive searching, this review did not identify any studies assessing the impact of holding the stillborn baby on partners.

The most recent quantitative work assessing the influence of holding the baby after stillbirth in England reported a negative impact of holding on mental health and well-being for mothers, but a positive effect of seeing the baby (Redshaw, Hennegan, & Henderson, 2016). Changes in guidelines and this further evidence of a negative effect for women mean quantitative assessment of the impact of this practice for partners is urgently needed.

This study assessed the effect, through mothers' reports, of holding the stillborn baby on partners' mental health and well-being. Analyses were guided by findings of the recent systematic review and quantitative study of outcomes for mothers conducted by the authors.

The review drew attention to a number of factors, drawn from past literature, which may alter the relationship between holding the baby and outcomes. Broadly, these included: timing of outcome assessment, current pregnancy status or subsequent live birth (Cacciatore, Rådestad, & Froen, 2008), the condition of the baby, captured by elements such as the gestation at the time of birth, time between antepartum death and delivery, presence of a congenital anomaly (Cacciatore et al., 2008; Rådestad, Säflund, Wredling, Onelöv, & Steineck, 2009; Ryninks, Roberts-Collins, McKenzie-McHarg, & Horsch, 2014; Samuelsson et al., 2001), and the care provided by healthcare staff (Koopmans, Wilson, Cacciatore, & Flenady, 2013). Where possible, the present study also incorporated these factors. Whether the mother held the baby may influence partners' experience and was also identified as potentially important.

Secondary analysis of data from a population-based survey of women who experienced a stillbirth in England in 2012 investigated the following research questions.

- (1) According to mothers, how many partners saw and held the baby after stillbirth?
- (2) Did demographic, clinical, or care characteristics differ between the partners who held and did not hold their baby?

- (3) How many partners were reported to have experienced mental health and well-being problems three and nine months after the stillbirth?
- (4) Did mothers' reports of mental health and well-being outcomes differ between partners who held and did not hold their stillborn baby?
- (5) Was there a unique impact for partners of holding the baby on outcomes, beyond the effect of having seen the baby?
- (6) Was the reported impact of contact with the stillborn baby different for partners according to other factors, e.g. whether mothers also held the stillborn baby, mother's pregnancy status at outcome assessment, or the condition of the baby.

Methods

This study reports on secondary analysis of the *Listening to Parents* survey of women (aged 16 and older) who had a registered stillbirth in England in 2012 (Redshaw, Rowe, & Henderson, 2014). Eligible women were identified from stillbirth registration data by the Office for National Statistics (ONS) and invited to participate. Between six and nine months after the birth they were sent a letter, study information and contact details in 18 languages by post, followed by the questionnaire. Reminders were posted to non-respondents after four weeks.

The *Listening to Parents* survey asked structured questions capturing the clinical, care and support experiences of women who had a stillbirth, from pregnancy through to after birth care. Questions were based on surveys of women who had a live birth (Redshaw & Heikkilä, 2010), with input from the charities Sands and BLISS. Using the questionnaire, cognitive interviews were undertaken with 10 bereaved mothers and the questions tailored to the experiences of this group. The questionnaire also asked women to report on the experiences and well-being of their partner.

Respondents and non-respondents were compared using data provided by ONS including Index of Multiple Deprivation (an area-based measure using postcodes), marital status, parents' age group and country of birth.

Women were asked to report if their *husband or partner was able to* '*See your baby?*' or '*Hold your baby?*' with one of three response options 'yes', '*no, they were not offered this*', or '*no, they felt they could not or did not want this*'. Partner mental health and well-being were assessed through a checklist. Women were asked '*Did your partner experience any of the following ...*' and indicated if the symptom was present 10 days after the birth, three months and nine months after the birth. Outcomes were selected based on prior literature and sought to capture partners' mental health and well-being. These included depression, anxiety, poor physical health and relationship difficulties. Symptoms hypothesised to suggest post-traumatic stress disorder (PTSD) were combined to represent a single 'PTSD-type symptoms' variable. Partners were considered to be displaying PTSD-type symptoms if they were reported by women to be experiencing two or more of: '*palpitations or feelings of panic*', '*sleep problems*', '*flashbacks to labour or birth*' and '*difficulties in concentrating*'.

Partners' care experiences were assessed through structured items asked of women. Women were asked '*In general did your husband or partner feel ...*': '*Listened to?*', '*Their concerns were taken seriously?*', '*Informed about what was happening?*', '*They had a part in decision-making?*', '*Their needs were acknowledged?*' with response options of; '*Yes*', '*To some extent*', or '*No*'.

Data analyses

Analyses were conducted using SPSS version 22. A comprehensive description of the survey sample is reported elsewhere (Redshaw, Rowe et al., 2014). Frequencies describe the study sample and partners' reported contact with the stillborn baby. Bivariate comparisons assessed the associations between demographic, clinical and care factors and holding the baby after stillbirth using chi-square statistics. Had many factors been significantly associated with contact with the stillborn infant, multivariable comparisons would have been used to compare them. However, few demographic, clinical and care characteristics were associated with holding ($p < 0.05$), thus only partner's country of birth was adjusted for in subsequent comparisons.

Chi-square statistics and logistic regressions were used to compare the mental health and well-being outcomes between those partners reported as having held and not having held their stillborn baby. Multiple logistic regressions were used to adjust for country of birth. In addition, sub-group analyses were conducted according to hypothesised moderators of the association between contact and outcomes. These included whether mothers had held the baby, and three elements proposed to impact the appearance or experience of holding the baby: gestation at birth, presence of a congenital anomaly, and time between antepartum death and delivery. The survey was approved by Oxford A Research Ethics Committee ref: 12/SC/0322.

Results

A total of 474 women completed and returned the questionnaire, a response rate of 30.2%. A full comparison of respondents and non-respondents is provided elsewhere (Redshaw, Rowe et al., 2014). Broadly, those who chose not to take part were more likely to be younger than 30, have been born outside the UK and to live in more deprived areas. The sociodemographic characteristics of women who did respond are shown in supplementary material Table A.

Most (455) women reported on whether their partner held the baby after stillbirth, and whether their partner experienced depression or anxiety three or nine months after birth, and were thus included in the analysis. Of the 455 women who completed the questions about partners, three stated their partner was female.

Overall, 91.9% of women reported that their partner saw and slightly fewer that their partner held (81.5%) their baby (Table 1). Of partners who did not hold their baby, this was predominantly because they felt they could not or did not want to do so. Three-quarters of the women (349, 77.6%) reported that both they and their partner held their baby. Nineteen women (4.2%) reported that partners held the baby when they themselves did not, and 53 women (11.8%) reported that neither they nor their partner held the baby.

Table 2 presents parents' demographic and clinical characteristics, as well as their care experiences according to whether partners were reported as holding their baby. Partners were more likely to hold their baby if mothers had done so. They were less likely to hold their baby if they themselves were born outside the UK. Later gestation at birth and shorter time between antepartum death and delivery were associated with higher rates of holding the baby (Table 2). Partners' reported experience of care was not associated with holding the

Table 1. Proportions of partners who were reported to have contact with their baby after stillbirth.

RedshawRedshaw	Rowe et al.Rowe et al.	Redshaw	
		Redshaw	Rowe et al.
Type of contact (n)	% (n)	% (n)	% (n)
See baby (455)	91.9 (418)	8.1 (37)	0.7 (3)
Hold baby (455)	81.5 (371)	18.5 (84)	7.5 (34)
		2.9 (13)	15.6 (71)

stillborn baby. While rates of holding varied according to mothers' parity, plurality of pregnancy and partnership status, differences were not statistically significant.

Table 3 reports on the prevalence of mental health and well-being outcomes at three and nine months, self-reported (for women) and reported by women on behalf of their partner. Mothers reported high rates of depression, anxiety and PTSD-type symptoms at three months, which were significantly lower at nine months. Similarly, high proportions of depression and anxiety were reported for partners, although significantly lower than that reported by mothers. Rates of symptoms reported for partners also reduced significantly over time. More women reported having relationship difficulties with their partner than reported that their partner had relationship difficulties with them.

At both three and nine months, partners who held their baby were reported to have substantially higher rates of mental health and relationship difficulties than those who did not hold their baby (Table 4). At three months, partners reported as holding their stillborn baby had 2.72 and 1.95 times higher odds of depression and PTSD-type symptoms, respectively, even after adjustment for differences in partner's country of birth. While a trend for poorer outcomes after holding the baby remained, there were no significant differences at nine months after the birth. No significant differences in relationship difficulties were found at three or nine months.

A total of 374 (81.5%) partners were reported to have both seen and held their baby, 47 (10.3%) saw but did not hold their baby and 37 (8.1%) neither saw nor held their baby. Table 5 shows that only depression significantly differed between those who saw and held, saw but did not hold, or neither saw nor held, their baby. However, raw percentages show a consistent pattern of negative effects for seeing and holding the baby or neither seeing nor holding the baby. The lowest rates of mental health and well-being issues were reported for those who saw but did not hold their baby. Additional analyses including both seeing and holding found that the odds of depression at three months increased for those who held the baby 5.40 (95% CI 1.64–17.78) when seeing was included in the model; however, broad confidence intervals suggest insufficient numbers to reliably assess effects. Logistic regression models including both holding and seeing the stillborn baby are reported in supplementary materials (Table B). No other significant effects were identified, although the odds of mental health issues were consistently higher than 1.0 for those who held their baby.

The small proportion of partners were reported to have not held their stillborn baby (Table 1), in combination with low rates of reported mental health issues at nine months (Table 3) meant groups were too small to conduct the planned sub-group analyses of moderators reliably. Outcomes are displayed in supplementary materials for completeness (Table C and D). There were no significant differences in mental health outcomes between those who held and those who did not hold their baby across any sub-groups. Only depression at nine months was higher for partners who held their baby when mothers had not (21%) compared to when mother had held the stillborn baby (14%) after adjustment (5.92 95%CI

Table 2. Demographic, clinical and care characteristics of those who held or did not hold their baby.

	Held% (n)	Did not hold% (n)
DEMOGRAPHIC CHARACTERISTICS (n)		
<i>Plurality of pregnancy (448) (p = 0.096)</i>		
Singleton	82.4 (346)	17.6 (74)
Multiple	67.9 (19)	32.1 (9)
<i>Partner age (years) (444) (p = 0.402)</i>		
16–19	100 (4)	0 (0)
20–29	85.7 (108)	14.3 (18)
30–39	80.8 (194)	19.2 (46)
40+	78.4 (58)	21.6 (16)
<i>Maternal age on leaving full-time education (years) (447) (p = 0.826)</i>		
<17	80.6 (54)	19.4 (13)
17–18	83.1 (118)	16.9 (24)
19+	80.7 (192)	19.3 (46)
<i>Partner country of birth (455)* (p = 0.017)</i>		
UK	84.2 (304)	15.3 (57)
Outside the UK	72.3 (60)	27.7 (23)
Missing	63.6 (7)	36.4 (4)
<i>Mother reported partnership status (455) (p = 0.461)</i>		
Married or with partner	82.1 (343)	17.9 (75)
Single mother	75.7 (28)	24.3 (9)
<i>Index of multiple deprivation (450) (p = 0.220)</i>		
1 (most deprived)	82.3 (79)	17.7 (17)
2	75.8 (69)	24.2 (22)
3	81.6 (71)	18.4 (16)
4	85.9 (79)	14.1 (13)
5 (least deprived)	83.3 (70)	16.7 (14)
CLINICAL CHARACTERISTICS (n)		
<i>Maternal parity (455) (p = 0.078)</i>		
Primiparous	84.4 (227)	15.6 (42)
Multiparous	77.4 (144)	22.6 (42)
<i>Mother experienced previous pregnancy loss (452) (p = 0.999)</i>		
No	81.8 (265)	18.2 (59)
Yes (miscarriage, late miscarriage, termination, stillbirth or neonatal death)	81.3 (104)	18.8 (24)
<i>Pregnancy the result of infertility treatment (447) (p = 0.999)</i>		
No	81.4 (341)	18.6 (78)
Yes	82.1 (23)	17.9 (5)
<i>Gestation at birth (438)*** (p = 0.003)</i>		
24–28 weeks	80.0 (80)	20.0 (20)
29–32 weeks	77.0 (47)	23.0 (14)
33–36 weeks	71.3 (62)	28.7 (25)
37+ weeks	88.9 (169)	11.1 (21)
<i>Time from antepartum death to delivery (441)*** (p = 0.003)</i>		
1 + weeks before birth	77.0 (67)	23.0 (20)
Few days before birth	73.9 (116)	26.1 (41)
The day before birth	85.7 (54)	14.3 (9)
Hours before or during birth	91.6 (87)	8.4 (8)
Unsure	89.7 (35)	10.3 (4)
<i>Type of delivery (435) (p = 0.289)</i>		
Vaginal	82.1 (307)	17.9 (67)
Caesarean	75.4 (46)	24.6 (15)
<i>Congenital anomaly (440) (p = 0.556)</i>		
No	82.8 (318)	17.2 (66)
Yes	78.6 (44)	21.4 (12)
CARE EXPERIENCE		
<i>Partner felt listened to (438) (p = 0.782)</i>		
Yes	81.4 (223)	18.6 (51)
To some extent/no	82.9 (136)	17.1 (28)
<i>Partner felt concerns were taken seriously (438) (p = 0.965)</i>		
Yes	81.5 (238)	18.5 (54)
To some extent/no	82.2 (120)	17.8 (26)

(Continued)

Table 2. (Continued).

	Held% (n)	Did not hold% (n)
<i>Partner felt informed about what was happening (438) (p = 0.966)</i>		
Yes	81.5 (247)	17.8 (24)
To some extent/no	82.2 (111)	18.5 (56)
<i>Partner felt they had a part in decision-making (437) (p = 0.685)</i>		
Yes	82.4 (230)	17.6 (49)
To some extent/no	80.4 (127)	19.6 (31)
<i>Partner felt their needs were acknowledged (437) (p = 0.838)</i>		
Yes	81.2 (216)	18.8 (50)
To some extent/no	82.5 (141)	17.5 (30)
<i>Mother held baby (450)*** (p < 0.001)</i>		
Yes	92.3 (349)	7.7 (29)
No	26.4 (19)	73.6 (53)

* $p < .05$; ** $p < .01$; *** $p < .001$.

Table 3. Partners' and mothers' mental health and well-being after stillbirth ($n = 455$).

	Partners% (n)	Mothers% (n)
<i>3 months</i>		
Depression	24.4 (111)	42.6 (194)
Anxiety	16.5 (75)	38.7 (176)
PTSD-type symptoms	23.7 (108)	50.5 (230)
Poor physical health	7.7 (35)	13.2 (60)
Relationship difficulties with partner	11.9 (54)	17.4 (79)
Relationship difficulties with family	8.8 (40)	21.3 (97)
<i>9 months</i>		
Depression	13.0 (59)	23.7 (108)
Anxiety	11.0 (50)	30.5 (139)
PTSD-type symptoms	11.9 (54)	35.6 (162)
Poor physical health	5.5 (25)	4.6 (21)
Relationship difficulties with partner	5.1 (23)	8.8 (40)
Relationship difficulties with family	4.4 (20)	12.1 (55)

Note: Differences between mothers and partners, and between 3 and 9 months, all statistically significant ($p < 0.001$).

Table 4. Impact of holding the stillborn baby on baby on partner mental health and well-being ($n = 455$).

	Held % (n)	Did not hold % (n)	OR (95% CI)	OR _{adj} (95% CI)
<i>Mental and physical health 3 months after the birth</i>				
Depression*** ($p = 0.005$)	27.2 (101)	11.9 (10)	2.77** (1.38–5.57)	2.72** (1.35–5.50)
Anxiety ($p = 0.157$)	17.8 (66)	10.7 (9)	1.80 (0.86–3.78)	1.63 (0.77–3.44)
PTSD-type symptoms* ($p = 0.035$)	25.9 (96)	14.3 (12)	2.10* (1.09–4.03)	1.95* (1.01–3.78)
Poor physical health ($p = 0.999$)	7.8 (29)	7.1 (6)	1.10 (0.44–2.75)	1.19 (0.47–2.99)
<i>Mental and physical health 9 months after the birth</i>				
Depression ($p = 0.390$)	13.7 (51)	9.5 (8)	1.51 (0.69–3.32)	1.53 (0.69–3.39)
Anxiety ($p = 0.504$)	11.6 (43)	8.3 (7)	1.44 (0.63–3.33)	1.27 (0.55–2.96)
PTSD-type symptoms ($p = 0.861$)	12.1 (45)	10.7 (9)	1.15 (0.54–2.46)	1.09 (0.51–2.35)
Poor physical health ($p = 0.126$)	4.6 (17)	9.5 (8)	0.46 (0.19–1.10)	0.58 (0.23–1.45)
<i>Relationship difficulties 3 months after birth</i>				
With partner ($p = 0.567$)	11.3 (42)	14.3 (12)	0.77 (0.39–1.53)	0.71 (0.35–1.43)
With family ($p = 0.218$)	9.7 (36)	4.8 (4)	2.15 (0.74–6.21)	1.90 (0.65–5.55)
<i>Relationship difficulties 9 months after birth</i>				
With partner ($p = 0.489$)	4.6 (17)	7.1 (6)	0.63 (0.24–1.63)	0.57 (0.22–1.51)
With family ($p = 0.060$)	5.4 (20)	0 (0)		

OR_{adj}: with adjustment for partner's country of birth.

* $p < .05$; ** $p < .01$; *** $p < .001$.

Table 5. Associations between holding, seeing alone, and neither seeing nor holding and outcomes.

	Held and saw baby (<i>n</i> = 371)% (<i>n</i>)	Saw but did not hold baby (<i>n</i> = 47)% (<i>n</i>)	Neither saw nor held baby (<i>n</i> = 37)% (<i>n</i>)
<i>Mental and physical health 3 months after birth</i>			
Depression (<i>p</i> = 0.005)**	27.2 (101)	6.4 (3)	18.9 (7)
Anxiety (<i>p</i> = 0.139)	17.8 (66)	6.4 (3)	16.2 (6)
PTSD-type symptoms (<i>p</i> = 0.078)	25.9 (96)	14.9 (7)	13.5 (5)
Poor physical health (<i>p</i> = 0.523)	7.8 (29)	4.3 (2)	10.8 (4)
<i>Mental and physical health 9 months after birth</i>			
Depression (<i>p</i> = 0.549)	13.7 (51)	10.6 (4)	8.1 (3)
Anxiety (<i>p</i> = 0.689)	11.6 (43)	8.5 (4)	8.1 (3)
PTSD-type symptoms (<i>p</i> = 0.756)	12.1 (45)	12.8 (6)	8.1 (3)
Poor physical health (<i>p</i> = 0.073)	4.6 (17)	6.4 (3)	13.5 (5)
<i>Relationship difficulties 3 months after birth</i>			
With partner (<i>p</i> = 0.137)	11.3 (42)	8.5 (4)	21.6 (8)
With family (<i>p</i> = 0.346)	9.7 (36)	4.3 (2)	5.4 (2)
<i>Relationship difficulties 9 months after birth</i>			
With partner (<i>p</i> = 0.587)	4.6 (17)	6.4 (3)	8.1 (3)
With family (<i>p</i> = 0.094)	5.4 (20)	0 (0)	0 (0)

p* < .05.; *p* < .01.; ****p* < .001.

1.04–33.55). There were no consistent differences between the partners who held and those who did not hold their baby dependent on mothers' current pregnancy status or for any of the variables reflecting the condition of the baby. Rates of reported mental health issues were consistently higher across all sub-groups for those who held compared to those who did not hold their stillborn baby.

Discussion

This study quantitatively compared a range of mental health and well-being outcomes between partners who reportedly held or did not hold their baby after stillbirth. Most partners saw and held their baby, and there were few demographic or clinical differences between the groups.

Mothers reported higher rates of their own mental health problems than reports of their partners, consistent with past research (Murphy et al., 2012; Redshaw et al., 2016; Vance et al., 1991). Mothers also reported relatively high rates of depression, anxiety and PTSD-type symptoms in their partners at three and nine months, which reduced over time. Across all mental health and relationship outcomes there was a trend for more adverse outcomes for partners who were reported to have held their stillborn baby. This was more pronounced at three months when, after adjustment for country of birth, both depression and PTSD-type symptoms were significantly higher in those who had held their baby. In contrast to mothers where significant differences in anxiety and PTSD-type symptoms remained at nine months (Redshaw et al., 2016), in partners there were no significant associations nine months after birth. It should be noted that the proportion of partners reported as experiencing mental health problems at nine months was much lower than for mothers. In combination with the small number of partners who did not hold their baby, the study did not have sufficient

statistical power to detect effects at this time point. No significant associations between holding the stillborn and partner outcomes were found when groups were compared according to whether mothers held the baby, or factors reflecting the condition of the baby (gestation at birth, time from antepartum death to delivery, or presence of a congenital anomaly). In contrast to Turton and colleagues (Turton et al., 2009) but consistent with findings for mothers in this sample (Redshaw et al., 2016), relationship difficulties within the couple was not significantly associated with having held their stillborn baby.

As was found for mothers in this survey sample, seeing without holding the baby appeared to be associated with lower risk of poor mental health outcomes. Higher rates were reported for those who both saw and held, and for those who neither saw nor held their baby (Redshaw et al., 2016). Possible reasons for this finding include a sense of acceptance that may come from seeing the baby, whereas holding and the associated involvement in care has the potential to create more tactile experiential memories and may lead to more distressing recollections.

Study findings are also consistent with past findings of negative effects in other research (Hennegan et al., 2015; Turton et al., 2009). However, our findings conflict with other studies of mothers which found no effect of holding or a positive effect (Hennegan et al., 2015). Reported rates of depression, anxiety and PTSD-type symptoms among the sample of 455 partners emphasises the importance of considering the care needs and potential influence of care practices for this group. At the same time, differences in mental health and well-being between women and their partners suggest that they may experience stillbirth differently (Erlandsson et al., 2013; Samuelsson et al., 2001).

Strengths and limitations

This study is the first to quantitatively evaluate the impact of holding the baby after stillbirth on partners' mental health and well-being. The wide range of demographic, clinical and care characteristics assessed meant groups could be well compared and differences adjusted for in analyses. The use of a population-based postal questionnaire meant the sample was not skewed towards those involved with stillbirth organisations who self-selected, as has been the case for other studies (Hennegan et al., 2015). However, the low response rate may limit the generalisability of the findings. Comparisons to non-respondents revealed a more advantaged respondent group (Redshaw, Rowe et al., 2014), and it is possible that those who responded to the survey also differed on unmeasured characteristics, which could include their experience or response to having a stillbirth. In addition, this was a retrospective survey carried out nine months after the stillbirth. Respondents' recall may not have been completely accurate, and their feelings at the time of the survey may have coloured their recollections of past events. Where partners were protective of mothers in relation to their own reactions, they may have under-reported partners' symptoms (Burden et al., 2016).

The study lacked power for sub-group analyses and the use of single item mother-reported mental health and well-being outcomes on behalf of partners is a further limitation of the study. Mothers' reports of partners' outcomes may not be consistent with what partners themselves would have reported and may depend on the woman's own mental health status, and on the quality of the couple relationship. This may to some extent explain the concurrence of findings between women and their partners. Standardised and validated scales of

depression, anxiety and symptoms of PTSD would have substantially improved the validity and reliability of the outcomes reported, although the items used had high face validity. In particular, the symptoms of PTSD are very similar to those of complicated grief (Maercker & Znoj, 2010) and parents who have held their baby may feel this more keenly.

Analysis followed a pre-established protocol, following a systematic review and investigation of the impact of holding on mothers. Although this eliminates reporting bias, multiple comparisons were conducted, potentially introducing the risk of chance findings. Larger, prospective studies designed to assess the impact of holding with validated outcome measurements and a greater level of detail regarding the characteristics of contact with the baby are required as are studies of the partner experience more directly. Details of the timing, type and duration of contact would provide a stronger and more nuanced assessment (Redshaw, Hennegan, & Kruske, 2014). Although this study sought to assess a number of sociodemographic or clinical differences in those who held and did not hold their baby, it is likely that unmeasured differences exist between the groups. Future studies would benefit from additional potential confounder adjustment including partner's pre-stillbirth anxiety.

This study suggests that holding the baby after stillbirth may negatively affect partners' mental health and well-being in the short term. Larger, prospective and more detailed studies are needed to further establish the impact of holding the baby after stillbirth and to investigate potential moderators with sufficient power.

In interpreting the findings of this study it should be noted that parents are consistently satisfied with their decision to hold the stillborn baby, and those who do not do so often regret it later (Hennegan et al., 2015). Parents have consistently described the high value they place on this interaction (Downe, Schmidt, Kingdon, & Heazell, 2013; Ellis et al., 2016; Gold et al., 2007; Ryninks et al., 2014). These findings must also be taken into account when considering the best care for parents.

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