Bringing Baby Home:

UK fathers in the first year after the birth

Adrienne Burgess &
Rebecca Goldman

FULL REPORT

An executive summary of this report and our recommendations, as well as the previous reports in the series, can be found in the Research section of our website.

Citation for this report: Burgess, A. & Goldman, R. (2022). *Bringing Baby Home: UK fathers in the first year after the birth (full report)*. Contemporary Fathers in the UK series. London: Fatherhood Institute

About the Fatherhood Institute

FATHERHOOD INSTITUTE

The Fatherhood Institute (founded 1999, charity number 1075104) is a world leader in the fatherhood field, with a unique grasp of policy, practice and research. Our concerns are with child wellbeing, gender equality, the fathers' role in child development and support for mothers, and the impact of fatherhood on men. Our research summaries, published free of charge on our much-visited website www.fatherhoodinstitute.org, are drawn on and cited all over the world; and our trainings in father-inclusive practice (online and face-to-face) are highly praised and evaluated by service providers. We work directly with fathers and couples in community, education and health settings, and train local facilitators to undertake this work. We also work with fathers and mothers in the workplace (in seminars, webinars and company intranet materials) and offer HR support to organisations aiming to develop competitive edge and reduce gender inequalities at work, through recognising and supporting male employees' caring responsibilities.

About the Nuffield Foundation

Nuffield Foundation

The Nuffield Foundation is an independent charitable trust with a mission to advance social well-being. It funds research that informs social policy, primarily in education, welfare and justice. It also funds student programmes that provide opportunities for young people to develop skills in quantitative and scientific methods. It is the founder and co-funder of the Nuffield Council on Bioethics and the Ada Lovelace Institute. The Nuffield Foundation has funded this report, but the views expressed are those of the authors and not necessarily the Foundation. Visit www.nuffieldfoundation.org

About the series 'Contemporary Fathers in the UK'

From 2014 the Fatherhood Institute, supported by the Nuffield Foundation, has been compiling a Literature Library of mainly academic articles, book chapters and reports about fathers and fatherhood in the UK, together with international reviews, methodology papers and publications relating to genetics and epigenetics. At the end of May 2022, we had entered and categorised 3,841 records, mostly of documents published from 1998 to 2022. To learn more about how we compiled our Literature Library from systematic searches of bibliographic databases, and how we are continuously updating it and categorising the items in it, read our Methodology (in the Research section of our website).

Drawing on this library, the contents of which we are now making available beyond the Fatherhood Institute, we have so far published four research reviews or reports with recommendations for research, policy and practice: *Cash or Carry? Fathers combining work and care in the UK*; *Where's the Daddy? Fathers and father-figures in UK datasets; Who's the Bloke in the Room? Fathers during pregnancy and at the birth in the UK*; and *Lockdown Fathers: the untold story*.

Bringing Baby Home is the fifth report in the Contemporary Fathers in the UK series.

For further information about this report and others in the series, please contact the Fatherhood Institute a.burgess@fatherhoodinstitute.org or visit our website.

Contents

1. Introduction 5
1.1. Our sources 5
1.2. Report content 6
1.3. Scoping review method 7
1.4. Terminology 7
2. A systematic scoping review of the UK literature 9
2.1. Who are the fathers, and what do they do in Year One? 9
2.2. From here to paternity: men becoming fathers 16
2.3. Fathers' behaviour in Year One: associations with child outcomes 18
2.4. Fathers' physical health in Year One: what do we know? 21
2.5. Fathers' physical health in Year One: associations with child outcomes 24
2.6. Fathers' mental health in Year One: what do we know? 25
2.7. Father-factors: associations with child outcomes 27
2.8. Fathers' influence on mothers 32
2.9. Services 37
2.10. Policy 40
3. Recommendations for policy and practice 41
3.1. Policy 41
3.2. Practice 42
4. Data for analysis and data collection gaps: a review of questions asked about fathers postnatally in three UK birth cohort studies 43
4.1. Introduction 43
4.2. Which fathers and which mothers? 45
4.3. Obtaining information about fathers in the postnatal period 46
4.4. Gaps in birth cohort data on fathering and the father-infant relationship, with suggestions for future birth cohort studies 58
4.5. Use of validated parental involvement and parenting scales with fathers 61
4.6. Conclusions from this review of data collected in three birth cohort studies 62
5. Understudied birth cohort data and the analytic potential of ongoing longitudinal studies 64
5.1. ALSPAC, MCS and GUS analyses of postnatal data about fathering and the inter-parental relationship 65
5.2. Conclusions 75
6. Tables for sections 4 and 5 77
7. Recommendations for research 92
8. References 93

1. Introduction

In our *Contemporary Fathers in the UK* series, we focus each report on an important stage in fathering or on an issue of great significance to fathers and families – with the aim of influencing policy, practice, and research. The postnatal year is one such period, particularly when the first child is born.

Bringing Baby Home picks up where *Who's the Bloke in the Room?,* our earlier report on fathers in the antenatal period and at the birth, left off. The aims of *Bringing Baby Home* are to identify through transparent scoping review methods what we know and need to know from empirical research since 1998 about fathers[1] in the UK in the year following birth: their situations, attitudes, characteristics, behaviours, and relationships; associations of these with maternal wellbeing, and infant and child outcomes; and how new fathers are supported in the UK. Further, we seek to identify the substantively important gaps in UK research to influence new research, secondary analyses of existing datasets, and enhancements to ongoing studies. While engagement in paid work is clearly an important part of almost all new fathers' lives, we pay limited attention to it here, since this is explored in our earlier report, *Cash or Carry?*

1.1. Our sources

For this report we draw on 787 records (mainly journal articles, book chapters and reports) in our digital systematically collected Literature Library that explore fathers and fatherhood in the postnatal year. Much of the research we cite derives from the three most recent UK large-scale 'birth cohort studies'[2] – the Avon Longitudinal Study of Parents and Children (ALSPAC)[3], the Millennium Cohort Study (MCS], and Growing Up in Scotland (GUS – two cohorts). These datasets contain most of the best postnatal-related quantitative data

[1] In the term 'father', we include biological fathers, other birth fathers, stepfathers or parents' male partners, adoptive fathers, foster fathers, grandfathers, other 'social' fathers, transmen who are fathers, transwomen who were previously male parents, and any individual in a fathering role. We also include fathers who live full-time or part-time with their children, do not regularly stay overnight with them or who are not currently in contact with them.

[2] Birth cohort studies start with a sample of births during a defined time-period and track the development and experiences of the cohort babies over several years, sometimes decades. They collect data from the cohort children, their parents, other research informants and linked administrative records so that researchers can examine biological, socio-demographic, economic, family, educational and other influences.

[3] ALSPAC is a pregnancy cohort. It began with a sample of pregnancies, collecting data from the women and expectant fathers during the antenatal period, and has continued to follow the babies born into adulthood. However, for brevity, and because the focus in this report is the postnatal year, ALSPAC is referred to in this report as a 'birth cohort study' alongside the MCS and GUS studies.

that exists on fathers and inter-parental relationships in Britain[4] together with extensive data on child outcomes. However, the MCS births were around 20 years ago; and the ALSPAC births around 30 years ago (and limited to one geographical area). Even the more recent second-cohort GUS births (2010/11) took place more than a decade ago. We rely heavily on these datasets because no more recent birth cohort study has been instituted in the UK[5]; and because long-running cohort studies are needed to look at the longer-term impacts of postnatal 'father factors' on children. Consequently, where we have identified more recent cross-sectional[6] quantitative studies, such as surveys, that address relevant topics, we have included their findings[7]. Findings from some qualitative studies are also included. On some occasions, particularly where UK research is lacking, we draw on international reviews.

1.2. Report content

Bringing Baby Home begins (section 2) with a synthesis of findings from a scope of the research literature about UK fathers in their babies' first year, supplemented by findings from international reviews. Some research gaps[8] are identified (we do not claim that these are exhaustive). In that section, as here in the introduction, some of the more technical detail is presented in footnotes (mainly for researchers). In section 3 we make recommendations for changes in **policy** and **practice**.

Sections 4, 5, 6 and 7 are for researchers and research funders. Section 4 reviews the questions asked about fathers postnatally in ALSPAC, the MCS and GUS; and establishes

[4] The birth 'sweeps' of the older National Child Development Study (NCDS) and the 1970 Birth Cohort Study (BCS70) collected only minimal demographic data about fathers.

[5] The discontinued Life Study http://www.nature.com/news/massive-uk-baby-study-cancelled-1.18650, had planned to collect extensive data directly from fathers and mothers' partners during pregnancy and six and twelve months after birth. The most recent strategic review of UK longitudinal studies recommends the commissioning of a new UK population-representative birth cohort (Davis-Kean et al., 2018). The Economic and Social Research Council has commissioned a feasibility study for a new Early Years Cohort study; and the Department for Education has commissioned a Children of the 2020s birth cohort to focus on the determinants of educational outcomes. Both are in development at the time of writing.

[6] Cross-sectional studies analyse data collected from a population, or a representative subset, at a specific point in time. They are valuable for describing fathers' characteristics, attitudes, relationships, and behaviours during the postnatal period. However, they do not follow the same individuals over time so outcomes cannot be ascertained.

[7] The samples in the large birth cohort studies are relatively socio-economically (and to a lesser extent ethnically) representative. The fathers studied in the smaller quantitative, qualitative and (especially) observational studies tend to be – in common with much empirical fatherhood research – mainly white, better educated and slightly older-than-average, with almost all living in couple households. This reveals important research gaps.

[8] Research gaps might be filled by collection of new data, including a new birth cohort study, or by secondary analysis of existing data.

data available for analysis and data collection gaps. Section 5 identifies under-studied postnatal data[9] about fathers from the same three studies and the analytic potential of ongoing longitudinal studies. Section 6 consists of tables for sections 4 and 5, while section 7 makes recommendations for future research.

1.3. Scoping review method

Our research reviews combine Advisory Group feedback and the Fatherhood Institute's expertise in fatherhood research with systematic methods and narrative synthesis suitable for scoping reviews, rather than for full systematic reviews. As is appropriate for a broad scoping review, we did not in *Bringing Baby Home* specify individual research questions at the outset but developed them as we synthesised the research literature on key topics.

We use our systematically collected and extensive Literature Library[10] of UK research on fathers to avoid cherry-picking of evidence and ensure that each review is even-handed and goes beyond widely known studies.

We take care to report accurately methods and findings from secondary sources, contacting authors where substantial issues are not clearly reported. We discriminate between correlation and causality and report adverse and null findings as well as beneficial findings. We do not cite any document without reading the full text; and only include pre-publication research with written author-permission.

1.4. Terminology

Cohabiting Partner Fathers (fathers whose main home is the household in which his infant, and his infant's mother, also live)[11].

[9] Under-studied data means that there are substantively important father-factor variables available for analysis (found through our review of the questions asked about fathers postnatally) but the publications in our extensive Literature Library do not include analyses of these variables.

[10] Our electronic Literature Library, held in Endnote software, incorporates keyworded references (with abstracts and full texts where available) for UK research on fathers, fatherhood, and inter-parental relationships, on any topic (not just baby's first year). The bulk of the records include empirical research, and consist of journal articles, book chapters and reports, including from 'grey literature'. The records in our Literature Library have been obtained through systematic searches of eleven social science and health bibliographic databases, carried out in summer 2014 for the date range 1998 to 2014, and again in autumn 2019 for the date range 2014 to 2019. For these searches we used a bespoke 'father and inter-parental relationships' search strategy. From 2014, on an ongoing basis, we have been adding by hand, almost daily, relevant records identified mainly through expert searches and contacts, social media, and organisational alerts and newsletters. All records found through these searches are systematically screened into the Library against explicit inclusion criteria and then keyworded.

[11] Birth, adoptive, step and foster fathers who are a cohabiting partner of the birth, adoptive, step or foster mother, both of whom live in the baby's sole or main household at the time of postnatal data collection. Nearly all Cohabiting Partner Fathers in the postnatal year are birth fathers.

Own Household Fathers (fathers whose main home is a separate household from his infant and his infant's mother – even if the parents consider themselves to be a 'couple')[12].

No transmen or non-birth or biological lesbian or gender-fluid parents are included in the term 'father' in this report as they are not represented in any of the research cited. Nor does any of that mainstream research include gay fathers. We identify and discuss the limited research that does so.

[12] Birth fathers who do not live full-time with the baby and whose main address is not the baby's sole or main address (where the baby lives – full-time or for half or more than half of the time – with the birth mother). Fifteen to twenty percent of babies have an OHF.

2. A systematic scoping review of the UK literature

2.1. Who are the fathers, and what do they do in Year One?

2.1.1. Painting by numbers

It is a very long time (20 years) since a UK study with a large nationally representative sample, thoroughly examined the living arrangements of mothers and fathers who had recently become parents. This – the Millennium Cohort Study (MCS) – found that, at the time of the birth in 2000/2001, 85% of the parents were living together at the same address (married or cohabiting); and 10.6%, while living in separate households, were described by the mother as 'closely involved' as a couple, or as 'friends'.

This left 4.4% of the mothers (fewer than 1:20) saying they were 'not in a relationship' with their baby's father (Kiernan & Smith, 2003). However, one in ten of the fathers in this most 'disengaged' group attended the birth; one in four entered his name on the birth certificate; and one in four was still in touch with infant and mother nine months later.

In ALSPAC families, by child-age 21 months, separation rates were 5% in families with two biological parents and no stepchildren[13] (O'Connor et al., 1999). And the MCS found that where couples had been living together nine months after the birth, only 5.5% had moved into separate households by the time their child was aged three and almost all the fathers saw their young child regularly (Haux et al., 2015). Meanwhile, out of the 15% of fathers who, at the time of the birth, had been living in a separate household from their baby's mother, one-in-four were living with her nine months later (Kiernan, 2006). *Growing up in Scotland* (2005) found similarly low levels of early parental separation and, where this did occur, high levels of father-engagement thereafter (Anderson et al., 2007; Marryat et al., 2009).

Another way of ascertaining fathers' presence (or otherwise) in families early on, is to examine birth registration data. Between 2000 and 2020, the percentage of sole birth registrations (almost all of which are by mothers) in England and Wales dropped from 7.5% to 5.2% (ONS, 2020a). The same trend was found in all the other countries in the UK as well as in a series of large surveys of new mothers undertaken by the National Perinatal Epidemiology Unit (NPEU) between 2006 and 2018[14] (Harrison et al., 2020). This

[13] By infant-age 21 months, separation rates were 38% where the father was also a stepfather; and 43% where the mother was also a stepmother. Early separation in all family configurations was predicted by a complex combination of individual and life-course history variables, including number of previous relationships, cohabiting status, poor relationship quality, low socioeconomic status, and younger age.

[14] Response rates declined between the 2006 and 2018 surveys: 62.6% in 2006, 54.1% in 2010, 46.7% in 2014, and 29.0% in the 2018. Survey weights were applied to make the data more representative. The 2020 survey (Harrison et al., 2021) did not report data on parents' cohabitation or birth registration.

makes intuitive sense: today fewer pregnancies are unintentional due to better and more easily available contraception; and there are fewer teenage births (ONS, 2020b). Almost all the individuals registered as the child's 'other' parent were the biological father: only 1:1000 births is registered to two women (ONS, 2016); and fewer than 2% of mothers have a cohabiting or non-cohabiting male partner at that time, who is not their baby's biological father (Bradshaw et al., 2013). 'Serial' fatherhood or motherhood is very uncommon: MCS data revealed that only 2.4% of the cohort infants was born to a mother or father who already had a child with a different partner. Among the small percentage of non-cohabiting (and most disadvantaged) parents, the figure (mothers and fathers combined) was 10.1% (Kiernan et al., 2011).

The NPEU surveys did not investigate father-child together-time where the father lived in a separate household from his infant's mother However, the MCS did so. Where the 'Own Household Father' (OHF) was still in touch with the mother nine months after the birth (59% were), mothers reported that 77% saw their child *at least* once a week and that 64% were 'very interested' in them (Kiernan, 2006) – a figure that rose to 80% where the mother was Black Caribbean (Dex & Ward, 2007)[15]. Similar figures were found in Scotland in 2011-12 , where 75% of the 21% of infants whose parents lived in separate households in Year One were meeting up with their father regularly – nearly 40% of them at least once a month (Bradshaw et al., 2013). In 2012, a study that reported on 5,717 families taking a child younger than 18 months to a Children's Centre in some of the most disadvantaged areas in England (Maisey et al., 2013), identified 1,086 families (19% of the whole) who had a father and mother living separately. The mothers in two-thirds (64%) of these families reported that the father saw his child *at least* weekly, with 25% seeing them every day. Twenty-three per cent had no face-to-face contact. This sounds substantial, until one realises that those fathers numbered just 250 (4%) out of the full sample of 5,717. Almost half may not have known they had become a father[16]. A large body of evidence finds Own Household Fathers more likely to see their children regularly than to pay regular child maintenance[17], although there is an association between the two. The majority of OHFs contribute financially. Low- or non-payment is associated with poverty in the father, less frequent father-child contact, and high mother-father conflict (Ermisch, 2008; Hakovirta et al., 2019).

[15] 'Every day' interactions also varied by ethnicity. Overall one third of OHFs saw their 9–10 month baby daily; this fell to fewer than one quarter where the mother was of South Asian origin, and to one-in-eight when she was Black African (Dex & Ward, 2007).

[16] A survey of more than 5,000 women found that 2% had not revealed their pregnancy to their baby's father (Redshaw & Heikkila, 2010). If this percentage were applied to the 2012 Children's Centre sample, almost half (114) of the 250 fathers who had no 'in person' interactions with their infant may have been unaware that they had become a father.

[17] For example, in the MCS sample, 54.2% of OHFs were seeing their child face to face in the year after the birth, whereas only 28.7% were contributing to child maintenance (Kiernan et al., 2011).

2.1.2. Infant care

Most new fathers in Britain are therefore present in their infant's daily life. To what extent do they participate in the nurturing tasks involved in 'taking care of' them during the first year? Only the behaviour of Cohabiting Partner Fathers has been studied in quantitative datasets. Their participation has increased dramatically over time. In 1959, a study of families in York found that 51% of the fathers never got up to their baby at night and 43% had never changed a nappy. When, 20 years later in 1979, similar families were again studied in York, only 22% of the fathers never got up to their baby at night and only 11% had never changed a nappy. And while in 1959 only 30% of the fathers had 'helped' at home in the period after the birth, by 1979 ninety-five percent did so. The change from majority (59.5%) home births in 1959 (with female kin generally taking charge immediately afterwards) to 98% hospital births in 1979 (with female kin no longer presiding at home – and 84% of the fathers at the birth[18]) likely contributed to the father's hugely expanded role as the mother's support (Beail, 1984; Lewis et al., 1982; Parmenter, 1993).

By the early 1990s, the large birth cohort study in the West of England ('ALSPAC') found 39% of Cohabiting Partner Fathers 'often' feeding and 32% 'often' bathing their infants. But 28% – more than 1:4 – had no active role in infant care (Parmenter, 1993)[19]. Ten years later, in 2000/2001, the MCS found hardly any Cohabiting Partner Fathers NOT engaged in regular infant care, with 53% reporting that they fed (and 57% that they changed) their 9 to 10- month-old baby *at least* once a *day* (Calderwood et al., 2005). It is worth noting that the infant care variables collected in MCS and ALSPAC are about *frequency* of each activity (per week) rather than the *amount of time spent*.

We could not find any published data relating to fathers' roles in infant care from either of the *Growing up in Scotland* (GUS – 2005, 2010) birth cohort studies[20]. However, the 2010 NPEU survey found mothers reporting that 65% of the fathers were changing nappies 'a great deal' and 72% were responding 'a great deal' to their crying babies. Fewer (58%) bathed the baby 'a great deal' (an activity more likely to be impacted by paid work schedules). Only 5% rarely or never took care of their infant when they cried and 11% rarely or never changed a nappy (Redshaw & Henderson, 2013). Similar patterns were found in Northern Ireland in 2014 (Alderdice et al., 2016). And in the 2012 Children's Centre Survey, just 5% of fathers 'never' dressed their infant; and 8% 'never' got them ready for bed. Nappy-changing was not studied (Maisey et al., 2013)[21]. Two years ago, 80%

[18] Fathers' birth attendance rose from 8% in 1950 to 88% in 1980 to 91% in 1990 (Parmenter, 1993).

[19] ALSPAC interviewed both mothers and fathers and we do not know which of them reported this.

[20] This was because the GUS cohort studies asked mothers about parent-infant activities in relation to the parental couple 'as a whole', not the parents individually i.e. "How often "do you or [PartnerName] do the following activities?"

[21] In more recent datasets, care by mothers and fathers is not disaggregated, but combined into one variable – 'parental care' – which is then measured against care provided by 'outside' carers. For

of pregnant women and new mothers in the UK identified their baby's father their primary source of support – a higher percentage than for any other individual (Harrison et al., 2020).

2.1.3. Factors associated with infant care by fathers

The strongest influence on the frequency of MCS fathers' Year One engagement with their infants was working hours – their own and their partner's. And the strongest influence on MCS fathers' Year Three engagement-frequency was their engagement-frequency in Year One, which trumped even parents' working hours (Norman, 2021). MCS fathers also engaged more frequently with their nine-month-olds when they had moderate-to-high family income, their child was a boy, there were no other children in the family – and the father saw his own father less often than other fathers saw theirs (Norman, 2011). A review by the US National Institute for Child Health and Development found fathers with a more optimistic outlook on life participating more in caregiving (NICHD, 2000). If this is the case, then associations between fathers' caregiving early on and better child outcomes may be, in part, related to the father's personality. This would be an interesting area of study. Another useful topic for investigation would be fathers who rarely or never take part in nurturing-care activities.

The introduction of paid Paternity Leave in the UK in 2003, followed by legislation in 2011 that allowed some mothers to transfer some of their Maternity Leave to their partner (subsequently modified and repackaged as 'Shared Parental Leave'[22]), has meant more new fathers spending more time at home, with increased opportunities to engage in infant care.

A survey of 364 NHS doctors found that between 2002 (just before Statutory Paid Paternity Leave was introduced) and 2011, the percentage taking any paternity leave increased from 50% to 95.6% (Gordon & Szram, 2013). Cross-national studies which include UK samples[23] have found a direct relationship between leave taking and fathers' involvement in daily childcare and housework, with fathers who are on leave for longer periods more involved afterwards (Huerta et al., 2013; Meil, 2013; O'Brien, 2018; Xu & O'Brien, 2014)[24]. An analysis of MCS data found taking Paternity Leave related to both *frequency* of infant-care activities (father-reported) and *share* of parental infant-care (mother-reported) (Norman, 2011). Another analysis of MCS data found that fathers who took any leave after the birth were 25% more likely than fathers who did not take leave to change nappies, and 19% more likely to feed their 8-12 month olds and get up for them at night

example, in Understanding Society the respondent is asked to describe childcare "carried out by anyone other than yourself (or your partner)".

[22] Discussed in detail on pages 30–31of our earlier report *Cash or Carry* (Burgess & Davies, 2017).

[23] As well as a large body of international literature.

[24] This finding is confirmed in international research, including in a very recent large population study in Germany (Schaber et al., 2021).

(Tanaka & Waldfogel, 2007). And according to a survey by the Equality and Human Rights Commission, over half (56%) of British fathers who took Paternity Leave believed this was directly responsible for their greater involvement in the care of their children in the longer term; and 69% said it led to improvements in the quality of family life (Ellison et al., 2009).

2.1.4. *Solo* infant care

Significant for gender equality, child outcomes, family wellbeing and father-child relationships, is the extent to which new fathers carry out 'solo' infant care: that is, look after their baby without the mother present.

For centuries[25] and also from pre-history (Blaffer Hrdy, 2009), fathers have been regularly looking after their infants on their own. That continues. In the ALSPAC sample (1990/91), 9% of the fathers in two parent households were the primary carer[26] (Parmenter, 1993) in Year One, with 13% in charge for at least 15 hours per week (Washbrook, 2007). In the MCS cohort, only 1% of fathers in couple households *with an employed father* were the 'main'/primary caregiver when their infant was nine months old. However, around a third of fathers did equal or near-equal parental childcare (for all the children in the household, not solely the infant). Also in the MCS cohort, 60% of fathers[27] looked after their baby *solo* several times a week; and while Indian, Bangladeshi and (particularly) Pakistani fathers were less likely than White fathers to feed or change nappies daily, there was little difference in rates of *solo* infant care (Calderwood et al., 2005). There were some national and socio-economic class differences (Dex & Ward, 2004)[28]. A decade later, in the 2012 Children's Centre sample more than half (53%) of the Cohabiting Partner Fathers looked after their baby on their own at least several times a week, with 22% looking after them *solo* every day. Only 3% never did so (Maisey et al., 2013).

In the ALSPAC sample, the father was the individual most likely to provide care when the mother was in paid work (Washbrook, 2007), as was also the case ten years later in the MCS cohort, where MCS fathers were the main source of non-maternal care in the 11% of

[25] Old English Nursery Rhyme Number CCCLXXXVII: "Hush-a-bye, baby, lie still with thy daddy/Thy mammy has gone to the mill/To grind thee some wheat to bake thee some meet/Hush little babby, lie still."

[26] How this was defined is not clear.

[27] In couple households.

[28] Fathers' participation in childcare was greater where mothers were employed and living in disadvantaged wards, except in Scotland (Dex & Ward, 2004). However, mothers were far more likely to be employed in advantaged wards compared with disadvantaged wards or wards with high minority ethnic populations. Northern Ireland had the lowest participation of fathers in childcare, across the UK countries.

MCS families in which both cohabiting[29] parents of infants worked full-time. Where the mother worked part-time, 40% of fathers in low-income families (20% in managerial or professional families) were the main source of non-maternal care (Dex & Ward, 2004)[30]. Where parents lived in separate households, by contrast, only one-on-eight employed mothers (one-in-five Black Caribbean mothers) used their child's father as a form of childcare, even though the great majority of mothers and fathers (and fathers and infants) were in regular contact (Dex & Ward, 2007).

More recently it has been difficult to establish the extent of fathers' childcare contributions, since questionnaires (e.g. the British Household Panel Survey) now ask families about childcare by non-parental caretakers (grandparents, professional carers) versus 'parental childcare' – a variable which combines mother-and-fathercare instead of disaggregating between them.

2.1.5. Gender and childcare

Early *solo* childcare is a very strong predictor of fathers' continuing high levels of engagement with their children, including after separation (Haux & Platt, 2015) and has also been found to be associated with lower rates of separation (Norman et al., 2018). Cohabiting Partner Fathers (MCS) who, during the first year, shared childcare with the mother (this involved substantial hours of *solo* care) were more likely still to be sharing care when their child was aged three (Fagan & Norman, 2016); and *solo* childcare in Year One was an even stronger predictor of MCS fathers' level of engagement with their three-year-olds than their early participation in nurturing care tasks (Norman, 2021). Also significant is duration of *solo* childcare (O'Brien, 2018). And the more responsibility for infant care fathers have, the more responsive they tend to become as parents (Lamb & Lewis, 2010).

Another type of infant care that might prove relevant to outcomes is division of the 'mental load': organisation of infant-related resources or issues such as making shopping lists; arranging non-parental childcare, health appointments and so on. We found no UK studies that explored fathers' early responsibility for this aspect of family work[31] – neither predictors of it, nor associations with fathers' parenting or child or maternal outcomes. This 'management function' will generally fall to mothers who, in the first year will almost always have spent far less time than fathers on paid work and far more time on infant care,

[29] The MCS (Dex et al., 2004) gathered data on provision of childcare by non-cohabiting fathers (Own Household Fathers); but the percentage given was of childcare providers overall, rather than of OHFs themselves, so the percentage was tiny – but then so were the numbers of OHFs.

[30] Another MCS analysis showed grandparents leading the field in terms of *whether* they provided care while mothers worked – but not in terms of *how much* care they provided (Dex et al., 2004).

[31] ALSPAC asked about shopping and the MCS asked about household repairs, DIY, decorating and money/bills. These are all part of the domestic division of labour and may be relevant to mental load, but mainly for reasons of space but also because our focus is on infant care, we are not exploring this data here.

including breastfeeding. The maternal 'mental load' may prove difficult to shift once established, even among parents who had hoped to be equal partners, and who find themselves 'falling back into gender' and operating as unequal parents after the birth (Dermott, 2008; Faircloth, 2020; Miller, 2011).

Even though division of work and care in families with young children is very clearly gendered[32] fathers' participation ln both nurturing tasks and *solo* infant care in the first year is substantial and has long been so. By the time their baby was nine months old, one third of MCS mothers reported that their partner was doing as much, or more, childcare as they were themselves (Fagan & Norman, 2016).

2.1.6. Play

The frequency of father engagement variables collected in the MCS and GUS, are solely about physical baby care and do not address play (although with babies play-and-care are often combined, for example, at bath time and when changing nappies). ALSPAC collected separate data from fathers on 'plays with' and 'takes for walks', and an analysis of this data found 90.6% of Cohabiting Partner Fathers playing with their eight-week-old infant every day and only 1.5% doing so less often than every four days. Taking their baby out for a walk was less common: 15% of fathers never did this (Scourfield et al., 2016). The 2012 Children's Centre survey similarly found 90% of the fathers playing with their child every day, or almost every day (Maisey et al., 2013).

Reviews investigating father-child play when children are very young (Amodia-Bidakowska et al., 2020; Robinson et al., 2021; Vallotton et al., 2020) do not report findings on fathers' play activities in Year One separately from play with toddlers, but some findings about the nature, amount and context of father-child play are generalisable across the early years. Fathers and mothers generate the same amounts and types of games with young infants. Fathers are not inherently more playful than mothers, nor do they enjoy play more than mothers, but they spend a greater *proportion* of the time they spend with their children in play. This is likely to result from the fact that they spend a greater proportion of the time they spend with their children in *recreation* time – e.g. evenings and weekends (Vallotton et al., 2020). Fathers tend to engage in more highly arousing play behaviours than mothers and this is most marked among fathers who spend less time on routine infant care (Lamb et al., 1982; Vallotton et al., 2020). As a strategy for catching young children's attention and obtaining a positive response, an invitation to arousing play may be successful. Such an approach may also be an expression of guilt on the part of a father who feels – as so many do (see Adjustment to fatherhood – below) – that he has spent insufficient time with his young child.

[32] Only 3.8% of parents of pre-schoolers[32] are 'Homedads' (ONS, 2014a); and while 90% of new fathers are in full-time work, fewer than 20% of previously full-time-employed mothers have returned to full-time work within four years of the birth (Harkness et al., 2019).

2.1.7. Maltreating fathers

In England and Wales there are an average of eight cases per year in which a father, stepfather or mother's partner (gender not identified) is convicted of killing an infant. A father or mother's partner is also identified as perpetrator in around half of non-fatal severe physical assault cases identified in Serious Case Reviews. While only 10% of father-perpetrators are stepfathers the risk they pose is substantially greater, since they number no more than 2% of all 'fathers' in baby's first year.[33] Risk factors include poor mental health, young parental age, misuse of alcohol and drugs, past criminal convictions, acrimonious parental relationships and separations, partner violence, previous involvement with public authorities (social services, police, criminal justice), poverty and homelessness, alongside prior concerns by practitioners about abuse and neglect in the family (Child Safeguarding Practice Review Panel, 2021; Davies & Goldman, 2021).

2.2. From here to paternity: men becoming fathers

2.2.1. Neurobiology

More than two decades of research which have included reviews (Abraham & Feldman, 2018, 2022; Grande et al., 2020; Provenzi et al., 2021) and books (Grande et al., 2020; Machin, 2018) have found fathers' adjustment to parenthood to be physiological as well as emotional and practical. We now know that brain structure and hormonal balance in fathers – including in fathers who do not live full-time with their children (Gettler et al., 2015) – change when they spend time physically close to their babies and young children, including participating in direct caregiving. The physiological changes, which include neurological changes in grey and white matter equivalent to those observed in the maternal brain (Kim et al., 2014), are powerful evidence of the sexes' equal caregiving abilities, and also help them adapt to their parental role. For example, new fathers' stress (as measured by cortisol levels) reduces when they hold their newborns. In most cultures, fathers' testosterone levels tend to drop shortly before their partner gives birth, and to remain low for at least the first twelve months[34] – and for a good evolutionary reason: men with lower testosterone are better attuned to their child's needs and respond more quickly when they cry. While testosterone decreases, levels of oxytocin and prolactin (hormones that promote bonding and nurturing) increase, flooding their bodies (and brains) as they hold their infants and engage in their care. Such physiological changes are most marked in fathers

[33] GUS data (Cohort Two) reveals that, in Year One, 1.5% mothers had a non-cohabiting partner who was not the birth father of the baby – and may, or may not, have had a relationship with the infant. Fewer than 1% of the mothers had a cohabiting partner who was not the infant's father (Bradshaw et al., 2013).

[34] Although one review pointed out the need for large studies with sufficient statistical power to detect small testosterone effects and, in particular, the moderating effects of the interplay with other endocrine systems and contextual determinants (Meijer et al., 2019).

who co-sleep with their infants, are their primary caregiver or are highly involved in their care. Even fathers' *beliefs* about caregiving are associated with their brain structure: for example, UK research found hypothalamus volume[35] greater among fathers who believe that fathers should be sensitive to their children and involved in their development (Long et al., 2021)[36].

2.2.2. Adjustment to fatherhood

Much media coverage of men becoming fathers, and the academic literature too, pathologises them (Lee, 2009; Lewis, 1986). In fact, most men adjust well to fatherhood. Their happiness, like women's, increases during the antenatal period and in the year after the birth[37] (Zwysen, 2016). In the ALSPAC sample, only 0.3% of fathers *never* felt they 'enjoyed' their baby or enjoyed watching them develop, with 91% even feeling 'more fulfilled' because they had become a father (Scourfield et al., 2016). When asked 'what was the most difficult thing' about having a new baby, only 11.3% of MCS fathers said it was 'adjustment to fatherhood', with *lack of sleep* and, where employed, *not having enough time with their infant* their most common concerns (Calderwood et al., 2005). Only 22% of the MCS fathers, compared with 70% of the mothers, felt they had 'plenty of time' to spend with their infant. More than half of the fathers (56%) thought they did not have enough time, and an additional 20% said they had 'nowhere near enough time'. Bangladeshi and Pakistani fathers felt most satisfied with the amount of time (Schoon & Hope, 2004), but these fathers were, and are, considerably less likely than white fathers to be in paid work or to work long hours (Burgess & Goldman, 2021; Calderwood et al., 2005). Even when MCS fathers reported difficulty adjusting to fatherhood, this was usually offset or compensated for by the joy experienced (Calderwood et al., 2005). A survey of 276 new fathers by the National Childbirth Trust (NCT)[38] found just 4% having nothing positive to say about the experience of becoming a father (Easter & Newburn, 2014).

Fathers who take on a major caregiving role may be particularly satisfied: fathers who took extended leave from work during Year One report positive experiences[39]; and a small observational study (26 families) found Primary Caregiver Fathers (Homedads) happier during play than Non-primary Caregiver Fathers (Lewis et al., 2009). However, although an Alspac analysis also found a strong positive correlation between time spent on childcare

[35] The hypothalamus plays a key role in pair-bonding and parenting behaviour.

[36] A related study of fathers and their 5-6-year-old children found increased INS in bilateral dorsolateral prefrontal cortex and left temporo-parietal junction during cooperative problem solving. Neural synchrony between parent-and-child is a hallmark of bio behavioural synchrony and the gold standard of attachment. In this study, too, the father's attitude toward his role as a parent was positively related to INS during the cooperation condition (Nguyen et al., 2021)

[37] After the first year, happiness levels decline back to baseline, and below for younger mothers and fathers.

[38] Sample said to be representative, but no details given.

[39] https://workingfamilies.org.uk/shared-parental-leave-videos/

and father's enjoyment of parenthood, the father's positive attitude to childcare *before* taking on substantial duties may account for the association (Washbrook, 2007). The adjustment trajectories of fathers of very low birth weight infants (Alexander et al., 2020), or whose partner suffers from postpartum psychosis (Holford et al., 2018) tend to be more challenging.

Qualitative systematic reviews (Chin, 2011; Goodman, 2005; Márquez et al., 2019) and qualitative studies in the UK (Dermott, 2008; Lewis, 1986; Miller, 2011) of first-time fathers' experiences following the birth of a healthy infant, describe a predictable process. Their journey is multifaceted, complex, sometimes disharmonic and shot through with some anxieties as well as feelings of extreme happiness. At first, the new father feels overwhelmed by the changing circumstances – at work, in his relationship with his partner, in the household routine. But gradually, even while culturally positioned as an outsider (Ives, 2014), he feels his way to becoming an involved father and reaps rewards that include both the positive and protective effects of fatherhood on his own health across the life-course (Philpott et al., 2020).

2.3. Fathers' behaviour in Year One: associations with child outcomes

2.3.1. Assessing impact

Assessing the 'impact' of one factor upon another is challenging. In some studies, *null* associations between father-factors and child outcomes are found, sometimes possibly due to methodological issues[40] (Parfitt et al., 2013b), sometimes not (Pearson et al., 2016). *Null* associations are more likely when these are measured in Year One (Scourfield et al., 2016); the effects of father-factors build over time[41] (Norman, 2021).

Factors – or 'variables' as they are called in social science – may interact. For example, a father may spend more time with his infant when his relationship with his child's mother is good (Poole et al., 2014), and it may be relationship-harmony (a 'confounding variable') as much as time spent, that influences outcomes. This is not to suggest that 'confounding

[40] The Sussex Journey to Parenthood study found no correlation between either mother's or father's poor postnatal mental health and child developmental outcomes. It was hypothesised that these *null* findings may be partly related to measurement issues (most studies rely on parental self-report which may contaminate findings; this was an observational study) and partly to young child-age (17 months) when developmental difficulties may have yet to manifest. In addition, in this sample, the numbers of fathers and mothers with poor mental health were small. An interesting finding was that the strongest link with child development outcomes for both mothers and fathers was their *perception* of their infant's characteristics. This should be considered when assessing risk – with fathers' observations, as well as mothers', sought (Parfitt et al., 2013b). But see also this *null* association ALSPAC study where there were no identifiable measurement issues (Pearson et al., 2016).

[41] The unstandardised coefficient for prior engagement is significantly stronger at each age.

variables' necessarily nullify associations, although sometimes they do[42]. They may also amplify them. Researchers drawing on ALSPAC data found increased psychological problems in three-year-olds whose father had been depressed when their child was eight weeks old. When the researchers took other variables into account, they found that while one-third of the three-year-olds' difficulties could be directly linked to their father's early depression, almost two-thirds[43] of the variance was linked with the mother's depression and with conflict between the parents. Both these, however, can be associated with father's depression. Depression in mothers (Philpott et al., 2020) and couple conflict (Hanington et al., 2012; Nath et al., 2016; Ramchandani et al., 2011) are more common when a father is depressed. To sum up, in the ALSPAC sample the father's early depression had both *direct* and *indirect* associations with pre-schooler's psychological problems (Gutierrez-Galve et al., 2015).

Another consideration, when seeking to understand impact, is 'direction' of effects. The Oxford Fathers' Study found a father's 'disengaged' early interaction style associated with higher levels of infant activity, particularly in boys. But was the child reacting to the father – or the father to the child? The researchers suspected child-to-father influence but, even if so, this did not mean the father's behaviour had no negative impact. Studies of at-risk mothers have found early negative responses to infant temperament increasing risk for child behavioural problems (Domoney, 2013).

Researchers have sometimes reported *poorer* child outcomes with higher levels of father involvement – particularly when the definition is extended to include housework and supervision of children (Opondo et al., 2017). Poorer outcomes are likely related *not* to fathers 'doing more' but to the reasons *why* they are 'doing more'. If un- or under-employment is the reason, this can be associated with poor mental health in the father (with bi-directional effects) (Wilson & Finch, 2021). Some studies but not all (Washbrook, 2007)[44] have found fathers more engaged when a child is 'difficult' or develops challenging behaviours (Flouri et al., 2016), or when the child's mother is depressed (Flouri & Malmberg, 2012).

[42] In this study, while fathers "strength of agreement with 'positive' parenting beliefs" at age nine months was associated with lower risk of subsequent behaviour problems in both boys and girls, the *amount* of care undertaken by the father early on, did not have an impact, once other factors were considered.

[43] Plus a small effect of the father's non-involvement at child-age 18 months.

[44] This study (the ALSPAC sample) found no differences in child temperament related to fathers' care of infants in Year One but, at child-ages two-to-three, found fathers of 'easier' toddlers slightly more likely to engage in higher levels of care.

2.3.2. Associations between fathers' engagement *time* and child outcomes

Longitudinal research in the UK (as elsewhere) has found that the *amount of time*[45] that Cohabiting Partner Fathers spend engaging with their infants is associated with child outcomes. One analysis of MCS data found that three-year-olds whose father had cared for and played with them more frequently when they were nine months old, displayed more positive emotions than children whose engagement with them had been less frequent. And the more *regularly* their father had interacted with them in infancy, the less likely the three-year-olds were to display emotional, conduct and peer problems. Furthermore, among children in that same sample who were at risk due to family socio-economic disadvantage, high frequency of early father-engagement promoted resilience to such a degree that socio-economic-disadvantage narrowed (Flouri & Malmberg, 2012). In the ALSPAC cohort, baby girls judged to be at risk because at age six months they were found to have 'reactive' temperaments, displayed significantly fewer problem behaviours and significantly more prosocial behaviours at age six years when their father had been more often engaged early on[46] (Ramchandani et al., 2010). Another analysis of the ALSPAC cohort found fathers' caregiving frequency from around six months onwards, predicting higher test scores and lower behavioural difficulty scores for both boys and girls in primary school, with the beneficial effect on school test score higher for boys[47] (Emmott & Mace, 2021).

Solo fathercare may deliver mixed benefits. In the small observational study reported earlier, infants whose father was their main carer were happier in play with them, than infants whose father undertook less *solo* care (Lewis et al, 2009). In the larger ALSPAC study, fathers compensated for employed mothers' lower levels of engagement with their infants (Lekfuangfu et al., 2015) and this more equal division of parenting duties (which involved substantial amounts of *solo* fathercare) had a strong association with children's better socio-emotional development (Gregg & Washbrook, 2003; Washbrook, 2007)[48]. In this sample *solo* fathercare in Year One was not associated with children's 'readiness to learn' at age four. However, sons (but not daughters) of father who had looked after them *solo* for long

[45] 'Time' is used here to refer to either the frequency of interactions/ activities or quantity of time. Data collection is often only of 'frequency' which may be a poor proxy for quantity of time – but may also (as here) – be the best we have.

[46] Mothers were asked about the father's engagement at infant-age 18 months, slightly later than the first year but not likely to differ substantially from his engagement six months earlier.

[47] Both boys and girls achieved relatively similar levels of test scores when paternal caregiving was high. However, boys who experienced *less* paternal caregiving had notably lower school test scores compared to girls. These results suggest that a lack of paternal caregiving may have greater detrimental effects on the educational outcomes of boys. This finding is in line with discussions around the "vulnerability" of boys, where boys are thought to be more sensitive to stressful environments and require greater levels of parental investments to achieve better outcomes.

[48] In the ALSPAC sample, *solo* paternal care begun in Year One but not carried on into the following years (a rare arrangement, accounting for only 4% of the sample) was associated with slightly poorer child behavioural outcomes at age 4 (Washbrook, 2007).

hours when they were aged two-three, exhibited poorer 'readiness to learn' at age four. That association had disappeared by age seven (Washbrook, 2007).

2.3.3. Associations between fathers' engagement *quality* and child outcomes

Time spent is of course only part of the story. Interaction *quality* is significant. This can be assessed through observation or indicated by parental attitude. The Oxford Fathers Study[49] reported fewer behavioural and emotional problems in two-year-olds whose father had made largely positive comments about them at age three months (Butler, 2012). In the Families, Children and Child Care study (FCCC – a community sample of 705 fathers, including 97 who were observed interacting with their infants), three-to-six month old babies whose father was engaged and active when playing with them performed better in cognitive tests at age two (Malmberg et al., 2007)[50]. And when the father's play style was sensitive and responsive a few months later, his child's cognitive development was superior at 18 months and language more advanced at age three. (Malmberg et al., 2016). In the ALSPAC sample, early sensitivity or responsiveness by the father had far-reaching consequences, being associated with lower depression risk in their 9-11 year old children (Opondo et al., 2017). But there were *null* effects at child-age 16 from father's early attitude to parenting, confidence as a parent and enjoyment of fathering (Scourfield et al., 2016).

Conversely, in the Oxford Fathers' Study, three-month-olds whose father had been disengaged and remote when interacting with them, were more hostile and aggressive at age one (Ramchandani et al., 2013); and when their father's comments about them had been critical, they exhibited more emotional and behavioural difficulties at age two (Butler, 2012), while also scoring lower on the Mental Development index (Sethna et al., 2017). In the ALSPAC sample, infant girls whose father had been less engaged[51] presented with more problem behaviours and fewer prosocial behaviours at age six (Ramchandani et al., 2010).

2.4. Fathers' physical health in Year One: what do we know?

2.4.1. General health

While the Office for National Statistics and other bodies[52] regularly report on maternal health, no data on expectant or new fathers is included. Fathers' invisibility is concerning

[49] 192 families recruited through maternity units in Oxford and Milton Keynes – largely white, older, and better educated than the local population of fathers.

[50] In that study, it seemed clear that it was the father influencing the child, not the child influencing the father: change in an infant's mood *followed* change in their father's mood.

[51] At child-age eighteen months.

[52] Such as the Office for Health Improvement and Disparities (formerly Public Health England).

for several reasons. First, child health risk cannot be accurately assessed when only their mother's health is taken into account; second, men exhibit riskier behaviours, poorer primary care utilization, and lower life expectancy (Allport et al., 2018); third, the perinatal period is acknowledged as a 'teachable moment' for fathers (Gage et al., 2007); and fourth, as shown above, almost all fathers are present in their families at this time. Nor can many genetic or epigenetic factors be monitored unless both parents' genetic profiles and health histories are known.

In the absence of more recent birth cohort studies, we are obliged, once again, to look back more than two decades to the Millennium Cohort Study for substantial data on new fathers' physical health conditions. There we find 1:5 new fathers reporting a long-standing illness such as asthma, migraine, eczema, and 1:6 reporting poor (or only 'fair') general health. The socio-economic differences are stark: 1:5 fathers in 'semi-routine or routine' employment reported poor or fair general health, compared with 1:10 of 'management or professional' fathers (Bartley et al., 2004).

2.4.2. Obesity

Fifty-seven per cent of the MCS sample of many thousands of new fathers of all social classes and ethnicities in the UK were overweight or obese in 2000/2001 (Bartley et al., 2004). While much data on adult and child adiposity is currently gathered and published in the UK, barely any of it separates parental from adult data. And even when parental data is gathered, it rarely disaggregates father/mother data. The only recent quantitative data on expectant or new *fathers'* adiposity that we could find is *not* from a representative sample like the MCS, but from a cross-sectional survey[53] of 573 relatively advantaged expectant fathers attending antenatal care with their partner at three London Maternity Units. The trend is not reassuring. Even among these relatively advantaged fathers, 50% were overweight or obese (Shawe et al., 2019). Had the sample been more representative, the percentage would have been far larger: a high BMI in fathers is significantly and positively associated with persistent low income (Burgess et al., 2004).

2.4.3. Alcohol and drugs

Currently, data on *parental* alcohol and drug use is gathered in the UK. However, findings are only reported on mothers' use or, if on 'parents', then father/mother data is not disaggregated. Contemporary quantitative research therefore offers few insights into new fathers' alcohol or drug use in Year One in the UK, and associations with their behaviour or child outcomes, despite a recent review emphasising the importance of intervening early to reduce fathers' substance misuse and interrupt intergenerational cycles (Cioffi & DeGarmo, 2021). A relatively recent analysis of the UK Household Longitudinal Study (UKHLS) investigated fathers' and mothers' alcohol use as part of a cluster of health

[53] Response rate 91%

behaviours – but in families with children aged under 16, not newborns (Graham et al., 2016).

And so, again, we return to the earlier cohort studies for robust quantitative data. ALSPAC found fathers two-to-three times more likely than their partner to report drug or alcohol addictions during the perinatal period, with 20% reporting heavy drinking (Kukla et al., 1996). A modest correlation was found between ALSPAC mothers' and fathers' reported alcohol consumption and alcohol problems (Kendler et al., 2013). And about 5% of both sexes reported regular cannabis use (Macleod et al., 2008). The MCS reported that advantaged fathers drank alcohol more often than disadvantaged fathers, although the amount consumed per week was about the same in both groups. About 6% of the new fathers regularly drank more than 14 units per week (Bartley et al., 2004) – the minimum level now defined as alcohol misuse by men[54]. Data on severe drug or alcohol misuse or addictions was not gathered.

2.4.4. Smoking

Fathers' smoking in Year One is a significant issue – and here, for once, we do not need to return to the earlier cohort studies to identify prevalence. The 2020 NPEU survey found 18% of new mothers living with a smoking adult – in almost all cases their male partner – and this sample was relatively socio-economically advantaged[55] (Harrison et al., 2020). Similarly in the relatively advantaged North London Maternity Hospitals sample, 16% of the women's partners were still smoking (Shawe et al., 2019). Since the link between smoking and disadvantage is well established, even higher percentages would be found in more representative samples.

Fathers' and mothers' smoking behaviours are closely linked. In the MCS, married women who had stopped smoking in pregnancy but whose husband continued to smoke in the year after the birth, were at increased risk of relapse (Prady et al., 2012). In a study of smoking households in the Midlands containing infants under three months old, fathers' tobacco consumption was higher where both parents smoked than where only the father smoked. In that sample, two-thirds of the households contained a smoking father – many more than contained a smoking mother (Blackburn et al., 2005). A study in Scotland found that smoking fathers had limited understanding of effective strategies to reduce their child's exposure to second hand smoke (O'Donnell et al., 2021). We only found one UK study reporting *change* for individual men in smoking behaviour before, and after, having a new baby (Blackburn et al., 2005); and none reporting on behaviour change in drug or alcohol use. These are research gaps.

[54] In 2000/2002 alcohol misuse by men was defined as 21 units per week. https://www.theguardian.com/society/2016/jan/08/mens-recommended-maximum-weekly-alcohol-units-cut-14

[55] The survey response rate was only 28%, and mothers of higher socio-economic status (SES) were more likely to respond.

In Scotland, a small qualitative study found men who had been resistant to health messaging identifying fatherhood as the only event that had encouraged them to adapt their lifestyle positively – stopping smoking and/or binge drinking, eating more healthily, exercising (O'Brien et al., 2009). This corresponds with a review suggesting that the obligations of a father–child relationship and a committed partnership might be beneficial to men's physical health (Bartlett, 2004).

2.5. Fathers' physical health in Year One: associations with child outcomes

2.5.1. Obesity

The children of obese fathers are substantially more likely (24%) to be obese than children whose father is overweight (14%), or neither overweight nor obese (9%) (National Statistics, 2017)[56]. Obesity is a family affair, with couple obesity or overweight also correlated (Brown et al., 2013). Yet UK research on fathers' contributions to family overweight is rare. Two studies have drawn on Year One MCS data to explore associations with child BMI. The first found weights and heights of mother and father contributing equally to worrying levels of infant weight gain in Year One (Griffiths et al., 2007). There was likely a genetic link at this stage, which became less salient over time when environment proved more influential (Fantin et al., 2016)[57]. A third study found fathers' shift work in Year One associated with significant increases in their children's BMI later – both independently, and in association with mother's nonstandard working (Zilanawala et al., 2017).

2.5.2. Alcohol, drugs, and smoking

A UK study (Rushton et al., 2003) and a wealth of international research (Burke et al., 2012; CDC&P, 2006; Washington, 2017) have found that infants exposed to mothers or fathers smoking at home are more likely to develop a range of negative health conditions including wheeze, asthma, lower respiratory illness, chronic middle ear disease, stunted growth and sudden infant death syndrome. There are many potential confounding factors, most of them – like overcrowded or damp housing – associated with lower family (and father) socio-economic status (Baker & Henderson, 1999).

Alcohol or drug misuse in either parent is categorised as an Adverse Childhood Experience (ACE) with many risk factors for children, including injury and death, premature mortality and suicide, disease and illness, and mental illness (Allen & Donkin, 2015). The effects of fathers' alcohol and drug use on mothers or infants in Year One in the UK have not been

[56] This data is not restricted to children aged twelve months or younger.

[57] As also proved to be the case in an analysis of ALSPAC data (Lawlor et al., 2008; van Dijk et al., 2014).

studied. In international research, fathers' alcoholism has been linked with negative father–infant interactions: lower paternal sensitivity, positive affect and verbalizations; higher negative affect and irritability; and lower infant responsiveness (Eiden & Leonard, 1999). One study found fathers' heavy alcohol use doubling the risk of an insecure mother-infant attachment (Eiden & Leonard, 1996).

2.6. Fathers' mental health in Year One: what do we know?

2.6.1. Anxiety and stress in new fathers

A review found high anxiety damaging new fathers' physical health, social relationships, and parenting skills, with implications for their interactions with their infants and subsequent child outcomes. Work-family conflict was a strong contributor and severe anxiety was far more common among disadvantaged fathers (Philpott et al., 2019). In a rare UK study, this was confirmed: disadvantaged fathers faced double the risk (Ben-Shlomo et al., 2016).

Postnatal stress in UK fathers is also understudied Fourteen per cent of ALSPAC fathers 'sometimes' (an additional 3.1% said 'often') felt so stressed they feared a negative impact on their baby (Scourfield et al., 2016). Reviews have pointed to stressors such as sleep deprivation, wider family concerns, social isolation; financial pressures, housing or food instability; work pressures; partner's stress and poor mental health; infant prematurity, developmental problems, and temperament (Feeley et al., 2013; Parfitt & Ayers, 2014; Parfitt et al., 2014; Philpott et al., 2017; Pinquart & Teubert, 2010). Many of these stressors, of course, existed prior to the birth and probably also prior to conception; and we did not find any longitudinal data in UK (or in international reviews) showing *change* for individual men before or after having a first baby in relation to stress – or to anxiety or depression[58]. This is a research gap. A review found fathers whose engagement in caregiving was low experiencing higher levels of stress (Diniz et al., 2021), as was also the case among fathers in Neonatal Intensive Care Units (NICUs) (Feeley et al., 2013). In that environment, 'open' visiting times reduced fathers' stress as did participating in their baby's care (Ireland et al., 2016).

[58] In the depression and anxiety literature, change in the percentages of men suffering from pre- to post- natal are identified, but not change in individual men. This is a research gap.

2.6.2. Depression in new fathers

2.6.2.1. Prevalence

A widely reported study found 38% of new fathers concerned about their own mental health[59]. The sample, however, was self-selecting. A recent mixed-method evidence synthesis reported depression rates of 5–10% among new fathers internationally but noted considerable heterogeneity between countries and did not report UK rates separately (Darwin et al., 2021). In the UK, in the substantial quantitative datasets, the figures are very low[60]. The percentages of ALSPAC fathers reporting symptoms of severe depression postnatally are 2.9% (Hanington et al., 2012), 3.7% (Deater-Deckard et al., 1998); and 4% (Ramchandani et al., 2006)[61]. An MCS analysis found 3.6% of fathers of babies born in the early 2000s suffering from significant mental distress[62] at infant age nine months (Nath et al., 2016). An analysis of primary care records between 1993 and 2007[63] found a depression rate of 3.56 per 100 person-years among new fathers compared with 13.93 among new mothers (Davé et al., 2010). The highest rate of mental distress recorded (MCS) was 8.9% at infant-age nine months among fathers of moderately or severely pre-term babies – a sample who clearly faced particular challenges (Carson et al., 2015). A reasonable assessment might be 4%[64] overall in the UK – with not all of this necessarily in response to the birth or even the pregnancy, because also experienced before conception. However, none of this data reflects the current cohort of fathers of babies and further research is needed.

2.6.2.2. Risk factors

Prior episodes of severe mental distress (Parfitt et al., 2013a; Ramchandani, Stein, et al., 2008) and having a depressed partner (Nath et al., 2016; Thiel et al., 2020) are the strongest predictors of a new father exhibiting depressive symptoms. Also significant is socio-

[59] https://www.nct.org.uk/about-us/media/news/dads-distress-many-new-fathers-are-worried-about-their-mental-health

[60] In the large datasets, fathers' mental distress may have been slightly under-reported, as some of the most distressed fathers may not have participated in the study (Edmondson et al., 2010; Gutierrez-Galve et al., 2018; Nath et al., 2016).

[61] Differences in these reports based on ALSPAC data may be due to: (i) data collected at different time points in Year One: Deater-Deckard at eight weeks; Hanington and Ramchandani at eight months; and (ii) different cut-offs applied to the scale used (the Edinburgh Postnatal Depression Scale).

[62] The scale used measured a mix of depression and anxiety.

[63] The Health Improvement Network database: when this data was collected from primary care settings (1993–2007), men were far less likely than women to speak with their GP about mental health issues. That has now changed (MIND, 2020).

[64] To include the small percentage possibly not picked up in the earlier quantitative datasets through sample selection – see footnote 61 above; more sensitive cut-off applied to the EPDS; or new scales better suited to identifying male depression.

economic or educational disadvantage – including unemployment (Nath et al., 2016). To illustrate the risk-differential, 12.7% of MCS fathers in 'semi-routine or routine' employment were at risk of mental distress in the first year, compared with 6.8% of 'management or professional' fathers. Fathers aged under 25 and those of South Asian or mixed heritage are at elevated risk; they are also more likely to be socio-economically disadvantaged (Clayton, 2016; Davé et al., 2010; Nath et al., 2016; Schoon & Hope, 2004). The high risk among fathers of pre-term babies will also have a socio-economic dimension: such infants are far more likely to be born into disadvantaged families (Carson et al., 2015).

At family level, new fathers' depressive symptoms are associated with an unsupportive or conflicted relationship with their baby's mother and limited family or social support (Deater-Deckard et al., 1998; Nath et al., 2016). Again there is a socio-economic dimension: there is more couple conflict in workless households (Stock et al., 2017). ALSPAC stepfathers, and men who had experienced frequent changes in romantic relationships, were also at elevated risk (Deater-Deckard et al., 1998). The depression-in-stepfather effect is likely related to the 'selection' (greater likelihood) of men who have mental health problems becoming stepfathers (Boyle et al., 2009; Feijten et al., 2011).

2.7. Father-factors: associations with child outcomes

2.7.1. Stress and anxiety

Only ALSPAC measured anxiety separately from depression. ALSPAC analyses found fathers' high anxiety in Year One predating recurrent abdominal pain ('sore tummies') in their children later (Ramchandani et al., 2006); and associated with worryingly rapid weight gain in their infants (Nawa et al., 2021).The researchers hypothesised that fathers' anxiety might be related to financial pressures, potentially influencing household food security and quality. MCS fathers' mental distress (a measure mainly consisting of depression + anxiety) reported at nine months was also associated with steeper increases in BMI and FMI[65] for both girls and boys aged 5 to 14 (Tommerup & Lacey, 2021). Year One parenting stress[66] in mothers, but not fathers, was associated with child problem behaviour at 51 months (Ortiz & Barnes, 2019) (FCCC data)[67].

2.7.2. Depression

While stress and anxiety in fathers in Year One have scarcely been considered, depression has been thoroughly researched. Many fathers who behave negatively towards their infants

[65] Fat Mass Index.

[66] The scale used was the Short Form Parenting Stress Index.

[67] It may be that mothers identify more strongly as the caregiver in Year One – or simply spend a lot more time with their babies.

in Year One exhibit depressive symptoms. A review found lower levels of cognitive development in the infants of depressed fathers – the pathway to which seemed to be their father's (lack of) engagement with them (Wanless et al., 2008). Depressed fathers in the UK tend to display less verbal and behavioural stimulation during interactions with their infants (Sethna et al., 2018; Sethna et al., 2015); to speak more negatively or critically about them; to focus more on their own rather than the infant's experience; and to be more likely to regard their relationship as poor (Parfitt, 2014; Sethna et al., 2012). Even when the depressed father engaged warmly and fully in parenting, his relationship with his child later tended to be more conflicted – and this was related to worse emotional and behavioural child outcomes (Nath, 2014).

Not all kinds of depression (or anxiety or stress) are equal, or likely to have the same effects. High symptom levels at one point may reflect transitory adverse events rather than true psychological morbidity (Ben-Shlomo et al., 2016). Two ALSPAC studies, for example, found *chronicity* in fathers' depression significant, rather than a one-time finding (Rajyaguru et al., 2021; Ramchandani et al., 2008).

Most of the early-father-depression-research has investigated associations with later child psychopathology or problematic behaviour. Some have found *null* effects[68] but most have found associations: for example, with more emotional and behavioural problems in the men's pre-schoolers at age two (Butler, 2012) and age three (ALSPAC data), including (in boys) antisocial behaviour (Ramchandani et al., 2005); more child problems at 51 months (Smith et al., 2013); greater risk of psychiatric disorder at age seven (Ramchandani et al., 2008); higher depression scores at ages 9–11 (Opondo et al., 2017; Opondo et al., 2016); poorer school performance at age 16[69] (Psychogiou et al., 2019); and, in daughters at age 18, higher depression risk (Gutierrez-Galve et al., 2018). Genetic or epigenetic factors were not examined in any of these studies, although 'heritability' in psychopathology has been identified in some datasets (Auty et al., 2015; Harold et al., 2008). As a scoping review like this cannot realistically do justice to all the findings[70], an in-depth systematic review of all the analyses of ALSPAC and MCS data relating to fathers' postnatal mental distress is warranted.

---

[68] ALSPAC studies found mother's but not father's, poor perinatal mental health a risk for Tourette syndrome and chronic tic disorders in children (Ben-Shlomo et al., 2016) and psychotic symptoms in adolescents (Srinivasan et al., 2020).

[69] Largely – it seemed – due to negative impact on their mental health of a poor relationship with their father.

[70] Studies not cited or not fully explored here which investigate early father depression/ mental distress in relation to child outcomes are (i) in relation to family functioning in Year One (Ramchandani et al., 2011) (ii) in relation to child behaviour at ages three, four or five (Dex & Ward, 2007; Flouri & Malmberg, 2012; Flouri et al., 2015; Flouri et al., 2010; Hanington et al., 2012; Malmberg & Flouri, 2011; Ramchandani et al., 2010; Ramchandani & Psychogiou, 2009) (iii) in relation to child adjustment at age seven (Nath et al., 2016) (iv) in relation to child mental health/ behavioural outcomes at age 11 (Fitzsimons et al., 2017) (v) in relation to child suicide attempt at ages 16 and 21 (Orri et al., 2020) (vi) in relation to child depression at age 18 (Pearson et al., 2013).

2.7.3. Other psychological characteristics

Locus of control ('LOC') refers to the extent to which an individual believes they can, or cannot, influence events. 'External' LOC[71] in ALSPAC fathers (the belief that they themselves had little power to influence events) was significantly associated with difficulties in their school-aged children, whose problems were worst when *both* parents' LOC were external (Nowicki et al., 2018a)[72]. By contrast, when both parents' LOC were 'internal' (they both felt they could influence events) their 18-month-olds slept better, ate better, and had fewer tantrums compared with toddlers whose mother and/or father's LOC was 'external' (Nowicki et al., 2017).

Few other psychological characteristics in UK fathers have been studied. An outlier study, which drew on a community sample (410 parents), found high extraversion in fathers associated with prosocial behaviour in their pre-schoolers (Ruiz Ortiz & Barnes, 2019).

In a study of the ALSPAC sample, the authors explored maladaptive personality characteristics (Monotony Avoidance, Impulsivity, Verbal Anger, Suspicion and Detachment) in the father (measured when their child was age 9)[73] in relation to offspring outcomes. These characteristics are associated with relational and affective dysregulation traits – known to be distinct from neuroticism and therefore depression. Although these traits were found to be associated with father's depression in the postnatal period, the more interesting finding was that paternal depression only occurred in 2% of the sample (n=2726) and the personality traits of relational and affective dysregulation were far more common, being found in 11% of ALSPAC fathers[74] (Cadman et al., 2021). Another indication that factors beyond depression need serious investigation is clear from the (observational) Sussex Journey to Parenthood study. Despite the mainly good mental health of both parents in this relatively advantaged sample, the parent-infant interactions of 34% of the mothers and 20% of the fathers were classified as being "inept" or "at risk" and in need of intervention. Ten percent of the families presented with impairment in both parents' interactions with their baby (Parfitt, 2014).

[71] Measured prenatally but, since personality traits are moderately stable, likely to have been much the same if measured shortly afterwards in Year One.

[72] A subsequent study that measured changes in parental LOC at child-ages three and six, found that among children whose father changed from external to internal (i.e. his belief in his own parental self-efficacy increased) his child's conduct behaviour problems, including hyperactivity, lessened at both time points (Nowicki et al., 2018b).

[73] Percentages in Year One have not been published but are unlikely to be lower: by child-age nine, some of the most problematic fathers are likely to have left the household (and the sample – they were not followed by the researchers into their new household).

[74] Percentages in Year One have not been published but are unlikely to be lower: by child-age nine, some of the most problematic fathers are likely to have left the household (and the sample – they were not followed by the researchers into their new household).

It may be concluded that screening fathers for traits for relational and affective dysregulation may be a more appropriate way than screening for depression to understand their difficulties and refer them for appropriate support. However, no steps are taken to identify any challenges, psychological physical or social, faced by new fathers. Not even screening for depression takes place.

Antisocial personality traits (ASP) in parents have been associated with increased risk of psychological problems in children (Gutierrez-Galve et al., 2015). In the UK, analyses have drawn on the Cambridge Study in Delinquent Development (CSDD) dataset (Bergstrøm & Farrington, 2021), but mainly in relation to older children and adults. We identified one study (UK and the Netherlands) that found father's antisocial personality traits associated with aggression in toddlers (Lambregtse-van den Berg et al., 2018). Again, no screening nor interventions to address ASP among fathers in the UK was found, even in the 'Supporting Families' (formerly called the Troubled Families) programme.

2.7.4. Demographic factors

The wealth of associations found between Year One depressive symptoms in fathers and child outcomes in the UK, might suggest that depression is the most significant of all the father-factors. This is not the case: it is simply the variable that has been most frequently studied. Associations with socio-economic status (SES) – which is often measured as a combination of education, income, and occupation – are significant to a far greater number of families[75]. SES is often studied as the independent variable in analyses of fatherhood data outside the UK, because it is a variable slow to change in individuals. In the US, there is a substantial body of literature on 'low-income'[76] fathers from pregnancy onwards.

In several of the UK studies cited in this report, SES has been identified as a key confounding variable[77]– revealing its power. A few studies have explored it as the independent variable in relation to Year One (Dex & Ward, 2007; Flouri & Malmberg, 2012; González-Sancho, 2014). Where it has been studied, the importance of what it represents is clear. For example, the study that identified the prevalence of maladaptive psychological characteristics in new parents also found low socio-economic status to be an independent risk factor for offspring depression (Cadman et al., 2021). One analysis of MCS data found both persistent and transitory poverty strongly correlated with MCS children's difficulties at ages 5 and 11 (Fitzsimons et al., 2017); and another that the likelihood of an MCS child having emotional or behavioural problems at age three was

[75] Comparing the relative sizes of the effects is beyond the capability of this scoping review – but would contribute to the evidence base.

[76] The category of 'low-income' in the US literature is not totally consistent: definitions vary (they are usually between 120% and 150% of the federal poverty standard), and sometimes use a combination of income, education, and occupational status (Nelson, 2004).

[77] That is, has moderated or mediated associations between another father-factor and a child or maternal outcome.

positively associated with a range of demographic factors related to their father's low SES: low education level, young age at becoming a father, being under- or un-employed; being of Indian, Pakistani or Bangladeshi ethnicity[78]; having a higher malaise score (depression + anxiety) when his baby was aged 9–10 months; and taking only annual or sick leave (or no leave) around the time of the birth or failing to use employer flexible working options[79] (Dex & Ward, 2007)[80]. An ALSPAC analysis found that *solo or* primary caregiver fathers tending to be younger and more socio-economically disadvantaged (Washbrook, 2007). An MCS analysis found father's (higher) education positively associated with a little more engagement with their infant, but not tending towards primary or *solo* care (Norman & Elliott, 2015).

Father's education level – often but not always confounded with SES – is under-studied in the UK, especially considering that a UK father's education level has a bigger impact than a mother's on the likelihood of low educational attainment in their offspring[81] (ONS, 2014).

UK research relating to new fathers' (or any fathers') ethnicity exists (Calderwood et al., 2005; Dex et al., 2004; Dex & Ward, 2007; González-Sancho, 2014; Ward & Dex, 2007) but is sparse, in part because surveys often have small sample numbers and therefore limited statistical power. Black or Black British and White fathers engaged slightly more often with their nine-month-olds than fathers of Indian, Pakistani or Bangladeshi heritage but the differences were small (Norman & Elliott, 2015). Fourteen studies in our Literature Library relate to more recent migrations, but none has data on the first year after the birth or on fathers with refugee status. These are all substantial research gaps.

Two studies that included UK samples explored the transition to parenthood in first time parents who conceived using assisted reproductive technologies. Among these were 35 gay male couples. Strikingly few differences in their emotions across the transition and the quality of their parenting were found in gay-father families, lesbian-mother families, and heterosexual families (Rubio et al., 2020). Wellbeing was high: the parents in all three groups reported relatively low levels of parental stress, anxiety, and depression, and all were relatively satisfied with their intimate relationship. There was a nonsignificant trend towards lower levels of depression among the gay primary caregiver fathers compared with lesbian and heterosexual primary caregivers (Van Rijn-van Gelderen et al., 2018).

[78] Particularly significant in 2001/2002 when this data was gathered.

[79] Low income fathers are less likely to be entitled to employer support and are more likely to work for employers who do not offer it (TUC, 2017).

[80] The father not sharing in home-based childcare also posed a risk, but we do not think this is related to low SES.

[81] People are 7.5 times more likely to have a low educational outcome if their father has a low level of education, compared with having highly educated father. Mother's education level is also important though to a lesser degree.

In young fathers, age is commonly confounded with low SES or education (Clayton, 2016; Huerta, undated; Kneale, 2009; PHE/DH/RCM, 2015). Fathers who are *solo* or main carers are younger, on average, than other fathers (Washbrook, 2007). Early fatherhood is associated with negative physical and mental health outcomes throughout the men's life-course, only partly associated with 'selection' (prior disadvantage) into early fatherhood (Grundy & Read, 2015; McMunn et al., 2016; Sigle-Rushton, 2005). It has been suggested that the need to provide immediate financial support for a family may push young men into lower paid work with adverse consequences on their later health (Einio et al., 2015).

In Britain, little is known about older fathers – not even their socio-demographic profile. A body of international research has found moderately increased risk of physical abnormalities and chromosome disorders in the offspring of fathers aged under 20 and over 40 (Fang et al., 2020); and, in older fathers, increased risk of offspring schizophrenia (Matheson et al., 2011), acute lymphoblastic leukaemia (Petridou et al., 2018) and autism, to which, in addition to genetic effects, multiple mechanisms are likely to contribute (Janecka et al., 2017).

It would be useful to explore further fathers' age and other socio demographic factors, during and from the first year after the birth, in relation to, for example, parenting attitudes, beliefs and behaviour, the couple relationship and coparenting, and child and maternal outcomes.

2.8. Fathers' influence on mothers

2.8.1. The family system

Fathers influence mothers in many ways, and vice versa. The family is often seen as a 'system' of interconnected influences. For example, the probability of a mother resuming paid work at infant-age nine months (and at child-age three) was greater where the father had been more involved in infant care (Norman, 2020). And her return to work was also associated with *either* parent endorsing more gender egalitarian roles (Norman, 2020). New fathers have been found aligning their views about parenting in line with what would be expected on the basis of the mother's level of education rather than their own (González-Sancho, 2014). And mother's LOC is more influential than father's own on his belief in the importance of being active in his child's upbringing (Lekfuangfu et al., 2014). A small observational study found sensitivity in one new parent 'buffering' the effect of lower sensitivity in the other (Malmberg et al., 2016) and each parent's depressed mood affecting the other's to a similar degree (Malmberg & Flouri, 2011). A small observational study found positive behaviour by new fathers far less common in families where mothers were depressed postnatally (Parfitt et al., 2013a), as was also evident in an ALSPAC analysis[82].

[82] Of note: partners of depressed mothers often had higher levels of depressive symptoms themselves.

When the father's behaviour was positive[83], this reduced the odds of negative child outcomes related to mother's depression (Martin et al., 2022). Similarly an MCS analysis found a good quality father-infant relationship moderating potentially negative impacts of poor maternal mental health on child outcomes (Coope, 2013).

2.8.2. Partner support

A new mother's partner can be central to her wellbeing. We address breastfeeding below; and a review of studies drawing on MCS data found that a father simply being around more – being 'accessible' – in Year One, was associated with mothers' better mental health (Twamley et al., 2013). Adolescent mothers with supportive partners 'parent' more positively and have better financial and psychological outcomes (Bunting & McAuley, 2004); and when new a mother perceives her partner as *emotionally* supportive, she feels more satisfied with housework-and-childcare share, even when it is far less equal than she had hoped (Cappuccini & Cochrane, 2000). Conversely, women without partners experience perinatal services far more negatively than other women (Raleigh et al., 2010); and the Sussex Journey to Parenthood study found mother's poor postpartum mental health significantly associated with lack of support from her partner (Parfitt & Ayers, 2014).

Fathers may need support themselves if they are to support their partner. A review found the male partners of women who developed severe depression postnatally, struggling to understand what was happening, and lacking the knowledge to be able to help her access help (Keeley-Jones, 2012). And if the mother's postnatal mental health becomes so poor that she and her baby are admitted to a specialist residential unit, he may often become even less able to offer support (Reid et al., 2016). Such fathers commonly experience significant psychological trauma, as well as relationship & family problems, chronic sleep deprivation, and financial and employment constraints & reduced input at work (Marrs et al., 2014; Muchena, 2007).

2.8.3. Breastfeeding

Improving breastfeeding rates is an important policy goal (McFadden et al., 2017). Here we examine fathers' influence as a 'case study' of partner influences. Thirty years of research, including recent systematic reviews (Al Namir et al., 2017; Bhairo & Elliott, 2018; Ng et al., 2019; Ogbo et al., 2020) and individual studies (Kiernan & Pickett, 2006) have found benefits from the father's verbal encouragement; responsiveness towards his partner; assistance in preventing and managing breastfeeding difficulties; and helping with household duties and infant care. Fathers' supportiveness is associated with detailed understanding of breastfeeding benefits and common challenges and how to address them; and with perceiving himself as having a useful role to play. A good quality relationship with

[83] Between two and 21 months.

his partner, attendance at antenatal classes and having taken Paternity Leave also contribute positively.

Conversely, a father's *negative* attitude is a risk for full formula feeding (Earle & Hadley, 2018a; Mahesh et al., 2018). Contributing factors include ignorance of breastfeeding benefits (Shepherd, 2000), embarrassment about his partner breastfeeding in 'public' (including in front of other family members) and being excluded from breastfeeding education and support (Earle & Hadley, 2018b; Shaker et al., 2004). UK mothers express frustration at their partner's inability to anticipate their breastfeeding support needs, and want breastfeeding education to target him (Brown, 2017; Sherriff et al., 2014) and (Sherriff et al., 2014).

Nevertheless, there is a dichotomy here. While father-support is associated with more frequent breastfeeding *initiation*, his practical support with parenting later has been linked with shorter breastfeeding *duration* (Emmott & Mace, 2015). It is not clear whether breastfeeding is being abandoned so fathers can play a greater role – or fathers are playing a greater role after breastfeeding has been discontinued. Probably both are relevant, although two factors influencing a family decision to bottle feed are the father being able to contribute to infant feeding and to develop a closer bond with his baby (Earle, 2002). And, in fact, 'quality of life' experienced by new fathers has been found to be higher where their infant is bottle-fed (Sihota et al., 2019).

2.8.4. Couple relationship satisfaction, quality, or conflict[84]

In the first year after the birth, most mothers and fathers who live in the same household are satisfied with their relationship. At that time just 6.2% of cohabiting MCS mothers thought they and their baby's father might separate[85] (Calderwood et al., 2005). However, , 23% of first-time fathers reported increased conflict (Easter & Newburn, 2014), as did mothers and fathers in ALSPAC households[86] (Hanington et al., 2012). While conflict can be positive, indicating that a couple is in negotiation, high conflict between ALSPAC parents exacerbated the negative impact of mothers' depression on children (Hanington et al., 2012); while an MCS analysis found a good quality couple relationship ameliorating it (Coope, 2013).

UK studies underline the significance of couple relationship satisfaction as early as Year One: new mothers who were dissatisfied with their relationship with their partner, were

[84] ALSPAC and MCS measured quality (positive/ negative aspects of the relationship, including support and conflict). GUS measured only conflict/ relationship problems.

[85] This made ultimate separation more likely, but far from certain.

[86] Both mothers (mean = 29.59, SD = 8.37) and fathers (mean = 28.98, SD = 7.93) reported higher levels of marital conflict after the birth of their child than they did antenatally [maternal conflict mean = 19.22, SD = 5.08, t(9757) = -164.41, P < 0.001; paternal conflict mean = 18.84, SD = 4.91, t(5972) =-129.27, P < 0.001].

found to talk more to their infant sons (Fink et al., 2019); those who were critical of their partner, or felt criticised by him, expressed more negativity towards their baby (Barnes et al., 2007). Conversely, infants were more 'settled' when their father felt positive about his relationship with their mother (Davé et al., 2005). Two-year-olds whose parents' relationship in the early postnatal period had been characterised by high satisfaction and low conflict, were calmer and more outgoing (Hughes et al., 2019); and at child-age five in the ALSPAC cohort, an early positive father-mother relationship moderated negative associations between mothers' early psychological distress and children's aggressive or disruptive behaviour (Coope, 2013).

The most recent UK Data on *non*-cohabiting parents' relationship in Year One found 36.4% of MCS mothers on friendly terms with their infant's father who-lived-elsewhere (Kiernan et al., 2011), and only 10% of the GUS parents who were living in separate households[87] reported a 'bad' or 'fairly bad' relationship (Anderson et al., 2007).

Parenting teamwork – known as 'coparenting' or 'collaborative parenting' – is a significant area of study internationally. The only UK study we found that explored associations between collaborative coparenting in Year One and child outcomes, found 'couple supportiveness' among cohabiting couples associated with reduced externalizing problems in children 8–10 years later (Parkes et al., 2019). There were only a few other UK studies that investigated co-/collaborative parenting – and they did not do so in Year One (Hinchliffe, 2013; Latham et al., 2018). An in-depth review of the full set of ALSPAC and MCS analyses of couple relationship in relation to later outcomes for fathers, mothers and children may be a useful addition to the literature[88].

Infant and parental sleep in Year One is also a growing area of study internationally – although not yet in the UK[89]. Reviews have found infant sleep problems directly (Wynter et al., 2020) and indirectly (Ragni et al., 2020; Wynter et al., 2020) related to poorer couple relationships, with an important indirect influence being father's depression (Parfitt & Ayers, 2014). A survey in the UK found a fifth (19%) of new fathers reporting that less sleep and more tiredness, for themselves *or* their partner, affected their moods and

[87] The sample included mothers who had registered their baby's birth alone, as well as those who had done so jointly with their baby's father. At infant-age ten months, around a third of the fathers who were not registered on the birth certificate were a non-cohabiting partner of the birth mother (Anderson et al, 2013).

[88] For example, Scourfield et al (2016) supplementary pages include percentages for ALSPAC items such as: *My partner excludes me from looking after the baby; I feel my partner does not trust me with the baby; I'm happy with the way my partner is bringing up the baby; I'm always getting under her feet; She doesn't like me being involved with the baby even if I'd like to be; My partner gives me no encouragement in bringing up the baby.*

[89] Possibly in part due to data gaps. An attempt to determine associations between child-sleep and father-sleep, and between father-sleep and father employment in the ALSPAC sample, was bedevilled by so many data gaps and measurement issues that no conclusion could be drawn (Costa-Font & Flèche, 2017).

behaviour and proved a major cause of couple conflict (Easter & Newburn, 2014). In reviews, infant sleep problems were also associated with fathers' poorer general physical health (Coles et al., 2021) and with a poorer relationship between the father and his infant, as well as with less safety compliance (by him) at work (Wynter et al., 2020). This may affect couple relationships if unemployment or other financial pressures result. More positively, father's engagement in caregiving was found to moderate mother's stress related to child sleep disturbances (Diniz et al., 2021). A small UK study found having an infant with sleep problems associated with ideation of violence by the father (Laws & Keeling, 2018).

2.8.5. Intimate partner violence (IPV)

How prevalent is father-to-mother IPV in the UK in the post-natal year? An analysis of ALSPAC data[90] found that, at infant-age eight months, 1.8% of mothers had experienced physical violence from their partner since the birth, 7.3% emotional, and 7.7% any victimization (most of the physical cruelty was accompanied by emotional cruelty) (Bowen et al., 2005). Among MCS mothers questioned at infant-age nine months, 3.6% reported that their partner had 'ever' used 'force' (grabbing, pushing, shaking, hitting, kicking) during the whole relationship (not limited to the post-birth period) (Kiernan et al., 2011). The Children's Centre Survey asked the same question and found 2% of new mothers reporting 'ever' use of force – and all those less often than once a month, the lowest frequency option offered (Maisey et al., 2013). There were associations with socio-economic disadvantage: for example, among the MCS mothers who were not cohabiting with their infant's father, 5.1% reported 'ever' use of force during the relationship (Kiernan et al., 2011). Such percentages and the demographic correlates accord with the 2018 British Crime Survey which, drawing on police data, uses a wider definition of partner violence that includes financial and emotional abuse, as well as force, threats, sexual assault and stalking (Anderberg & Moroni, 2021).

It is possible that when women are questioned by Health Care Practitioners *trained* to ask about domestic violence, or reply via a paper or online questionnaire, percentages may be higher. However, a London hospital study that employed trained interviewers also found low rates: 1.8% of expectant mothers[91] reported violence or threats of violence from their partner, or feeling unsafe or afraid of him (Bacchus et al., 2004). The percentage was higher among women questioned more than once during their pregnancy, although there are

[90] See also a comparison of IPV experienced by ALSPAC mothers with or without a history of eating disorders (Kothari et al., 2015).

[91] This sample included women who were not at the time cohabiting with their partner.

methodological problems with this data[92]. In Hull[93]twenty years ago an anonymous paper survey of 500 pregnant women[94] which generated a remarkable 95% response rate, found 3.4% reporting victimization (Johnson et al., 2003). Prevalence is not increasing: in fact, the British Crime Survey reports a *downward* trend in family violence from 6.9% (2005) to 4.5% (2020), with the reduction mainly driven by reduction in the prevalence of *partner* abuse (ONS, 2020c).

We do not report these low percentages and the downward trend to minimize the seriousness of IPV in the postnatal period. An ALSPAC analysis found the first three years after the birth to be the period during which, for children, exposure to IPV[95] was most strongly associated with damage to socio-emotional and cognitive skill accumulation (Anderberg & Moroni, 2021). US research has charted multiple associations between father-to-mother IPV and mother-and-infant responses, and their relationship with each other. For example, mothers' and infants' PTSD symptoms are correlated (Levendosky et al., 2013); and when the mother is subjected to IPV from her partner, mother-infant attachment is less secure (Levendosky et al., 2011).

Nevertheless, countering the exaggerated 'father-as-risk' narrative embedded firmly in most health and social care services aimed at parents (Child Safeguarding Practice Review Panel, 2021) is essential if risk is to be properly assessed and high quality services delivered.

2.9. Services

As is evident from this report, fathers are key players in the postnatal year. Almost all are present in their baby's life and are in a relationship with their baby's mother. And even despite the comparative paucity of UK research on 'father-factors' v. 'mother factors' (and lack of research on combined influences), associations with maternal and infant wellbeing, and with later child development, are clear.

[92] When interviewed later in their pregnancy, 5.8% of a sample of just 86 women (67 of whom were interviewed for a second time) reported violence or fear of violence. Ten days after the birth, the percentage reporting violence was 5% – and by then the sample size had shrunk further to just 40 women, 19 of whom had been questioned three times. The samples in the two later 'sweeps' are too small to provide basis for generalization. It is not clear whether the higher percentages reported later were related to repeat questioning; or whether some of the women reporting violence later had not been interviewed earlier; or whether some of the violence had begun in the later stages of pregnancy, or immediately after the birth.

[93] Hull is the tenth most deprived Local Authority in England (Morfitt, 2015) and there is a strong correlation between domestic violence and social deprivation (Walby & Allen, 2004).

[94] This sample also included women who were not at the time cohabiting with their partner.

[95] IPV is not exclusively perpetrated by fathers or male partners, and can be bi-directional (Mojahed et al., 2021). Perpetration by the larger and stronger parent, usually the father, may be more frightening to children.

This section explores how UK service providers engage with new fathers and the evidence available suggests there is still a lot of work to do in this area. Lack of data collection is a significant issue. Health records for babies in the UK only allow the inclusion of one adult (the mother), so any record relating to the father is held separately (if it is held at all) and family records cannot be seen in a joined up and connected way (Child Safeguarding Practice Review Panel, 2021). Researchers are lobbying for change, suggesting as a first step, the addition of the father's National Health Service number to the birth notification (Lut et al., 2022).

Most new fathers come across at least one Health Care Practitioner (HCP): 88% of new fathers are present for at least one post-birth home visit and 58% attend at least one clinic appointment (TNS System Three, 2005), while 14% have an infant in a Neo-Natal Intensive Care Unit[96] (and meet NICU staff). Yet with no record of their existence, no policies to engage them implemented, and no staff training on engaging with them in place, each father's experience depends on the practice of each individual HCP (Ferguson, 2016). Some fathers describe positive encounters but most report feeling ignored (Baldwin et al., 2021; Coles & Collins, 2009; Hanley, 2018; Menzies, 2019), patronized and considered unimportant (Brown & Davies, 2014; Sherriff & Hall, 2014). A review of international studies found practitioners' negative or apathetic attitudes towards involving fathers in home visiting thereby discouraging their participation (Burcher et al., 2021), and the 'teachable moment' to support positive health and other behaviours being missed. In the UK, Health Visitors confess to not engaging with fathers, even when recognising the benefits of doing so (Whitelock, 2016); and to actively avoiding fathers known to pose a threat to mother and infant (McGarry & Ali, 2018), thus to a great degree leaving mothers to manage risk (Child Safeguarding Practice Review Panel, 2021).

In breastfeeding information and support, the situation is similar: fathers in the UK almost never receive information on breastfeeding from HCPs (Earle & Hadley, 2018a; Merritt et al., 2019) and report being actively excluded from breastfeeding education (Brown & Davies, 2014). That is despite reviews finding all interventions that included fathers resulting in better rates of breastfeeding initiation, duration, and/or exclusivity (Abbass-Dick et al., 2019; Ayebare et al., 2015; Mahesh et al., 2018). Mahesh et al. also found that where fathers had been included, mothers had a better understanding of the benefits of breastfeeding, felt more positively towards it, and experienced fewer lactation-related problems. Yet not one of the breastfeeding helplines[97] nor NHS Choices[98] suggests that fathers can make use of their service or have a role to play. In fact, the Oxford Health

[96] https://www.bliss.org.uk/research-campaigns/neonatal-care-statistics/statistics-about-neonatal-care

[97] https://www.breastfeedingnetwork.org.uk/contact-us/helplines/

[98] https://www.nhs.uk/start4life/baby/feeding-your-baby/breastfeeding/

NHS Foundation Trust confidently asserts that fathers 'cannot help' with breastfeeding initially[99].

Nor is there routine, or mostly any, engagement with fathers whose seriously mentally affected partner is admitted to a specialist residential mother-and-baby unit (MBU). This is despite policy and practice recommendations over several years that this should happen[100] and agreement by professionals that the woman's partner is likely to pick up signs of her mental health problems before she herself recognises that she is unwell (Boots Family Trust Alliance, 2013). A 'good practice guideline' published to try to improve father or partner inclusion stopped short of being a 'requirement' or even a 'recommendation' and could cite almost no current examples of good practice (Darwin et al., 2021). Yet a review of interventions with the partners of women suffering from, or at risk of, poor mental health postnatally found all studies except one reporting significant improvement in maternal depression and anxiety scores when her partner was included (Noonan et al., 2021)

Research conducted in Neo-Natal Intensive Care Units (NICUs) has identified the benefits of staff supporting new fathers to participate in their baby's care, including encouraging skin-to-skin[101] (Filippa et al., 2021). Yet here, too, there is evidence of fathers' marginalisation and even exclusion (Deeney et al., 2012; Feeley et al., 2013; Harvey, 2010; Prouhet et al., 2018; Robertson, 2014; Sisson et al., 2015; Walmsley & Jones, 2016). And when an infant dies, and in pregnancy loss, too, fathers commonly report being excluded during communication and information-giving (Coffey, 2016; Ellis et al., 2016), as well as experiencing 'double-disenfranchised' grief (Obst et al., 2020): not only from lack of empathy for their loss, as often also experienced by mothers[102] but also from being regarded primarily as a 'supportive partner' rather than as a bereaved parent (Jones et al., 2019). The exclusion is sometimes so extreme as to seem inhumane. One father, remembering his experience in the NICU with his critically ill infant, said to a researcher: "I think when the nurse came to my wife and said, 'kiss your baby you mightn't see him again' – why didn't she say it to me, as well?" (Hollywood & Hollywood, 2011).

---

[99] https://www.oxfordhealth.nhs.uk/wp-content/uploads/2017/03/CY-173.16-Dads-and-breastfeeding.pdf

[100] In 2019, the NHS Long Term Plan had recommended support be provided to the partners of women accessing specialist perinatal mental health services and maternity outreach clinics; and in 2018, the Competency Framework for Professionals working with Women who have Mental Health Problems in the Perinatal Period had declared HCPs' ability to understand the father or partner's mental health a 'core competency'.

[101] Father-infant skin-to-skin has been found to have similar positive impacts as mother-infant skin-to-skin (Shorey et al., 2016).

[102] Mothers sometimes feel their grief is 'disenfranchised' insofar as empathy for their loss is lacking.

2.10. Policy

For almost two decades perinatal policy in England, Wales and Scotland has 'talked the talk'. In 2004, the National Service Framework for Children, Young People and Maternity Services (DfES & DH, 2004) declared that maternity care was to be 'woman-focused and family-centred' – i.e. with obstetrics focus on the woman, the wider family would be informed and engaged with throughout. That approach was never enacted, nor has it been in Scotland where in 2017 the Scottish Government's 'forward plan' for maternity care used the same terminology and, further, committed to ensuring that 'Fathers, partners and other family members are actively encouraged and supported to become an integral part of all aspects of maternal and newborn care' (Scottish Government, 2017). Also not implemented, including in Wales[103], has been the instruction embedded in the Healthy Child Programme (Shribman & Billingham, 2009) to "From the beginning, promote the father's role as being important to his child's outcomes".

The latest revised NICE Postnatal Care guideline (2021) which, in previous versions, paid little attention to fathers or partners, now refers to them throughout. It requires the workforce to engage with them in, for example, breastfeeding education and support – and also in promoting fathers' emotional attachment to their infants including encouraging skin-to-skin contact, face-to-face communication and learning to respond appropriately to their baby's cues (NICE, 2021). Is this the beginning of a 'new dawn'? Or will the NICE Guideline prove to be, like the previous bold policy papers, more rhetoric than reality (Sherriff & Hall, 2014)?

[103] A recent evaluation of the delivery of the Healthy Child Programme in Wales (KilBride et al., 2018) noted that "Health visitors are beginning to articulate the benefits of the programme, for … working with fathers … (This) may require more focused evaluation to determine both outcomes and further training and support required to health visitors to deliver and understand the onward effects".

3. Recommendations for policy and practice

3.1. Policy

All tax-funded services and interventions for families in the perinatal period – including those commissioned by central government (e.g. the Reducing Parental Conflict programme and Family Hubs) – should be **commissioned, designed, delivered, promoted** and **evaluated** in ways that **recognise fathers' own need for support** (whether or not they share a household with the child's mother) and **their impact on children and mothers**.

All tax-funded services and interventions for families in the perinatal period **should use evidence-based strategies to achieve high levels of father-inclusion, and should follow (and where relevant be inspected against) key guidance**, including the NICE Postnatal Care Guideline (2021), the NHS Good Practice Guidance in Involving and Supporting Partners and Other Family Members in Specialist Perinatal Mental Health Services (2021), the Forward Plan for Maternity and Neonatal Care in Scotland (2017), Parenting in Wales (2017), the Healthy Child Programme (2009) and the National Service Framework for Children, Young People and Maternity Services (2004).

A scalable, locality-wide approach to embedding father-inclusive practice should be piloted and evaluated across a whole network of perinatal services in a number of local areas.

Given the unavailability of parental leave to the vast majority of UK fathers, and the huge significance of fathers' participation in *solo* parental care in baby's first year for later care patterns, **the government should pilot new approaches, focused on different groups of working fathers, including those who are employed, self-employed and working in the 'gig economy'**. Ways in which employers do or could support fathers should be included in this.

Data should be collected by NHS and local authorities to assess whether government policy and official guidance on partner or father-inclusion **have been embedded into service design and communications.**

Fathers' names, contact details and NHS numbers should be entered onto NHS birth notifications so that fathers can be contacted directly by services. As is the case for mothers, the father's NHS number would link to his medical record for use by practitioners and for research purposes within a framework of data protection law and ethical guidelines.

3.2. Practice

Fathers need to be seen as an integral part of the family unit and non an 'add-on'. **The perinatal workforce needs adequate training to include fathers in all their work.** This should be incorporated in their initial professional training at universities and follow on through all their CPD training so that working with both parents become part of the norm. Only then we can change the current health professional culture and practice.

Ancillary staff, such as receptionists, should be included in CPD or other training to ensure that they understand the expectation to include fathers and are able to do so in a confident, welcoming manner.

If there is no systematic process for requesting, recording, and storing of fathers' and father-figures' names and contact details, **lobby for their inclusion or adapt systems** to ensure these details are incorporated.

If the father's details have been provided by a third party, without his being present, **the need to contact him to obtain his consent for his details being held on his child's record**, as required by GDPR, should be seen as an opportunity to inform him about the service and involve him.

4. Data for analysis and data collection gaps: a review of questions asked about fathers postnatally in three UK birth cohort studies

4.1. Introduction

Section 4 of this *Bringing Baby Home* report is aimed at an audience of researchers and research funders. It investigates the data that have been collected about fathers during the year following their baby's birth in three of the UK's large-scale birth cohort studies, including data about the inter-parental relationship.

4.1.1. The birth cohort studies

These three studies – the Avon Longitudinal Study of Parents and Children (the ALSPAC Generation 1 cohort – with babies born in 1991–92[104]), Millennium Cohort Study (MCS – with babies born in 2000–02) and Growing Up in Scotland[105] (GUS – with babies born in 2004–05 and 2010–11) – have tracked the development and experiences of large[106] representative[107] samples of 'cohort children' from pregnancy[108] or the postnatal year into the teenage years and beyond. Data about the children and their parents have been collected through self-completion questionnaires or interviews at a number of data collection sweeps, alongside (depending on the study) linkage to administrative records, biological samples, and clinical measures. The UK's birth cohort studies are valued internationally by medical and social scientists (Pearson, 2016). The studies have collected data across a broad range of topics and childhood outcomes for the examination of biological, demographic, economic, family, educational, psychosocial and other influences on children. Their longitudinal nature gives greater validity in evidencing cause-and-effect relationships than does data collected only at one point in time.

[104] Data collected in the ongoing ALSPAC Generation 2 (G2) study of the children of the 1990s babies (Children of the Children of the 90s) is covered in section 5 of this *Bringing Baby Home* report.

[105] Both Growing Up in Scotland cohorts, Birth Cohort 1 (born 2004–05) and Birth Cohort 2 (born 2010–11) are included in this *Bringing Baby Home* review of datasets. Birth Cohort 1 babies have been followed through to the adolescent years, whereas Birth Cohort 2 babies were followed only until they were aged just under five years.

[106] Around 14,500 babies in ALSPAC G1; nearly 19,000 babies in the MCS; around 5,000 babies in GUS Birth Cohort 1 and around 6,000 babies in GUS Birth Cohort 2.

[107] Representative of the former county of Avon in south-west England (ALSPAC); the UK (the MCS) or Scotland (GUS).

[108] ALSPAC recruited a cohort of pregnant mothers, collecting data from the women and expectant fathers antenatally; whereas the MCS and GUS recruited a cohort of infants from birth registration records. For the purposes of this report, we call all three birth cohort studies.

4.1.2. Why this review of datasets?

In this section of the report, the father-focused content of the ALSPAC, MCS and GUS questionnaires and interviews which collected data from fathers and mothers during the postnatal[109] year is examined. The aims of this scope of the questions asked about fathers postnatally are, **firstly,** to show the potential for secondary analyses of this data (see section 5 for an investigation of under-studied postnatal data collected about fathers); and **secondly,** to identify data collection gaps which might inform the content of new longitudinal studies and large-scale cross-sectional surveys. As part of the first Nuffield Foundation-funded Contemporary Fathers project, similar work was carried out in terms of fathers during the antenatal period (Burgess and Goldman, 2018).

The *Bringing Baby Home* literature review (section 2 of this report) includes many analyses of postnatal data from these three 'gold standard' quantitative studies. An international Delphi study of science leaders concluded that *"the next generation of birth cohort studies could benefit from collecting data from fathers or male caregivers … to capture a more complete picture of the family environment"* (Brown et al., 2021) (p47). The UK has been ahead in this respect, with ALSPAC the first large-scale UK child cohort study to collect data directly from fathers (Golding et al., 2021); and the MCS the first national UK birth cohort study to do so (Norman & Elliott, 2015).

New nationally representative birth cohort studies are in development in the UK. Subsequent to the Economic and Social Research Council (ESRC)'s strategic review of UK longitudinal studies (Davis-Kean et al., 2018) the ESRC has funded a project to assess the feasibility of a new Early Life Cohort study of babies born in the early 2020s. If a mainstage study goes ahead following this work, this will be the first UK-wide birth cohort since the MCS, and will examine the childhoods and longitudinal pathways for a cohort of babies affected by the ongoing pandemic (Burgess & Goldman, 2021), Brexit and other generational changes. Additionally, the Department for Education has commissioned a Children of the 2020s cohort study in England to focus on early childcare and education and other determinants of educational outcomes.

[109] In this and the next chapters, 'postnatal' refers to the year following birth. It is a term sometimes used to refer to just the first six weeks after the birth.

4.2. Which fathers and which mothers?

4.2.1. Cohabiting Partner Fathers

Firstly, this chapter reviews the data collected about the fathers termed (for the purposes of this review of datasets) **Cohabiting Partner Fathers**[110] – birth[111], adoptive, step and foster fathers who are a cohabiting partner of the birth, adoptive, step or foster mother, both of whom live in the baby's sole or main[112] household at the time of postnatal data collection. Nearly all mothers living with the cohort babies are birth mothers, and nearly all Cohabiting Partner Fathers at this time are birth fathers. In the MCS, these Cohabiting Partner Fathers included fathers living 'regularly' with the birth mother – including part-time resident fathers[113]; whereas in ALSPAC[114] and GUS, the meaning of 'live with' was left to the mother or father answering the questions about who lives in their household.

4.2.2. Own Household Fathers

Secondly, this chapter reviews the data collected about **Own Household Fathers** ('OHFs' – sometimes called, in the wider literature, 'non-resident' or 'separated' or 'absent' fathers): these are birth fathers who do not live full-time with the baby and whose main address is **not** the baby's sole or main address (where the baby lives – full-time or for half or more than half of the time – with the birth mother). Around fifteen percent[115] of babies have an OHF. For the purposes of this review of datasets, OHFs are categorised into:

- '**Partner OHFs'**: currently not cohabiting full-time with the birth mother but in an ongoing romantic relationship with her (a category overlapping with the MCS-identified part-time resident fathers); and

[110] ALSPAC questionnaires did not identify the gender of the mother's or main caregiver's partner unless the partner completed a questionnaire at 8 months after birth.

[111] The term 'birth father' is used to refer to birth or biological fathers of the baby. Birth parents are those named on the birth certificate (including any re-registrations). Not all birth parents are biological parents, for example one or both parents in a same-sex parental couple; other sperm or egg donation, and other non-paternity including that not disclosed. The terms used in ALSPAC questionnaires were 'biological father' or the baby's 'father'. The terms used in the MCS and GUS, were 'natural father' or the baby's 'father'.

[112] This includes the rare situations in which the baby lives more-or-less equally across their birth mother's and birth father's households. In this situation, it is the birth mother's household which would have been prioritised for data collection (Goldman & Burgess, 2017).

[113] Around 2% of cohort babies (aged nine months) had an identified part-time resident father in MCS data (Kiernan, 2006).

[114] For the ALSPAC eight weeks sweep, it is not known whether, or not, the mother's partner lived with her.

[115] 16% of UK babies under one year not living with both birth parents in analysis of Understanding Society data 2010–2015 (DWP, 2017).

- '**Non-partner OHFs':** separated from the birth mother or who were never in an ongoing romantic relationship with her.

In the mid 2000s in Scotland, for ten-month old infants, almost a third of OHFs were Partner OHFs (6% of all cohort babies) (Anderson et al, 2007 – GUS Birth Cohort 1 data).

Where studies set out to examine childhood and family life, or to understand child outcomes via genetic, epigenetic, social behavioural and other pathways, data collection about fathers is key, whether they live full-time or part-time in another household (the OHFs), or are fully resident with the child and their mother (Goldman et al., 2019). In the 2000s, the 15% of babies in England and Wales whose birth father did not live with their mother at the time of birth were twice as likely to live in deprived areas (Messer, 2011) and those in Scotland with an OHF at ten months were much more likely to have low household income (Bradshaw et al, 2013 – GUS Birth Cohort 2 data).

Biological fathers contribute half of the genetic inheritance of a child. Therefore, collecting data about the characteristics of **all OHFs whether involved with the baby or not** (such as demographics, health, height and weight, mental health, health behaviours, personality, literacy, and numeracy), especially when combined with genetic samples, has value in biosocial research aiming to disentangle genetic and social influences on children's development. These same characteristics, and additionally data relating to the OHF's fathering and the father-child relationship, are important in the context of a baby spending regular or substantial time[116] with an OHF. In the early 2010s in Scotland, for ten-month old infants, around 70% of babies with an OHF saw their birth father at least weekly (Bradshaw et al., 2013) – GUS Birth Cohort 2 data); and, in the mid 2000s, a quarter stayed overnight with their father at least weekly (Anderson et al., 2007).

4.3. Obtaining information about fathers in the postnatal period

4.3.1. Gathering father-data: who is the informant?

A key issue is whether data about fathers is collected from mothers or fathers or both. There is potential inaccuracy and bias when mothers are asked to report on the characteristics, perceptions, attitudes, and behaviours[117] of fathers (Goldman and Burgess, 2017; Hinchliffe, 2013) and even more so when the father is an OHF and spends time with

[116] In the early 2000s (MCS data), 95% of birth fathers were in a relationship or friendship (married, cohabiting, closely involved or 'just friends') with their child's mother at the time of the birth (Kiernan & Smith, 2003).

[117] This may not apply to socially undesirable behaviours, for which some fathers may under-report compared to their partners.

the child in a separate location from the mother's household (Bryson et al., 2017; Goldman et al., 2019; Kiernan, 2016).

ALSPAC collected self-completion questionnaire data from mothers and Partner Fathers (whether or not cohabiting with the mother, so including Partner OHFs) in the early postnatal period (eight weeks after birth) as well as in later infancy (eight months infant age). The MCS interviewed mothers and Cohabiting Partner Fathers[118] (including part-time resident fathers) when the babies were aged nine months. Likewise, GUS interviewed mothers at around ten months infant age, but did not collect data from fathers during the postnatal period[119]. This means that all the GUS data about fathers postnatally is reported by mothers. None of these three studies collected data from Non-partner OHFs – that is, OHFs who were not in an ongoing romantic relationship with their infant's birth mother.

Each of the cohort studies had separate questionnaires or interview schedules[120] for the baby's **mother** (ALSPAC 8 weeks sweep) or **main/sole parental[121] research participant** (ALSPAC 8 months sweep, MCS and GUS); and for the Partner **Father** (ALSPAC 8 weeks sweep) or the **main parental research participant's partner (**ALSPAC 8 months sweep and MCS). In ALSPAC, the 'carer' questionnaire (for the main parental research participant) gave the instruction "*the person who is mostly responsible for looking after the study baby*" but then stated: "*Your answers will help us understand what problems babies and their mothers have at this stage*". In the MCS, the mother was prioritised by interviewers for the longer 'main respondent' interview regardless of her share of parental childcare, and similarly in GUS for the sole 'main carer' interview[122].In each of the cohort studies, a tiny proportion[123] of the parents completing data collection as the main or sole parental research participant

[118] There were around 18,500 'main respondent' interviews and 13,200 'partner' interviews in the MCS postnatal sweep. ALSPAC collected partner questionnaires from around 8,300 partners at eight weeks and 7000 partners at eight months after the birth.

[119] GUS has collected data from Cohabiting Partner Fathers when the children were aged 2, 12 and 14 years.

[120] In the rest of this section, the term 'questionnaire' refers to the data collection instrument, whether that is a paper self-completion questionnaire (ALSPAC) or a structured interview schedule including a self- completion component (MCS and GUS).

[121] The term 'parental' in relation to questionnaires and interviews is used to mean acting in a parental capacity, so including grandparents and other non-parental caregivers living with the baby without a resident parent.

[122] The mother was prioritised in interviewer instructions because data was collected about pregnancy and birth. Additionally, the cohort babies were generally recruited through their mothers. The MCS and GUS samples of babies were taken from Child Benefit records, which at that time generally included only the mothers' name and contact details. ALSPAC mothers were recruited during pregnancy via maternity services.

[123] In the MCS and GUS postnatal sweeps, **birth** mothers were interviewed as main or sole parental research participants in the vast majority (over 98%) of cases. The exceptions in the MCS were 18 'lone fathers' (0.1% of the total sample of babies), three birth fathers (two where the birth mother was given a 'partner interview', and one where the mother could not take part at all in the fieldwork), two adoptive mothers, two foster mothers, and five other guardians (Joshi et al., 2004).

were fathers (or non-parental caregivers). These fathers were asked a fuller range of questions than those fathers interviewed as a 'partner'. This was the case for any two-father families in the sample, and where the birth mother had died, was away or otherwise not living with the baby, did not speak English, was incapacitated, or would not participate. Even more rarely[124], parents completing 'partner' data collection were mothers (or non-parental caregivers). Gay fathers and 'lone fathers' in the postnatal year are important categories of fathers but with very low prevalence (Norman, 2011). These large-scale birth cohort studies do not provide sufficient samples for separate analysis.

This review of datasets is restricted to looking at data collected about fathers:

- in families in which **the mother** completed data collection designed for **mothers or main/sole parental research participants**; and, if included in the study, **a Cohabiting Partner Father[125]** completed data collection designed for **fathers or partners**
- **in the postnatal sweeps** of each study and about fathers' characteristics, perceptions, behaviours and relationships **during the postnatal year** up to but not including twelve months[126] – this *excludes* (i) any retrospective data[127] collected in later sweeps about fathers postnatally (ii) data collected in the postnatal sweep/s about fathers in the antenatal period or during the birth – see Burgess & Goldman, 2018, for a review of this data – or about the fathers' childhood and earlier adult years.
- through **questionnaires and interviews**, excluding linked administrative data (Lut et al., 2022), clinical measures and bio-samples[128].

[124] In the MCS postnatal sweep, birth or biological fathers comprised over 99% of all respondents completing 'partner interviews'. The remainder included around 30 step, adoptive or foster fathers, and 12 cohabiting partners of the 'main respondent' who were not the baby's father (Prady & Kiernan, 2016).

[125] The MCS also collected data about fathers in an additional 'proxy interview' with the mother when her cohabiting partner (nearly always the baby's father) could not be interviewed. Only around 200 of these interviews were carried out and their content is excluded from this datasets scope.

[126] Table 7 in section 6 lists the questionnaires that were examined in this *Bringing Baby Home* review of datasets. ALSPAC questionnaires completed at 12 months (infant age) were excluded.

[127] This would have much lower reliability than data collected at the time during the postnatal sweep.

[128] As well as providing genetic data, biological samples collected during the postnatal interview would allow measurement of hormone levels (e.g. testosterone, vasopressin, and oxytocin) which have been analysed in relation to perinatal father involvement (Bakermans-Kranenburg et al., 2019). In the MCS, saliva samples were collected later (age 14 years) from resident birth fathers and mothers. In ALSPAC, hair and nail samples were collected from fathers and mothers in 1993 when cohort children were aged 0–2 years.

4.3.2. What data is collected about and from Cohabiting Partner Fathers?

Table 1 in section 6 provides a summary of the questions asked in ALSPAC, the MCS and GUS about **Cohabiting Partner Fathers** (including the inter-parental relationship) during their baby's first year. This data is collected from mothers and/or from the fathers (who are nearly all birth fathers). For comparison, the content of the interviews that were piloted[129] in the discontinued[130] Life Study birth cohort study is also included, although this planned study did not progress to mainstage fieldwork (Kiernan, 2016).

Despite a wide variety of questions about fathers and the cohabiting parents' relationship being asked in at least one of these cohort studies (see Table 1 in section 6), the questions asked **in all three studies** are mainly about:

- the father's economic contribution (through work) and socio-economic status
- the types and extent of the father's parenting activities, especially in terms of his share within the cohabiting parental couple of hands-on physical infant-care and household tasks[131] ('domestic division of labour')
- the couple relationship, with all three studies including questions on couple conflict and relationship problems but only two including questions on partner support.

Each of the three cohort studies had a distinctive focus for its questionnaire content.

ALSPAC collected detailed data from both the mother and father about the father's health (physical and mental), health behaviours and couple relationship, but asked fewer questions about the father's demographics[132] and employment. It is the only one of the three cohort studies to have collected postnatal data about:

- whether the father had been diagnosed with depression or anxiety since the baby was born[133] – and use of a postnatal depression scale and an anxiety scale, including in the early infancy sweep at 8 weeks

[129] It is likely that question cuts would have been made to the Life Study interviews following the pilot.

[130] The discontinued Life Study had planned to collect a broad set of data from mothers and fathers during pregnancy and six and twelve months after birth. See the Life Study website.

[131] The content of the questions has changed from ALSPAC asking about the father 'helping' the mother to the MCS and GUS identifying the share of each activity. ALSPAC asked both fathers and mothers about the domestic division of labour, but the MCS and GUS asked only mothers.

[132] Demographics such as age and ethnicity were asked in ALSPAC antenatal sweeps. In nearly all cases, the mother's partner at that time would have been the same partner as during the postnatal sweeps.

[133] By 9 or 10 months, fathers may have recovered from earlier depression and anxiety (Carson et al., 2015).

- the number of hours[134] of *solo* childcare by the father i.e. without the mother present
- multiple aspects of father adjustment and the father's responses to, feelings about and bonding with the baby
- co-parenting – including trust of the other parent with the baby
- a broader range of father-baby interactions than just the physical infant-care covered in the MCS or GUS, including cuddling the baby, physical play, playing with toys, taking the baby for walks and looking at pictures in books
- risk factors such as the father's response to the baby's crying; and identifying any criminal justice involvement and drug use.

Most of the father-data that the MCS collected came directly from fathers in 'partner interviews', with mothers asked little about their cohabiting partner (unless the mother did a proxy interview where the father could not be interviewed[135]). The MCS collected more wide-ranging data about the father's employment and the mothers' and fathers' gender role beliefs[136] than did the other two studies, including about his workplace and work flexibility. The MCS is the only one of the three studies to have postnatal measures of the father's self-esteem, locus of control, literacy, numeracy, and social and political attitudes; and to have identified birth fathers who reside part-time in the mother's household. In comparison to ALSPAC, the MCS collected much less data[137] about the father's adjustment to parenthood and none about his emotional relationship with the baby.

GUS data about fathers during their baby's first year is all from interviews with mothers. The GUS cohort studies collected detailed data about the father's demographics, employment, and 'leave for parenting'[138], with some differences between Birth Cohort 1

---

[134] The MCS did not ask this question directly but did ask about the father being the main child carer whilst the mother is working or studying. The mother's working hours are known. GUS asked about the number of hours of care for the baby by an OHF but not by a 'cohabiting partner father'.

[135] Only around 200 of these 'proxy interviews' were carried out and their content is excluded from this review of datasets.

[136] The gender role statements in the questionnaire were predominantly attitudes to maternal employment and caregiving. One father-focused statement was included "*Children need their father to be as closely involved in their upbringing as their mother?*".

[137] The MCS asked how the father felt about the **amount of time** that he had to spend with the baby; and also open questions about the best thing and most difficult thing about his first months with the baby. The responses to these open questions were coded, see Microsoft Word – MCS1 Code Book and Edit Instructions.doc (ucl.ac.uk) although there were coding issues, see MCS1_Tech_Report_ID_Fieldwork.pdf (ucl.ac.uk).

[138] The term 'leave for parenting' is used here to refer to paternity leave, parental leave, and the use of annual leave and unpaid leave to look after the baby. None of the birth cohort studies identified **when** leave was taken, such as whether this was in a single block of leave following the birth, or in two or more blocks, and whether it was taken after the end of the mother's maternity leave or at the same time (Tanaka & Waldfogel, 2007).

and Birth Cohort 2. It is the only one of the three studies to have collected data about the father's participation in programmes and groups for parents or babies. It has also collected unique data on the total length of leave from work (paid and unpaid) taken by the father to be at home with the baby; whether the father was on leave at the time of interview; and which parent was perceived by the mother to be the 'main carer' specifically for the baby[139].

Life Study planned to collect measures directly from Cohabiting Partner Fathers, as well as from mothers, that were novel in the postnatal sweeps of large-scale UK birth cohorts, including diet and physical activity; psychological characteristics (ADHD, autism and personality); and an object relations scale about fathers' representation of baby's reactions to him, as a component of father-infant attachment.

4.3.3. Striking a balance

The questions included in these birth cohort studies are a result of the decisions made by research funders and directors in a specific context. Resources for cohort studies are tight, and the fieldwork design and selection of questions would have been in relation to that study's key aims, research questions and context. ALSPAC started as part of the European Longitudinal Study of Pregnancy and Childhood (ELSPAC) in which there was much emphasis on *"importance of measuring the psychology of the parents, and the way they interacted and the way they would interact with the child, and the child's behaviour"* (Overy et al., 2012). The incorporation of questions on parenting services and 'leave for parenting' may reflect the policy focus of GUS, which is commissioned by the Scottish Government.

Clearly, there is a balance to be struck between questions about the following issues (alongside equivalent data about mothers):

- father demographics and socio-economic status to differentiate subsets of fathers for subgroup analysis; use as control variables in multivariate analyses of other issues; and investigate the inter-generational transmission of circumstances and inequalities
- the detail of fathers' employment, income, 'leave for parenting' and work-care decisions
- fathers' caregiving, fathering and the father-baby and inter-parental relationships

especially since these factors interact in their influences on children (Keizer, 2020).

The extent of data collection about and from fathers is linked to key differences between the design of the three cohort studies.

Firstly, **whether data was collected directly from fathers**. Table 1 in section 6 shows the importance of data collection from fathers (in ALSPAC and the MCS) for the inclusion of

[139] The MCS identified which parent took the main role for looking after all the children in the household ("generally being with and looking after the children") so including siblings, for whom there may have been a different parental division of childcare.

questions about the father's mental health, sleep, life satisfaction and psychological characteristics; detailed employment characteristics; activities with the baby, relationship with the baby, adjustment to parenthood, parenting and gender role beliefs, and perceptions of the couple relationship, coparenting, and social support. In contrast, GUS was limited to factual and other information that mothers were able to report. A few questions (e.g. problems since the baby's birth, and activities with the baby) were asked (of mothers) in terms of the parental couple as a whole rather than each individual parent. For some factual measures and analytic purposes, concordance levels between mother and father may be sufficient (Prady & Kiernan, 2016). However, even facts such as occupation, educational qualifications, paid work hours and income can be problematic in terms of a survey respondent reporting on their partner (Dave & Knight, 1997; Prady & Kiernan, 2016; Tagiyeva et al., 2011).

Secondly, the **recruitment method for fathers, and the data collection mode for both mothers and fathers**. ALSPAC used **self-completion questionnaires** that recruited mothers gave to their partner at each survey sweep. The fathers posted back the questionnaires. ALSPAC had no information on the identity of the Partner Father, nor whether the mother had passed the questionnaire to him, so reminders could not be sent, reducing response rates., with potential impacts on the representativeness of ALSPAC 'partners' data (Bowen, 2015; Gutierrez-Galve et al., 2018; Hanington et al., 2012; Ramchandani & Psychogiou, 2009; Ramchandaninet al., 2008; Washbrook, 2007). There are accounts of the emphasis in ALSPAC on being wide-ranging in the data collected (Overy et al., 2012; H. Pearson, 2016) which was made possible by lengthy questionnaires. Such an approach can be a strength in terms of not being able to anticipate future research questions over the long timescale of the study. However, there are also risks that some of the variables collected will not be used (see section 5 of this report); and there may be impacts on response rates, attrition, and data quality.

In contrast, the MCS and GUS used **in-person doorstep recruitment, and in-home interviews**, both carried out by skilled survey interviewers. This meant a substantial budget constraint on the total interview time for each household, and the range of topics covered, influenced also by the need to reduce the burden on respondents to maximise both response rate and data quality (Smith & Joshi, 2002). The great advantage of interviewer-administered recruitment and interviews in the MCS was a higher response rate (88%) from eligible partner fathers than in ALSPAC. Even in the MCS, there remained differential response from partners according to key 'main respondent' and area characteristics (Plewis, 2007).

One way in which the MCS – as well as other cohort studies in the UK and abroad – restricted total interview time for each household was to assign a much longer 'main respondent' interview (twice as long – 65 minutes) to one of the parents, with a shorter 'partner interview' (30 minutes) for this 'main respondent's cohabiting partner. As referred to earlier in section 4, the mother was prioritised for the 'main respondent' interview regardless of her share of parental childcare.

The ALSPAC father or 'partner' questionnaires at eight weeks and eight months were around 15 and 20 pages respectively, compared to mother or 'carer' questionnaires of around 20 and 30 pages. This difference in the extent of data collection from the two parents was smaller than that in the MCS, which enabled ALSPAC to collect symmetrical data from fathers and from mothers for a greater number of variables[140]. ALSPAC gives four-way data for some issues: from the mother about the father's parenting and relationship with the baby, and equivalent variables from the mother about herself; from the father about the mother; and from the father about himself. This study also asked both mothers and fathers about key father socio-demographic characteristics[141], perhaps in case the father didn't complete a 'partner questionnaire'.

Authors of several secondary analyses of the three cohort studies note the importance of **equivalent ('symmetrical') data from fathers and mothers** for addressing scientific research questions about parent mental health, perceptions of the couple relationship, perceptions of co-parenting, involvement with the child, parenting behaviours, gender role beliefs and parenting beliefs (Bird et al., 2020; González-Sancho, 2014; Hinchliffe, 2013; Lewis et al., 2018; Parkes et al., 2019; Psychogiou et al., 2019). Without data from fathers, it may be assumed without evidence that only maternal effects are important as predictors of child outcomes (Sharp et al., 2018). If father involvement and characteristics are not controlled for in analyses of mother effects, then the net 'mother effect' may represent the impact of both parents. Descriptive and analytical data about fathers is also key for a policy-focused study such as GUS in fully describing and understanding families (Chanfreau et al., 2011; Kadar-Satat & Koslowski, 2015).

This issue is important even where the mother is the main caregiver, and in a proportion of these 'father secondary caregiver' cases, the father takes a substantial role. It applies even more so when the parents have an even share of parental childcare. In MCS data, 20 years ago, around a third of **employed** Cohabiting Partner Fathers shared childcare tasks (for all the children in the family) equally or near-equally when the infant was nine months old (Norman, 2011). This compared to fewer than 1% of these fathers being the main parental caregiver for a baby.

Collecting equivalent data from fathers and mothers regardless of their division of childcare for the baby may enable parental gender effects to be disentangled in analysis from main caregiver versus secondary caregiver effects. It also maintains the opportunity for analysis

[140] In both ALSPAC and the MCS, there is symmetrical data from mothers and from fathers on their perception of the couple relationship, their parenting beliefs, and their reporting of partner violence. Additionally, ALSPAC has symmetrical (or near-symmetrical) data for division of childcare/ household labour, frequency of parent-baby activities; bonding/ relationship between parent and baby; parental adjustment and responses to the baby; and trust of the other parent as a parent. MCS has symmetrical data about gender role beliefs.

[141] The alternative strategy in the MCS was to collect demographic data from the mother in the 'proxy interview' if the father did not participate.

of a full set of longitudinal data for mothers and fathers because the father's and mother's share of parental caregiving often changes over time.

A longer interview for fathers – or for 'partners' (who are more often fathers than mothers) – carries increased costs and respondent burden. Yet the impact of additional questions on respondent burden may interact with how interesting and relevant these questions are for research respondents. Questions were added to the MCS 'partner interview' after early piloting so that the interview was more interesting for fathers (Kiernan, 2016). Growing up in Ireland is an exemplar of a large-scale birth cohort study which has collected postnatal data from fathers on a range of parenting activities, parenting stress, and the father-infant relationship (Smyth & Rusell, 2021).

Recommendation: Consideration should be given in a future birth cohort study to a more even allocation of interview time between the parents, rather than a longer main parental interview and a shorter 'partner' interview. This may also raise the response rate from fathers, who are less likely than mothers to be the main caregiver of the baby, by showing that the study considers him to be an equally important participant to the cohort child's mother, and by including in-depth questions of interest to him as a parent. If resources do not allow for that, a question near the beginning of the household interview should establish whether the father is a shared or main caregiver, and if he is either, the parents should be given the opportunity to select which of them undertakes the longer interview. A good question would be needed to determine the share of parental caregiving.

4.3.4. What data is collected about and from Own Household Fathers?

This section looks at the questions asked about (i) 'Non-partner OHFs' (not cohabiting and not in an ongoing romantic relationship with the mother); and (ii) 'Partner OHFs' (not fully cohabiting but in an ongoing romantic relationship) in the three birth cohort studies. The ESRC's Longitudinal Studies Strategic Review stated that a future birth cohort study could *"collect data on resident and non-resident fathers and mothers in order to adequately address the gene-environment interplay, to better understand the dynamics of separated families and to enable more research on the intergenerational transmission of inequalities"* (Davis-Kean et al., 2018)

4.3.5. Non-partner OHFs

Both the MCS and GUS main or sole parental interviews (with the birth mother) included a module of questions about **'non-resident parents'**, almost all of whom were fathers – i.e. OHFs.

ALSPAC postnatal mother and 'main carer' questionnaires did not include similar questions, although later sweeps did so. Non-partner OHFs were not interviewed in the MCS or GUS, nor was questionnaire data collected from them in ALSPAC.

Table 2 in section 6 provides a summary of the questions asked of MCS and GUS birth mothers (in the 'non-resident parents' module) about **Non-partner OHFs** (including relationships between the two birth parents) during their baby's first year. The content of the drafted Life Study interviews with birth mothers about OHFs, **and also interviews with OHFs,** are included in the table, although (unlike the interviews with Cohabiting Partner Fathers) these were not tested in the Life Study pilot, and some question cuts would have been made.

The questions asked in both the MCS and GUS are those about:

- contact and in-person time together[142] between the OHF and baby
- whether the father's name is on the baby's birth certificate
- whether the father pays child maintenance
- the father's interest in the baby
- the relationship between the birth parents.

These types of questions were cognitively tested with Scottish birth mothers in an ESRC-funded scoping study (Goldman et al., 2019).

Perhaps because it is the most recent of the cohorts, GUS asked mothers many more questions about Non-partner OHFs. These included:

- the OHF's economic activity[143], such as whether he is in paid work[144]
- the OHF's non-financial support to the mother or baby
- whether the baby stays overnight in the OHF's household, and/or is taken on outings; and the number of weekly hours and days that the OHF 'looks after' the baby
- the time taken to travel between the mother's and OHF's households (a big constraint on the degree and type of involvement)
- the birth parents' co-parenting of the baby (focused on joint decision-making), and whether the current arrangements involved a court order or formal or informal mediation

[142] This includes the frequency of father-infant in-person contact. See Goldman et al, 2019, for the findings of cognitive testing that these questions do not work well in capturing accurately the extent of interaction.

[143] The 2018 Eurostat Labour Force Survey module on 'reconciliation between work and family life' identified OHFs regularly taking care of their children living elsewhere, and asked questions about work flexibility, parental leave, and work barriers to their caring responsibilities. Similar questions could be asked of OHFs in a birth cohort study.

[144] The MCS asks instead about the OHF's age and ethnicity.

- whether the OHF has a (new) cohabiting partner (who may act as a part-time resident or non-resident stepparent to the baby) and/or children with a different or new partner (who will be step- or half- siblings of the cohort baby) – although these circumstances are less common for babies than for older children.

4.3.6. Partner OHFs

Each of the three cohort studies treated **Partner OHFs** in a different way for the purposes of data collection and questionnaire design.

In the **ALSPAC postnatal sweeps**, the same questions were asked about Partner OHFs (who were the non-cohabiting partner of the mother) as were asked about Cohabiting Partner Fathers (see Table 1 in section 6), **from both the birth mother[145] and the Partner OHF**, who could complete a 'partner questionnaire'. However, in the eight weeks sweep[146] Partner OHFs were not differentiated from other cohabiting and non-cohabiting partners of the mother, so it is not possible to identify them in the dataset for analysis.

The MCS took a different approach. A **subset of Partner OHFs** was identifiable in the data as **'part-time resident fathers';** included as household members for research purposes; and could complete a 'partner interview'. These fathers regularly stayed over in the mother's household (for example for one or two nights a week) **and had not been identified earlier in the interview** as a 'regular' household member. Almost all[147] the questions in Table 1 section 6 – those about Cohabiting Partner Fathers – were also asked about this subset of Partner OHFs **from both the mother and the Partner OHF**. Additionally, the mother was asked a subset[148] of the 'non-resident father' questions asked of mothers about **Non-partner** OHFs (see Table 2 in section 6).

Other Partner OHFs were **not identified as such** in the postnatal sweep[149] of the MCS. If they had been identified early in the interview as a 'regular' household member[150], they

[145] When mothers were asked in the mother and 'main carer' questionnaires about their partner, this could include a non-cohabiting partner.

[146] Partner OHFs at eight months infant age can be identified only if the OHF completed a 'partner questionnaire'. The 'mother questionnaire' did not identify the relationship of a non-cohabiting partner to the baby. Almost all non-cohabiting partners of the mother would have been birth fathers, so this assumption could be made if the partner questionnaire was not completed.

[147] The exceptions were questions about the division of childcare and household tasks and about the couple relationship (including partner violence).

[148] The frequency with which the part-time resident father saw the baby; how interested the father was in the baby (the mother's perception); and whether he paid child maintenance.

[149] Later sweeps of the MCS did identify where the mother had a non-cohabiting partner who was the cohort child's father.

[150] There is a household inclusion probe BEFORE asking the mother the question to identify 'part-time resident' birth fathers, so a proportion of part-time cohabiting birth fathers may initially be identified as

were included with (but not differentiated from) full-time Cohabiting Partner Fathers (see Table 1 in section 6 for the question topics). If they were **not** identified as living part-time or 'regularly' in the household, they were included with (but not differentiated from) Non-partner OHFs among 'non-resident fathers' (see Table 2 in section 6 for the range of data collected).

GUS was the only one of these three birth cohort studies to **explicitly identify all Partner OHFs**, by asking the mother whether she was in a relationship with someone who did not live with her, and whether this person was the 'father' of the cohort baby. It is not known whether the father stayed over regularly with the baby in the mother's household. Mothers were asked the same questions about these Partner OHFs as they were asked about 'non-resident fathers' (Table 2 in section 6). It is possible that a further subset of part-time Cohabiting Partner OHFs was included early in the interview as living in the household, and so included among (but not differentiated from) the Cohabiting Partner Fathers.

In terms of the questions asked to mothers about **Partner OHFs** in the drafted Life Study interview, this was a hybrid of the approaches in ALSPAC and GUS. Mothers identified whether they had a non-cohabiting partner who was the baby's birth father. They were to be asked many[151] of the same questions about Partner OHFs as they were to be asked about Cohabiting Partner Fathers, including his demographics, employment, father activities with the baby and the couple relationship and **additionally** a subset of the questions asked to mothers about Non-partner OHFs (see Table 2 in section 6).

Both Partner and Non-partner OHFs were to be approached in Life Study for interview, either in the mother's household or in his separate household. The draft interview included data about his demographics, living arrangements, housing, height and weight, employment, finances, payment of child maintenance, health (physical and mental), health behaviours, personality characteristics, relationship, and decisions about the baby with the birth mother, and degree of contact and in-person time with the baby (see Tables 1 and 2).

Involved OHFs (who saw the baby) would have additionally been asked (in Life Study) about overnight stays with the baby in the OHF's, mother's or a grandparent's household; the frequency of various father-baby activities***;*** and his relationship and quality of time with the baby. Some of this was symmetrical data to that collected from the birth mother. All OHFs would have been asked whether they wanted more involvement in the baby's life; about barriers to greater involvement; the extent of decision-making with the mother about the baby (an element of co-parenting); and his self-perception as a parent.

household members and not identified as part-time resident – *PCHK Can I just check, is there anyone else living here regularly as a member of this household? 1 Yes 2 No*

[151] Excepting the following: when the couple started living together; organisation of finances within the couple; division of childcare and household tasks; the change in amount of housework done by the father; and the father's usual take-home pay from work and receipt of specific benefits/tax credits. These questions were **not** asked of the mother about a **non-cohabiting** partner.

Both the Children of the 2020s study and the Early Life Cohort feasibility study are planning data collection directly from OHFs. Strategies to successfully recruit and retain OHFs in birth cohort studies, based on a review of methodological evidence, are set out in a scoping study for the Economic and Social Research Council (Goldman et al., 2019; Goldman et al., 2021).

4.4. Gaps in birth cohort data on fathering and the father-infant relationship, with suggestions for future birth cohort studies

This discussion focuses on gaps in the data collected from mothers and fathers on 'fathering' (caregiving) issues – father involvement with the baby; the father-baby relationship, father adjustment and co-parenting. This data can be collected both from Cohabiting Partner Fathers and from involved OHFs, as discussed previously.

Because there is no nationally representative large-scale UK data about a recent cohort of babies and their fathers and mothers, with longitudinal follow-up of these families, all the postnatal data of continuing interest that have been collected for previous cohorts of babies in ALSPAC, the MCS and GUS can be defined as a current data collection gap. For research on fathers, this gap applies especially to the data which were last collected (in a birth cohort study) thirty years ago in ALSPAC from Cohabiting Partner Fathers. It is therefore recommended that a future birth cohort study includes questions on these issues, for both **Cohabiting Partner Fathers** and **involved OHFs**. In particular*:*

- a broad range of father-baby interactions, including those regarded as 'cognitively stimulating'[152] (Lekfuangfu et al., 2015): cuddles, putting the baby to bed, talking with the baby, telling stories, physical and creative play, playing with toys, taking the baby for walks and outings, and looking at pictures in books; as well as the physical care that is often specific to babies and toddlers (Norman & Elliott, 2015). Physical play is a key part of fathers' interactions with children (Amodia-Bidakowska et al., 2020)
- data on the **quantity** of *solo* care of the baby by the father – the **frequency** of involvement does not equate to the **amount of time** spent together and **when**[153] fathers spend time with their babies may also be important (McMunn et al., 2017)

[152] Activities such as conversation and physical play occur during routine physical care tasks; although Kroll et al (2016) write – "Nappy-changing and 'looking after' do not necessarily entail the carer's full attention… Hence, their lack of clear association with behavioural outcomes in studies of father involvement, including ours, is perhaps unsurprising… Other caring tasks (bedtime, reading, play) have a potential for more complex interaction" (p13).

[153] This could be the time of day; and whether the time together is on weekdays (when the baby may be in daycare for part of the time) or weekends. Diaries and calendars, such as those used in time-use studies, would give the best data on time and timings (Hinchliffe, 2013; Goldman et al., 2019).

- father adjustment to parenthood in the postnatal period, and father's responses to and feelings about ('bonding with') the baby– this is an indicator of the **quality** of his interactions with the baby, distinct from the data collected in ALSPAC and the MCS on the **frequency** of different types of interactions (Emmott, 2015; McMunn et al., 2017; Norman & Elliott, 2015; Zilanawala et al., 2017)
- co-parenting in infant care (Hinchliffe, 2013), including trust of the other parent with the baby
- the father's response to the baby's crying; criminal justice involvement and drug use, all of which have been linked (with varying strength of evidence) to the father's physical abuse of his baby (Davies & Goldman, 2021).

Some of these parenting topics were asked of mothers (about herself or the parental couple) in the MCS or GUS main/sole parental interview; but not (in the MCS) of fathers in the 'partner interview'.

If using what has been collected in ALSPAC, the MCS and GUS – and had been planned for Life Study (Tables 1 and 2) – as a guide to future data collection on fathering and the father-baby relationship, what may be missing? Are there opportunities for novel data in future studies?

The following sub-sections propose **innovations for future studies**:

- a graduated questionnaire scale of father and mother involvement with the baby
- questions about father responsibilities for organising what the baby needs
- use of validated parental involvement and parenting scales with fathers
- collecting observations of father-infant interactions.

4.4.1. A graduated questionnaire scale of father and mother involvement with the baby

Earlier, it was recommended that a new birth cohort study needs a good question to determine the father's share of parental caregiving to the cohort baby. This is a key question for investigation of a new generation of babies in which greater sharing of parental childcare may be more common than in the older cohort studies. It is also key for fieldwork purposes. If there is to be a longer main parental interview, this question could be used early in a cohort interview to identify which parent is invited to do it. A graduated scale is needed to identify (i) evenly shared involvement; and (ii) where one parent does more than the other – but there is substantial involvement by both parents.

The MCS asked about the division within the parental couple for who is "generally with and looking after the children", so including care given to siblings. However, one parent may take the lead caregiving role for the baby, but not for all the children in the family, for

example if both parents are working during the day, or one parent is looking after the baby during the day when older siblings are in childcare or at school, or there are several siblings. In contrast, GUS asked 'who is the main caregiver for **the baby' specifically**: *Can you tell me who is [the baby's] main carer – that is, the adult in the household who has most involvement in the day-to-day care of [baby]*?" The question allowed any adult in the household to be coded in response. In 98% of cases interviewed at 10 months in the second GUS birth cohort, the baby's mother was recorded as the 'main carer' (personal communication with Paul Bradshaw at Scotcen).

4.4.2. Questions about father responsibilities for organising what the baby needs

Father's role in looking after their baby, especially if they are a main or shared caregiver, may include parenting responsibilities that go beyond hands-on infant care and time together. Norman and Elliot (2015) differentiate between **'direct responsibility'** and '**indirect responsibility'** for fathers**.** Direct responsibility refers to *"the planning of the child's day to day life"* (Norman & Elliott, 2015 p6), relating this to Lamb's three-part model of father involvement – **engagement, accessibility** and **responsibility** (Lamb, 1986). Indirect responsibility comprises "*the support activities that provide a positive nurturing environment for the child"* such as housework (Norman & Elliott, 2015), p6. These responsibilities are linked to family decision-making and co-parenting. They may contribute to a parent's 'mental load' and involve 'cognitive and emotional labour'[154]. These concepts have become a focus for family and gender research since the postnatal sweeps of ALSPAC, the MCS and GUS – see (Luthra & Haux, 2022) for an account of mental load in separated families.

Measures of the division of household tasks were obtained, to differing extents, in ALSPAC, the MCS and GUS, including responsibilities such as paying bills and shopping[155]. However, questions about direct responsibility, such as for the baby's health (Norman & Elliott, 2015), meal planning (Batalova & Cohen, 2002) and arranging non-parental childcare, are missing in these three birth cohort studies for Cohabiting Partner Fathers[156]. In future child and family research studies, items could be used from the *Who Does What* scale (Cowan & Cowan, 1988), which covers decision-making, arrangements and

[154] The concepts of 'mental load' and 'cognitive and emotional labour' refer to family and household 'management' including forward planning, associated anxieties, and the emotional maintenance of family relationships. Research to date shows that women are more likely to take on these, often invisible, activities.

[155] Only ALSPAC asked about washing-up and shopping. Only the MCS asked about household repairs, DIY, decorating and money/bills, which are less frequent household tasks and often the male partner's responsibility in traditional divisions of household labour (Batalova & Cohen, 2002).

[156] The Life Study questionnaire **for OHFs** included questions about which parent was mainly responsible for taking the baby to the doctors and nursery or childminder. Both GUS and Understanding Society have asked about inter-parental decision-making **between birth parents living separately**, in respect of issues such as immunisations, the baby's diet, education and health.

responsibilities such as the baby's feeding schedule; choosing toys; baby sitters or childcare; dealing with the doctor; finances and holidays; and contact with family and friends.

4.5. Use of validated parental involvement and parenting scales with fathers

Table 3 in section 6 gives examples[157] of father involvement, parental beliefs, parental stress, co-parenting and parent-baby bonding or attachment self-report (questionnaire) scales which have been used internationally with fathers. Similar types of scales were used with mothers in the postnatal sweeps of GUS and the MCS[158] but not with fathers.

The full scales may comprise a greater number of question items than there is space for in a multi-purpose cohort study; but some have shortened versions, or sub-scales which can be used separately. Most of these scales are formally validated although with differing degrees of evidence for use with fathers. The advantage of using these scales is harmonisation with other studies which have used them abroad. The disadvantage of introducing them into a new UK birth cohort study is a lack of comparability with the questions asked in previous UK birth cohorts such as ALSPAC and the MCS about father involvement and the father-infant relationship. Yet measures for a variety of constructs develop and change over time, resulting in discontinuities in the data collected by different studies. This has been the case for the measures of mental health, diet and socio-economic status used in the UK's birth cohort studies, with subsequent harmonisation projects[159].

4.5.1. Collecting observations of father-child interactions

The characteristics of parent-infant interactions and the behaviours of babies are more reliably assessed with observational evidence (Flouri & Malmberg, 2012; Gutierrez-Galve et al., 2018; Gutierrez-Galve et al., 2015; Kroll et al., 2016; Nath et al., 2016). Parents with depression or negative 'cognitive styles', or who are struggling with their parental role, may report (in a self-report questionnaire or to an interviewer) their interactions with their baby or their baby's abilities and behaviours more negatively than would an independent observer (Hanington et al., 2012; Nath et al., 2016; Fitzsimons et al., 2017).

[157] See Siew et al., 2020 for an extensive list of measures used to assess the father-child relationship.

[158] For example, a subset of items in the Condon Maternal Postnatal Attachment Scale in the MCS and GUS postnatal sweeps; the Child-Parent Relationship Scale (Pianta: Short Form) in the MCS age 3 sweep, and items from the Authoritarian Parental Beliefs Scale and Parental Stress Scale in the GUS postnatal sweep.

[159] Harmonisation projects carried out by CLOSER, a partnership of UK longitudinal population studies, the UK Data Service and The British Library. are summarised here Data harmonisation – CLOSER.

Several smaller-scale longitudinal studies[160] in the UK have carried out formal observations of father-child interactions for infants or pre-school children in samples of between 100 and 250 fathers. An innovation in the ongoing ALSPAC Generation 2 Focus on Fathers sub-study is the use of head-worn cameras at home to record video of interactions between fathers and their babies in a sample of around 70 father-infant pairs[161] (Campbell et al., Under submission (unpublished)). This gives data on how fathers and babies interact naturally at home, without the presence of an interviewer or practitioner. Fathers and babies both use a head-camera for ten to fifteen minutes at a time to record mealtime, free play, and a specific task (stacking cups). There is also a mealtime triadic interaction ('as a family') recorded if the father has a partner (usually the birth mother of the child). The huge advantage of this observational data collection is that it is nested as a sub-study within a large-scale child cohort study. This means that the head-camera data – and other in-depth data collected for this ALSPAC sub-sample – can be analysed in the context of the wealth of data collected in the ALSPAC study, as discussed in section 5.

Given the evidence in section 2 from smaller-scale studies that there are statistical associations between the quality of observed father-infant interactions and later child outcomes, there is a strong case for collecting father-infant observational data in a larger-scale sample of fathers in a birth cohort study. Smaller-scale studies of father-infant observations rarely reflect the diversity among fathers, tending to include greater numbers of middle-class white heterosexual fathers than of other socio-demographic subsets of fathers. With funding and interviewer training, it may be possible to collect father-infant observations on a larger scale. Interviewers for the postnatal sweep of GUS Birth Cohort 2, when the babies were aged 10 months, coded aspects of the **mother**-infant interactions and infant behaviour (for example, the mother's praise of the baby and the baby's positive or negative mood), that they had informally observed during the interview. The new Children of the 2020s birth cohort study will ask the 'main caregivers' of the cohort babies, who are likely to comprise more mothers than fathers, to use a smartphone app called BabySteps, developed by the University of Iowa to record video of parent-infant interactions at low cost.

4.6. Conclusions from this review of data collected in three birth cohort studies

This review of the questions asked in ALSPAC, the MCS and GUS to mothers and fathers about fathers during their baby's first year has led to conclusions that there should be:

- direct data collection from fathers, including (as an innovation in the UK) OHFs (Partner and Non-partner OHFs, and involved and less involved OHFs)

[160] These include the Oxford Fathers Study; Families, Children & Childcare study; and New Fathers and Mothers Study.

[161] Participant instructions are at COCO90s_Focus_On_Fathers_Information.pdf (bristol.ac.uk).

- fathering, father adjustment, father-infant relationship and co-parenting variables should be collected for both Cohabiting Partner Fathers and involved OHFs. These have not been asked in a birth cohort study since ALSPAC in the early 1990s, and equivalent data from fathers and mothers is important for analysis
- **a more even allocation of interview time between a mother and father who are living together**. This may also raise the response rate from fathers, who are less likely than mothers to be the 'main caregiver', by showing that the study considers him to be an equally important research participant to the cohort child's mother. If resources do not allow for an even allocation, and there is a longer main parental interview, a question near the beginning of the household interview should establish whether the father is sharing substantially in the infant's care or is a main caregiver, and if so, ask the parents to select which of them does it. A **graduated questionnaire scale of father and mother involvement with the baby** would be needed to determine substantial sharing of parental caregiving.

Other innovations could include **questions about father responsibility** as well as engagement or hands-on care; the **use of validated scales** of father involvement, father adjustment and the father-infant relationship (as have been used with mothers in previous UK cohort studies; and **observations of father-infant interactions**.

This review of the questions asked in three birth cohort studies has also shown the wealth of data already available for analyses of fathers in the postnatal period, which is the focus of section 5 of this report.

5. Understudied birth cohort data and the analytic potential of ongoing longitudinal studies

This section, section 5, reports on the second half of the *Bringing Baby Home* review of datasets and, like section 4, is aimed at an audience of researchers and research funders. Section 5 investigates the extent to which variables collected about fathers during the year following their baby's birth have been included[162] in published[163] analyses of the Avon Longitudinal Study of Parents and Children (ALSPAC), the Millennium Cohort Study (MCS) and Growing Up in Scotland (GUS) birth cohort studies.

In this section of the report, the range of postnatal ALSPAC, MCS and GUS 'father-factor' variables analysed in research papers in the Fatherhood Institute's digital Literature Library[164] is compared to the range of questions asked about fathers and inter-parental relationships in the ALSPAC, the MCS and GUS postnatal sweeps (see section 4). This comparison can identify 'analysis gaps' i.e. where postnatal data collected has not been analysed within publications in the Literature Library. The focus for this comparison is fathering and the inter-parental relationship for Cohabiting Partner Fathers; so including cohort study questions about postnatal father involvement, father adjustment, the father-baby relationship, gender role beliefs, co-parenting and the parental couple relationship. Policy and practice questions change over the years, but interest in these issues remains as strong now – or stronger – as in previous decades. These topics feature in section 2 as of substantive importance (scholarly and/or relevance to policy or practice) in relation to fathers in baby's first year.

In an equivalent *Who's the Bloke* review of datasets, the authors of this *Bringing Baby Home* report found that substantial numbers of data items on fathers in the antenatal period, in particular from ALSPAC, did not appear to have been analysed in published literature (Burgess & Goldman, 2018). Other investigations into 'analysis gaps' – on topics other than fatherhood – have likewise found under-studied data. The EPPI-Centre and Centre for Longitudinal Studies at UCL examined published studies that used MCS data for analysis on selected topics about children, and found under-utilised MCS data (Kneale et al, 2016). The Understanding Society project team found no published research papers using Understanding Society data on pregnancy outcomes and children aged one to eight years (Benzeval, 2019).

---

[162] The findings of many of these analyses are reported in the evidence synthesis in section 2 of this report.

[163] With author permission, a few unpublished analyses are also included.

[164] The Literature Library was searched for all analyses of ALSPAC, MCS and GUS data. Each full text was screened for analysis that included variables about fathers or inter-parental relationships in baby's first year (postnatal 'father-factors'). This could be a descriptive analysis of those variables (e.g. the percentages responding to each question code, or two-way tables), or a cross-sectional or longitudinal analysis of the statistical relationships between the postnatal father-factors and other variables.

The Literature Library is an extensive collection of research publications (and unpublished papers with author permission) about UK fathers, fatherhood and inter-parental relationships, as well as relevant international research reviews and methodological papers, back to 1998. It was created through systematic searches of eleven bibliographic databases[165] (in 2014 and repeated in 2019) and supplementary search methods to identify journal articles, book chapters and 'grey literature' (Davies et al., 2017). It has been continuously updated[166] since 2014, including screening of recent ALSPAC, MCS and GUS publications (up to March 2022) and pre-1998 ALSPAC publications listed on cohort study websites[167]. The Library is therefore likely to include the great majority[168] of published analyses of ALSPAC, MCS and GUS data about fathers and the inter-parental relationship.

This section of the report also looks at the potential for analysis of data about fathers during their baby's first year being collected currently and recently in two longitudinal studies:

- the UK Household Longitudinal Study, a nationally representative household panel study, also known as Understanding Society
- the ALSPAC Generation 2 cohort study – the children of the ALSPAC Generation (G1) 1990s cohort babies, who are now in their early 30s.

5.1. ALSPAC, MCS and GUS analyses of postnatal data about fathering and the inter-parental relationship

5.1.1. Breadth of analyses in the Fatherhood Institute's Literature Library

Apart from the analyses of postnatal fathering and the inter-parental relationship (among Cohabiting Partner Fathers) which are the main focus in section 5.1 (see 5.1.3 to 5.1.6 below), the Literature Library also includes:

- analyses of Cohabiting Partner Fathers' postnatal employment status and characteristics, and paternity leave and other 'leave for parenting'

[165] Prioritising social science databases, UK databases and those covering UK research journals.

[166] Through expert contacts, social media, and organisational alerts and newsletters.

[167] A title screen of all recent publications (January 2019 to March 2022) listed on the ALSPAC, MCS and GUS websites was carried out, and additionally a title screen of listed pre-1998 ALSPAC publications. Where the title suggested that the focus of the paper was fathers, mothers, or parental relationships, the abstract was screened and, where relevant, the full text was also screened, looking for inclusion of variables about fathers and inter-parental relationships during baby's first year.

[168] Analyses of father-factors that form a minor part of a publication with a wider or different focus, or had a biomedical focus, may have been missed.

- analyses of Cohabiting Partner Fathers' postnatal mental health; and, to a limited extent, their self-esteem, life satisfaction and social support
- (to a lesser extent) analyses of Cohabiting Partner Fathers' postnatal global health rating, physical health conditions, height and weight, and health behaviours
- (to a lesser extent) analyses of Cohabiting Partner Fathers' relationship with their own parents during the postnatal year
- analyses of family change, parental separation and Own Household Fathers during the postnatal year
- analyses using fathers' postnatal characteristics (often demographics such as age, economic status, ethnicity, socio-economic status, educational qualifications) and inter-parental relationship variables as control variables but do not report any data specific to these postnatal father-factors
- analyses which use postnatal father-factor variables as part of composite variables for broader age-ranges (often using the same variable from multiple sweeps to identify relatively rare events such as mental health problems, drug use, parental separation and partner violence), for 'parents' (i.e. combining father and mother data), and/or for broader concepts (e.g. childhood adversity) – but do not report any data specific to the postnatal father-factors.

5.1.2. Categories of fathers included in analyses

Many published analyses of ALSPAC, MCS and GUS postnatal data about fathers in the Literature Library do not include the small numbers of fathers who completed data collection for the main/sole parental research participant (see section 4). Several analyses exclude the small numbers of adoptive, foster and stepfathers, limiting the analysis to birth fathers e.g. (Nath et al., 2016; Norman, 2011; Washbrook, 2007), or restrict the sample to heterosexual father-mother families (which comprise 99% of the cohort two-parent families) (Emmott & Mace, 2021; Norman, 2011). For analyses of MCS data, part-time resident fathers may also be excluded e.g. (Kroll et al., 2016; Nath et al., 2016) – these fathers are analysed in Kiernan, 2006.

5.1.3. Published analyses of data on fathering and inter-parental relationships

Table 4 in section 6 shows the fathering and inter-parental topics for which postnatal variables have been included in published analyses of ALSPAC G1, MCS and GUS data. The father-factors may have been analysed **descriptively**[169], **or** included as part of a

[169] For example, the percentage of fathers reporting each response code for that question; the average score on a composite questionnaire scale, or a table of the response codes by socio-economic status.

correlational analysis or statistical model of variables collected at the same sweep (a 'cross-sectional analysis') or at earlier[170] or later sweeps (a 'longitudinal analysis'). To be included in Table 4, data specific to the postnatal father-factor/s must be reported in the publication[171].

The fathering and inter-parental topics most extensively analysed in the published literature (in the Fatherhood Institute's Literature Library) are:

- Mother-reported division[172] of parental childcare and household tasks
- Frequency of father-baby activities
- The parental couple relationship
- (to a lesser extent) Father's gender role and parenting beliefs.

These postnatal father-factors have been analysed in longitudinal analysis in relation to a variety of 'outcome variables'. These are most commonly: child development, the couple relationship, parental relationship separation and father involvement at or by a later sweep of data collection. For several topics where there is both ALSPAC and MCS data, MCS data has been analysed more extensively.

ALSPAC and MCS collected equivalent data from mothers and fathers on the parental couple relationship postnatally, but the mother-reported data has been analysed in a greater number of publications. This may be in part due to the more robust and larger samples of mother-reported data for longitudinal analysis. The achieved samples of Cohabiting Partner Fathers (those who completed 'partner' data collection) were smaller than the achieved samples of mothers with a partner, and potentially less representative, particularly for ALSPAC data with its lower response rate for Cohabiting Partner Fathers. This is stated as a reason for not analysing ALSPAC self-report 'partner questionnaire' data, but instead using the equivalent mother-reported data about the father, in at least a couple of studies (Bowen, 2015; Washbrook, 2007).

The analyses of GUS fathering and inter-parental variables tend to be descriptive or cross-sectional, and are reported in the cohort study's own publications, rather than as secondary analyses by university researchers. The most recent second birth sweep data on father

[170] This applies to ALSPAC in which there were antenatal data collection sweeps.

[171] Table 4 excludes publications where a postnatal father-factor is used solely as a control variable in a multivariate analysis, without data specific to that-postnatal father-factor being reported in the publication. Also excluded are analyses in which a postnatal father-factor is used as part of a composite variable, without data specific to the postnatal father-factor being reported.

[172] This includes analysis of the father's 'main', shared or 'secondary' caregiver status; and analysis of the father carrying out 'solo' infant-care without the mother present, for example whilst she is in paid work.

involvement and the couple relationship[173] has been analysed (Bradshaw et al., 2013; Bradshaw et al., 2014).

5.1.4. Under-exploited data on fathering and inter-parental relationships

The Literature Library includes a much greater number of analyses of postnatal ALSPAC data on father depression than analyses of the rich ALSPAC data about father involvement, father adjustment or co-parenting postnatally (see Table 4). In contrast, the number of analyses of MCS data about father involvement or the inter-parental relationship postnatally is similar to the number of analyses of postnatal MCS data on father mental health.

The following data on fathering and inter-parental relationships may be especially under-exploited:

- **GUS data** on the division of parental childcare and household tasks, and on couple conflict and abuse
- **ALSPAC data** on the bonding and relationship between father and baby, and father adjustment. Examples of questions for which data is not reported in published analyses in the Literature Library are:
    - *"You found that your partner didn't want your child"* (mother-reported at eight months)
    - *"I have found having a baby around: easier than expected; about as difficult as I expected; more difficult than I expected"* (father-reported at eight weeks)
    - *"It has made a big difference to the way I live"; "It has meant that I have less money to spend on myself";* and *"It has meant that I have had to stay at home more than I used to"* (father-reported at eight months)
- **ALSPAC data** relating to co-parenting, including each parent's trust of their partner as a parent. For example:
    - *"If I feel tired I can rely on my partner to take over"*[174] (mother-reported at eight weeks and eight months)
    - *"I trust him/her alone with the baby"* (mother-reported and father-reported at eight months)

[173] (Kadar-Satat & Koslowski, 2015; Koslowski & Kadar-Satat, 2018) also analyse postnatal data about fathers from the second GUS birth cohort. Their focus is paternity and parental leave and fathers' employment, topics not covered in this review because they are addressed in a previous review in this series (Burgess & Davies, 2017).

[174] This has been used in analysis as part of a postnatal 'social support' scale for mothers, and also as part of a multi-sweep derived variable, but no analysis specifically of this item postnatally was found in publications in the Literature Library.

  - each parent's perceptions **of the other parent's** feelings about parenthood, enjoyment of baby, regret, confidence in looking after baby etc (mother- and father-reported at eight months)

- **Data from all three studies** on the Impact of the baby/becoming parents on the couple relationship. For example:
  - **ALSPAC –** *"Do you feel parenthood has brought you closer together?"* (mother- and father-reported at 8 months)
  - **MCS** *"Do you feel that having ^Jack has… 1 brought you and your ^husband closer together… 2 made you less close than before… 3 made no difference to your relationship?"* (mother- and father-reported)
  - **GUS Birth Cohort 1** *"Thinking about the first six weeks or so after child was born, how well do you think you and child's mother/father, as a couple, dealt with the arrival of your child?"* (mother-reported).

5.1.5. Issues for future secondary analysis of these cohort studies

Where there is equivalent ('symmetrical') data in ALSPAC or the MCS from mothers and fathers about the impact of the baby on the couple relationship, and about co-parenting and trust of the other as a parent, analyses could look at the level of concordance between reports, and the impact of the coupled parents having differing views and perceptions.

To develop proposals for secondary analysis for the identified topics, researchers would need to take into account that the LSPAC data relate to births in the early 1990s and to one area of southwest England, and the MCS to births in the early 2000s. As noted in the Introduction to this report, the experiences of the ALSPAC and MCS babies and their fathers and mothers may not reflect the contemporary context of postnatal fatherhood (Nawa et al., 2021; Opondo et al., 2016; Norman et al, 2011). An issue is therefore whether statistical relationships between ALSPAC variables remain relevant over 30 years later, but researchers continue to analyse it, especially where more recent nationally representative birth cohort studies have not collected equivalent data (for example, father's postnatal anxiety (Nawa et al., 2021), and symmetrical measures for mothers' and fathers' caregiving and play activities (Emmott & Mace, 2021). Changes since the ALSPAC and MCS babies were born include the introduction of Statutory Paternity Leave in 2003[175]; a growing focus on father involvement at home; and the influence of the internet and social media. The GUS data is more recent but has a more limited range of postnatal father involvement variables and no data obtained postnatally from fathers.

[175] Also more recently, the introduction of Shared Parental Leave, but with low take-up.

Further work would need to establish specific research questions, as well as the sample sizes and item non-response[176] and subsequent bias for individual questions and composite measures. The quality of the data collected may contribute to explaining why researchers have not used it in analysis (even where data is highly relevant to policy and practice interests) although this should not be assumed.

5.1.6. Enduring value of older cohort studies

The enduring value that the older ALSPAC and MCS cohort studies offer to fatherhood research is for analyses of perinatal and early childhood father-factors in relation to adolescent and young adult outcomes measured at later sweeps. Only long-running cohort studies of an earlier cohort of babies can offer this analytic potential. The ALSPAC cohort children are now aged in their early 30s; the MCS children in their early 20s[177]; and the GUS children (Birth Cohort 1) in their late teens.

Table 5 in section 6 shows that this value is now being realised for both studies with a growing number of analyses of postnatal fathering and couple relationship variables in connection with adolescent outcomes (examples are Benson & Mckay, 2018, 2019; Lekfuangfu et al., 2015; Parkes et al., 2019; Scourfield et al., 2016). Two publications in the Literature Library include postnatal father involvement or the postnatal couple relationship in analysis in relation to young adult outcomes at age 18 (Lekfuangfu et al, 2015; Gutierrez-Galve et al., 2019). It is of course possible that any effects of postnatal fathering on younger children will have 'washed out' by young adulthood, and that looking at the effects of fathering in middle childhood on young adult outcomes may be more fruitful. In comparison, the Literature Library includes five analyses of the longer-term impacts of postnatal father mental health on child outcomes from 18 years to age 24 years, using ALSPAC data (Collin et al., 2014; Gutierrez-Galve et al., 2018; Orri et al., 2020; Pearson et al., 2016; Pearson et al., 2013; Rajyaguru et al., 2021).

Loss of children from the cohort studies by adolescence and young adulthood means that the samples of children, mothers, and fathers at later sweeps for longitudinal analysis are smaller and less representative. This attrition bias may affect certain variables more than others, although can be taken into account to some extent by weighting in analysis and does not always substantially influence the findings (Srinivasan et al., 2020; Wolke et al., 2009).

---

[176] Over 99% of responding fathers completed the 'Education and employment' module (with only 6% refusing to give details of their earnings), 'Parent's health' and 'Father's involvement' survey modules (Plewis, 2007). There was greater item non-response for the self-completion questions, with 78% of 'partners' completing all but one question. Gonzalez-Sancho (2014) found that 89% of responding fathers completed the gender role belief questions, and 92% completed the parenting belief questions – these were only a few percentage points lower than completion rates by mothers.

[177] The most recent MCS dataset available for analysis is the age 17 sweep, and the most recent GUS dataset (Birth Cohort 1) is the age 14–15 sweep.

5.1.7. Analytic potential of ongoing data collection in the ALSPAC Generation 2 and Understanding Society studies

The forthcoming 'Early Life Cohort' and 'Children of the 2020s' birth cohort studies[178] will offer huge potential for learning about fathers and their impacts for the current generation of babies. Opportunities are also given by recent developments in ALSPAC and Understanding Society, ongoing studies which are collecting data about and from fathers during their baby's first year.

5.1.7.1. The ALSPAC Generation 2 (G2) study – Children of the Children of the 1990s

The 1990s ALSPAC cohort babies are now in their early 30s, with a growing proportion of them becoming parents themselves. These new parents are the ALSPAC Generation 1 (G1), with their fathers (the ALSPAC fathers who are the focus of section 4 and the previous part of this section 5) and mothers called the G0 generation. The G1 parents' children have been recruited since 2012 into a second-generation (G2) ALSPAC study called "Children of the Children of the 90s (COCO90s)" (Lawlor et al., 2019) so comprising an ongoing child cohort study.

The aim is to recruit the G2 children from their mother's pregnancy and to collect antenatal and postnatal data from the G2 children's parents (the G1 fathers and mothers and their partners). By June 2020, around 1,120 G2 children[179] had been recruited, with around 200 G1 fathers and 300 male partners of G1 mothers also enrolled in the G2 study (Smith et al, 2021). Around half of these G2 children were recruited antenatally, with over 80% recruited by the age of three years (Smith et al., 2021). The sample is accumulating over time, with the current G1 fathers of babies being relatively younger parents – having at least one child before the age of 32[180].

G1 fathers and partners of G1 mothers (who are nearly all fathers) are asked to complete a questionnaire as soon as they are enrolled into the G2 study to gain their demographics, health and employment details, fertility history and health behaviours – this could be antenatally, postnatally in their baby's first year, or when their child/ren are older. The fathers are asked to complete a questionnaire antenatally and shortly after the birth (including questions on their pre-birth beliefs about infant feeding and parenting); and to attend a clinic when the G2 child is six months old (unless recruited when their G2 child/ren are older). The focus of this postnatal data collection is physical and mental health, psychological measures, clinical measures, biological samples, and health

[178] Information about these new studies can be found at CLS | Early Life Cohort Feasibility Study (ucl.ac.uk) and CLS | Children of the 2020s Study (ucl.ac.uk).

[179] Excluding those not yet born.

[180] Birth fathers in England and Wales are on average aged 32 at the birth of their baby, who may not be their first child (ONS 2022 birth registrations data).

behaviours– see Table 6 in section 6 for a summary of the data being collected in the ongoing ALSPAC@30 clinic[181] (2021–2024)[182]. Detailed data is also being collected about the G2 children and their mothers as they progress through childhood.

There are no published analyses yet in the Fatherhood Institute's Literature Library that focus on the G1 fathers and the G2 babies, since the sample is still accumulating to a reasonable size. The postnatal data being collected about G1 fathers and G2 children can be combined in analysis with the wide-ranging data that has already been collected about the G1 and G0 generation. The G1 fathers – as adults – completed a questionnaire annually up to age 28 and were invited to attend a clinic at age 24 for health, psychological, cognitive and health behaviour measures. Rich data was also collected about them and their G0 parents (the parents of the G1 fathers, and the grandparents of the G2 babies) during their childhood and their mother's pregnancy. In the 1990s, retrospective data was collected from G0 parents about their own childhoods and their own parents (the G1 fathers' grandparents, and the G2 children's great-grandparents) (Golding et al., 2019; Golding et al., 2022). This makes ALSPAC data a four-generation dataset for examination of inter-generational influences (genetic, epigenetic, biological, environmental, lifestyle and socio-behavioural) on fathering and child outcomes.

Collecting in-depth data, including diaries (Farrow et al., 1997) and observations (Coffey, 2015)[183] in sub-samples has been a feature of the G1 ALSPAC cohort. The advantage of embedding smaller-scale in-depth studies in a large-scale cohort study is that, for the sub-sample members, there is a vast set of longitudinal data for analysis, and the full cohort sample may be used for comparative purposes. Embedded in the ALSPAC G2 study is an ongoing Focus on Fathers sub-study[184], looking at fathering and the father-infant relationship, including where the mother has postnatal depression. This is currently collecting rich data from a sample of up to 200 G1 fathers and their G2 babies (along with a smaller sample of fathers recruited separately from the local community) antenatally and postnatally. During the visit to the research clinic when the baby is around six months old,

[181] The '30' refers to the 30th year of the ALSPAC study – the G1 cohort members will be aged between 27 and 32 years during the period of the clinic data collection. See Join our new @30 Clinic | Avon Longitudinal Study of Parents and Children | University of Bristol; and a description of the measures at 30_Clinic_visit_PIS.pdf (bristol.ac.uk).

[182] With thanks to the ALSPAC team at the University of Bristol for making available the ALSPAC@30 protocol for the purposes of this *Bringing Baby Home* review.

[183] This is an analysis of video-recorded father-infant observations collected in an ALSPAC Focus clinic for 12-month-old babies in 1993. Over 95% of infants came with their mother, giving 1194 recorded mother-infant interactions, compared to around 50 father-infant interactions. The participating fathers were not representative of ALSPAC G0 fathers in the full cohort sample – they tended to be older fathers who were more involved with their babies' care and slightly more likely to be unemployed.

[184] With thanks to Dr Iryna Culpin at the University of Bristol for giving information about the Focus on Fathers ALSPAC sub-study.

fathers are asked to complete several questionnaires[185] (using validated measures and questions from previous cohort studies) and to provide speech samples (five-minute audio recordings) of their reflections on their child and their relationship with the child. They are invited to participate in a smaller-scale study involving head-cameras for observations of father-infant interactions, and qualitative father and couple interviews.

5.1.7.2. Understanding Society and its potential early life and 'parents living apart' extensions

Understanding Society is a household panel study in which people living in a representative sample of UK households in 2009 have been followed up in annual waves of data collection. The original sample members are approached annually for an interview, with older children aged 10 to 15 asked to complete a self-completion questionnaire. This includes sample members who move out of the initially sampled household to live elsewhere during the course of the study – some of these movers will be Own Household Fathers (OHFs).

The first part of each interview identifies members of the study household[186], including babies born to sample members since the previous interview, who become members of the study going forward. There are between 560 and 1,120 new babies reported at each wave of data collection[187] (Borkowska, 2019) so this is a considerably smaller sample than in the birth cohort studies. Data about fathers postnatally can be combined across waves for analysis of a bigger sample. In total, 6730 children in the study were born between 2008 and 2017, entering the study at age 0 to 2 (Pelikh, 2019). The study gives a representative sample of mothers with infants aged under one year (Fisher, 2020). In addition to identifying new babies as household members, men are asked in each wave whether they have fathered a child since the last interview, including babies living elsewhere, and asked for the date of birth of each baby. Ongoing work is testing new questions to improve the reporting of pregnancies between waves, and to reduce the number of families who drop out of the study at the time of major life transitions (Benzeval, 2019, 2021).

Understanding Society collects a more diverse set of variables about fathers who are interviewed during their baby's first year than is available from birth cohort studies, but with a much smaller focus on fathering issues – this is mainly the same set of data as is collected about every adult sample member (see Table 6 in section 6). Questions are asked every two sweeps to resident fathers and mothers about the domestic division of

[185] These self-completion measures cover mental health, personality, father involvement, parenting beliefs, the father-infant relationship, fatherhood experiences, couple division of housework, social support, parental self-efficacy, the couple relationship and co-parenting. Fathers are asked to report on their baby's development and temperament.

[186] Who have this address as their main residence.

[187] Based on waves 2 to 8, from 2009 to 2018.

household jobs and parental childcare[188] and a range of parenting activities and interactions[189]. However, these questions are asked in relation to all dependent children living in the household[190], not specifically the baby. Additionally, there has been an occasional module on gender role attitudes. Equivalent variables are available for these fathers in previous waves (i.e. before the birth of the baby) and also in subsequent years for as long as they remain in the study. Information is collected from the baby's birth mother or father[191] about the baby's feeding, sleeping and temperament; and in subsequent years, about the child's health, physical, cognitive and social development, psychological wellbeing, activities and education (when they are aged 3, 5 and 8 years[192]), although in much less detail than is available in birth cohort studies (Benzeval, 2019). For the youngest of the fathers with babies, who may have entered the study as a 'young sample member' (10-15 years) or young adult living with their own parent/s, there will potentially be a three-generation dataset, with data also having been collected annually about the new father's parents (grandparents of the baby).

The study is now considering enhancement of the data asked about pregnancy and early life (Benzeval, 2019; Benzeval et al., 2020) including data collected from fathers between waves in 'event-triggered data collection'. Fathers may be asked questions about babies living elsewhere as well as those with whom they live. This additional data could answer research questions such as *"How do biology and social factors interact for men and women in different environments and contexts through pregnancy and early life to influence early life outcomes for their child(ren)*?" (Benzeval, 2019; Benzeval et al., 2020).

In contrast to the MCS and GUS, the Understanding Society sample of fathers includes OHFs whose babies live elsewhere. As with all adult sample members, these OHFs are interviewed to collect the same data on their characteristics, beliefs, and behaviours (see Table 6 in section 6) that are collected about fathers living with their babies. Up to wave 12, the questions asking fathers about their 'non-resident' children[193] have not been child-

[188] Questions have been added recently about the 'domestic division of labour' for transporting children, play and leisure activities with children; staying at home when the children are unwell; putting children to bed; and dressing children. A question asks about weekly hours of housework, but not the time spent looking after the child/ren, which would be useful for analysis of parental gender roles.

[189] The included parent-child activities and interactions most relevant to babies are outings for leisure activities; having an evening meal together; praising their children; hugging or cuddling their children; and shouting at their children. A question also identifies physical abuse (spanking or slapping their children).

[190] An analysis could be carried out of fathers' responses where the baby is the only dependent child, which would mainly comprise first-time fathers.

[191] The biological mother is prioritised to answer these questions.

[192] Data is also collected about the resident father's parenting style when their child is aged 10.

[193] Involved OHFs of older children (ages 3, 5, 8 and 10) could be asked a similar set of questions about their parenting and activities with their children as are fathers living with their children. However, the questions are limited to the frequency of contact, overnight stays, the distance between households, and the closeness of the relationship they have with their children living elsewhere.

specific[194], so the father's responses apply to the baby together with any siblings, but this is likely to change in the future to child-specific questions (Benzeval, 2021).

The study also includes babies whose father lives elsewhere – a sample of 5,810 'lone mothers' of babies under one year across waves 1–8 (Benzeval, 2019). Uniquely among ongoing UK longitudinal studies[195], if an OHF was previously living with the mother and his baby at a study wave but then separated from the mother (or moved out for another reason), he remains part of the study and can be interviewed annually at his new address. However, OHFs of babies who have never lived with the mother (56% in GUS Birth Cohort 2 data (Bradshaw et al, 2013) will not be Understanding Society study members. Furthermore, the study drop-out rate for Understanding Society sample members who become an OHF[196] after a relationship separation whilst participating in the study is high (Bryson et al, 2017). The study is now looking at ways to boost the retention of OHFs and other movers; and the possibility of bringing into the study the partners of sample members who live elsewhere (who include Partner OHFs) and also the parents of child sample members who live elsewhere (Benzeval, 2019). This would bring into the study the full range of OHFs of Understanding Society's babies.

As for G2 ALSPAC data, the Fatherhood Institute's Literature Library includes no analyses of Understanding Society data that are specifically about fathers of babies. By 2019, there were also no published analyses using the child development and wellbeing data collected for children aged 1 to 8 (Benzeval, 2019). This lack of analysis of the data available may in part be due to limited knowledge among researchers about the potential of Understanding Society to address research questions about children. The study has launched new datasets which bring together all the data collected on each child from pregnancy to the age of 10 years and will also link data from connected households (Benzeval, 2021).

5.2. Conclusions

It appears from a review of the variables analysed in published studies in the Fatherhood Institute's extensive Literature Library that data collected in ALSPAC and GUS about fathers, co-parenting and the couple relationship postnatally is under-studied. These large-scale birth cohort studies along with the MCS offer potential for future secondary analysis in substantively important areas. They provide outcomes data **into adolescence and beyond** for the cohort members who were first studied as babies ten to thirty years ago. For study of the **current** generation of babies, several initiatives give important

[194] An analysis could be carried out of fathers' responses where the baby is the only dependent child living elsewhere.

[195] The new 'Early Life Cohort' feasibility study will interview a sample of OHFs with babies, so will become a major source of data about this group of fathers.

[196] i.e. following the relationship separation, the father no longer lives (fully or primarily) with his child/ren.

opportunities for future analysis of father-factors during their baby's first year. These are the 'Early Life Cohort' and Children of the 2020s studies; the ALSPAC G2 study (including the Focus on Fathers sub-study); and Understanding Society with its potential 'early life' and 'parents living apart' extensions.

These studies offer complementary strengths for analyses of fathers in their baby's first year. ALSPAC G1, the MCS and GUS collected postnatal data about a large cohort of fathers that was (particularly in ALSPAC and the MCS) focused on father-factors that may impact on their babies and partners (the mothers). The ALSPAC and MCS fathers entered the studies during the pregnancy or postnatal year, and rich data about the babies, fathers, and mothers – and other influences on children – is collected **'forward'** through childhood and adolescence in all three studies. Therefore, these studies' analytic strength is in examining the impacts of fathers and fathering postnatally on children's later development and outcomes, as well as on mothers and fathers themselves. This will also apply to the 'Early Life Cohort'[197] and Children of the 2020s studies for the current generation of babies.

The ALSPAC Generation2 (G2) study and Understanding Society offer data from the fathers (who are already sample members) in multiple sweeps of data collection **before** the birth and pregnancy; three-generation samples (the babies, their parents, and grandparents); and data on father characteristics, health, beliefs and behaviours and the couple relationship during the postnatal period. Their limitations are smaller samples of postnatal fathers; fewer variables currently[198] that are focused on fathering and the father's relationship to the baby[199]; and, in Understanding Society, fewer variables which measure babies' and children's development and outcomes. The analytic strengths of ALSPAC G2 and Understanding Society are in providing data on current and recent cohorts of fathers; and for examining the antecedents of father characteristics, health, beliefs. and behaviours postnatally, and the impacts of the baby and first-time parenthood on the fathers[200] and their relationships.

The future of quantitative longitudinal research on fathers during their baby's first year is therefore full of opportunity.

[197] If a mainstage Early Life Cohort study is commissioned following the current feasibility study.

[198] This may change in Understanding Society with the proposed Early Life extension.

[199] With the exception of the ALSPAC G2 Focus on Fathers sub-study, which collects rich fathering data.

[200] In principle, the ALSPAC and Understanding Society study samples, as a whole, include comparison groups of fathers of older children and men without children. Whether these can be incorporated into analysis depends on sample sizes and the ability to match these groups of men on age and other characteristics.

6. Tables for sections 4 and 5

Table 1: data collected about Cohabiting Partner Fathers across postnatal sweeps of ALSPAC G1, the MCS and GUS, and in piloted Life Study questionnaires

(F) = data gained from fathers (M) = data gained from mothers Data collected only when there is data collection from fathers	In all three cohort studies	*In at least one* of the MCS and GUS Cohorts 1 or 2 (the more recent cohort studies) but not in all three cohort studies (F) refers to the MCS (fathers were not interviewed in GUS)	ONLY in ALSPAC (1990s G1 data collection)	ONLY in piloted interviews for discontinued Life Study birth cohort
COHABITING PARTNER FATHER in relation to COHORT CHILD – relationship and co-residence		Relationship of father to baby (birth/biological; adoptive; step/partner of child's parent; foster; 'non-relative') (M or F in household grid) Birth father co-resides with mother and baby (in mother's household) for part of the time ('part-time resident father') (M) Father who 'lives regularly' in the mother/baby's household is temporarily away at time of fieldwork e.g. work; armed forces; hospital; prison (M) Temporary separations of father from baby since birth (F)		
FATHER CHARACTERISTICS AND HEALTH	Age (M) (F) Ethnicity (M) (F) Global health rating (M) (F)	Legal marital status (M) (F) Religion + religiosity (M) (F) Age left continuous full-time education (M) (F) Educational qualifications (M) (F)	Life events for father during postnatal period (M) (F) Criminal justice or police involvement during postnatal period (M) (F)	Country of birth (F) Citizenship (F) Main language (F) Diet/nutrition (F) Physical activity (F) Social support from siblings and cousins (F)

		Problems for father during postnatal period (M) Father's own parents (paternal grandparents of baby) (M) (F) Current health conditions or disabilities (F) Self-reported height and weight (F) Current 'psychological distress' (Rutter Malaise Inventory) (F) Tiredness (F) Life satisfaction (F) Self-esteem and locus of control (F) Social support from friends/neighbours (F) Smoking (F) Alcohol (F) Literacy, reading behaviour and numeracy (F) – IT literacy or use of internet Social/political attitudes (F)	Whether had depression since baby born (M) (F) Edinburgh Postnatal Depression Scale (F) Anxiety (sub-scale of Crown-Crisp Index) Self-harm or suicidal attempt (F) Sleep (F) Social support from 'family' (broader than own parents) and from other fathers (F) Use of drugs/substances (other than smoking/alcohol) (F)	Adult ADHD Self Report Scale (F) Autism Spectrum Quotient (F) "Big Five" Personality measures (F) Cognitive skills (F) Satisfaction with and perception of 'belonging' to local area – neighbourhood social capital (F)
FATHER ECONOMIC ACTIVITY, EMPLOYMENT AND FINANCES	Economic activity/whether in paid work (M) (F) If currently not working– whether cohabiting birth father worked since baby born (M) (F) Occupation/industry for SOC/SEG coding (M) (F) Employee/self-employed (M) (F) Whether father is manager or supervisor at work (M) (F) Work hours (M) (F)	Size of father's employer/business in terms of number of workers (M) (F) Paternity/parental/other 'leave for parenting' taken by father – types, whether paid, total length (M) (F) Work income (M) (F) State benefits or tax credits received specifically by father (M) (F) Father makes financial contribution for children living elsewhere (M) (F)	Perception of financial strain (F)	How finances managed within couple (M) (F) Change in working hours/location/job due to birth of baby (F)

	Atypical work hours (M) (F) COUPLE'S work-childcare-family life trade-offs, decisions and/or balance (M) (F)	Commuting time (F) Time spent on occasional/casual work (F) Flexible work arrangements offered by employer and used by father (F) Provision for parents offered by employer and used by father (F) Male/female mix of father's workplace (F) How sympathetic the father's work colleagues or employer are about his parenting responsibility (F)		
FATHER INVOLVEMENT (non-economic), FATHERING behaviours/beliefs, and BONDING or FATHER ADJUSTMENT	Division of childcare and household tasks within cohabiting parental couple (M) (F) Father is main or substantial shared parental caregiver within the couple (baby and/or other children) (M) (F) Solo childcare by father (i.e. without mother present) (M) (F) Frequency of father involvement in physical care of baby (M) (F)	Child/ren living elsewhere (M) (F) Use of family services and parenting support services (M) Influence on whether mother breastfed baby (M) Perception of whether has sufficient time with baby, and best and most difficult things about first few months with the baby (F) Beliefs/values about parenting of babies – how parents should treat a baby – belief in the importance of regularity, stimulation, cuddling, talking (not specifically about the cohort baby) (F) Father's gender role beliefs/values (F) Plans for further children (F)	Number of hours of solo-childcare (without mother present) by father Bonding/relationship between father and baby; Multiple aspects of father adjustment and responses to baby (including items on enjoyment of baby; parenting styles: parental stress; perception of competence as a parent/parenting confidence) Reaction to infant crying (M) (F) Frequency of father playing with baby, taking for walks, bathing baby (M) (F), cuddling the baby, physical play, playing with toys, singing to baby, showing pictures in books (M), putting baby to bed (F)	Frequency of father reading stories to baby (F) Object Relations Scales – Short Form (MORSSF) -fathers' representation of baby's reactions to him, as a component of father-infant attachment (F)

COUPLE RELATIONSHIP AND CO-PARENTING between the cohabiting parents	How long mother and father have been living together (M) Problems/conflict in couple relationship (M) (F) Impact of baby/becoming parents on couple relationship (M) (F)	Whether married to each other (M) (F) Whether cohabiting birth parents were also living together at time of baby's birth (M) Whether cohabiting birth parents were in a relationship with one another at time of baby's birth (M) Quality of couple relationship – positive and negative aspects or overall rating (M) (F) Values in relation to parental separation, non-married parents, and child-rearing by 'single parents' (M) (F) Partner violence between mother and father (M) (F)	Trust/perception of other parent's parenting role /behaviours (M) (F) Co-parenting (F) Physical affection and sexual relationship with partner (F)	

Table 2: data collected about Non-partner OHFs across the MCS and GUS, and in draft Life Study questionnaires

(F) = data gained from father (M) = data gained from mother Data collected only when there is data collection from fathers	Reported by mothers in both MCS and GUS	Reported by mothers only in MCS	Reported by mothers only in GUS (in at least one of the two GUS birth cohorts)	Additional questions asked to OHFs in drafted Life Study 'non-resident father' interview
OHF in relation to cohort baby	Birth father has died Whether joint birth registration (if birth parents not married at time of birth)		Baby is part-time resident in OHF's household (stays regularly overnight) Geographic distance or time taken to travel between OHF and baby's main household	
OHF characteristics or demographics		Age Ethnicity	OHF currently in prison	Country of birth Citizenship Main language Religion or religiosity Age left continuous full-time education Educational qualifications Tenure Accommodation including number of rooms Global health rating Physical health conditions Height/Weight Mental health – depression and anxiety Personality Smoking and alcohol use Literacy and numeracy
OHF economic activity/employment/financial issues	Pays child maintenance for baby		Whether OHF doing paid work Other financial and non-financial support from OHF for mother and/or baby	Economic activity Work hours Employee/self-employed Manager/supervisor status

				Employer size Occupation/industry for SES coding Work income State benefits received Use of paternity and other 'leave for parenting' since baby born Demands of job make more frequent contact with baby difficult + stops being more involved with baby
All OHFs – Extent of father involvement with baby	Whether current contact between OHF and mother or baby Father-child in-person contact – frequency Solo childcare by OHF (i.e. without mother present Mother's values in relation to children having a 'single parent' rather than two parents (GUS) or being brought up by a couple (MCS)		Regular overnight stays of baby in the OHF's household OHF takes baby on outings – frequency Whether had had any contact since birth + how long ago the baby saw OHF	Whether 'set' or usual pattern of time together, and reliability of arrangements How well child adjusts to spending time with other parent Whether mother or father wants greater or less OHF involvement with baby now and/or in future; and barriers to greater involvement Attitudes to father involvement or responsibilities or gender role beliefs Perception of self as a father
Involved OHFs – relationship and activities between OHF and baby				Location of overnight stays of baby e.g. in OHF's, mother's or grandparents' household Whether shared care Specific father-child activities Bonding between father and baby; Father adjustment and responses to baby Father's beliefs about parenting and babies

Relationship and co-parenting between birth parents	The nature of the relationship between the birth parents currently Friendliness or cordiality of their relationship currently The nature of the relationship between the birth parents at time of baby's birth Whether birth parents ever lived together (full-time and/or part-time)		Whether have legal agreement or court order about child arrangements Co-parenting and decision-making about the baby	Arrangements as source of tension in birth parents' relationship If previously in relationship with birth mother – Why relationship ended
OHF's cohabiting partner and other children (where relevant) and OHF's parents	Contact between baby or mother and OHF's parents (paternal grandparents of baby)		Whether OHF has cohabiting partner Whether OHF has other children	Gender and age of cohabiting partner Whether OHF has other children living in his household and/or living elsewhere Relationship between OHF and his parents (paternal grandparents of baby)

Table 3: internationally used measures of fathering, associated beliefs, and the father-baby relationship

		Examples of use with fathers (may be the whole scale or a subset of items)
Bronte-Tinkew measure of father involvement (Bronte-Tinkew et al., 2008)	Fathers' caregiving activities, paternal warmth, nurturing activities, physical care, and cognitively stimulating activities	ALSPAC G2 Focus on Fathers sub-study Early Childhood Longitudinal Study–Birth Cohort
Role of the Father Questionnaire (ROFQ) (Palkovitz, 1984)	Measures the extent to which a parent believes the father's parental role is important for child development	ALSPAC G2 Focus on Fathers sub-study
Paternal Postnatal Attachment Scale (PPAS) (Condon et al., 2008)	Father-infant bonding/attachment	Growing Up in Ireland large-scale birth cohort study ALSPAC G2 Focus on Fathers sub-study
Postpartum Bonding Questionnaire (PBQ) (Brockington et al., 2006)	Father-infant bonding/attachment	Dresden Study on Parenting, Work, and Mental Health
Parental Stress Scale (PSS) (Berry & Jones, 1995)	**Parental stress**	Growing Up in Ireland large-scale birth cohort study
Co-parenting Relationship Scale (CRS) (Feinberg et al., 2012)	**Co-parenting**	ALSPAC G2 Focus on Fathers sub-study

Table 4: The topic content of published analyses of postnatal data about fathering and the inter-parental relationship from ALSPAC G1, the MCS and GUS

KEY	
Dark orange	Includes longitudinal analysis[201]
Light orange	Cross-sectional analysis only[202]
Yellow	No analysis found – although the cohort study collected variables on this topic about fathers postnatally.
White	The study did not collect data on this topic about fathers postnatally

	ALSPAC Mother-reported	ALSPAC Father-reported	MCS Mother-reported	MCS Father-reported	GUS Mother-reported (Birth Cohort 1 and/or Birth Cohort 2)
Father is part-time resident in mother + baby's household			2		
Division of childcare and household jobs within cohabiting parental couple; **and/or** Father is main or substantial shared parental caregiver within the couple (baby and/or other children) **and/or** Father does solo childcare without mother present	3	2	16		2
Frequency of specific father-baby activities	5	2		18	
Bonding/relationship between father and baby; Father adjustment and responses to baby; Father's view of whether sufficient time with baby		3		3	
Father's beliefs about parenting and babies		2		7	
Father's gender role beliefs		2		9	
Father attended parenting class/es					2

[201] The postnatal father-factors have been reported **in relation to 'outcome' variables** (for example, child development, the father's involvement with his child, the parental couple relationship, and mother's employment) collected when the cohort baby was older.

[202] The postnatal father-factors have been reported **descriptively, or as part of a broader cross-sectional analysis of postnatal data**, using data solely from the postnatal sweep of data collection.

Co-parenting including father's/mother's trust/perception of other parent's parenting role /behaviours		2			
Quality of couple relationship (composite of positive and/or negative aspects, and/or overall happiness)	4	1	21	11	1
Impact of baby/becoming parents on couple relationship		1	1	1	1
Partner violence between cohabiting parents	5		5		1
FOR COMPARISON -					
Paternal depression (ALSPAC)/poor mental health (MCS)		21		16	

Table 5: Analyses of ALSPAC and MCS postnatal data about fathering and the inter-parental relationship in relation to adolescent outcomes

KEY	
Dark orange	Longitudinal analysis in relation to child outcomes in adolescence
Yellow	No analysis of adolescent outcomes found – although the cohort study collected father variable/s on this topic about fathers postnatally
White	The study did not collect data on this topic about fathers postnatally

	ALSPAC Mother-reported	ALSPAC Father-reported	MCS Mother-reported	MCS Father-reported
Division of childcare and household jobs within cohabiting parental couple **and/or** Father is main or substantial shared parental caregiver within the couple (baby and/or other children) or does solo childcare without mother present				
Frequency of specific father-baby activities				
Bonding/relationship between father and baby; Father adjustment and responses to baby; Father's view of whether sufficient time with baby				
Father's beliefs about parenting and babies				
Father's gender role beliefs				
Co-parenting				
Father's/mother's trust/perception of other parent's parenting role /behaviours				
Quality of couple relationship (composite of positive and/or negative aspects, and/or overall happiness)				
Impact of baby/becoming parents on couple relationship				
Partner violence between cohabiting parents				
FOR COMPARISON –				
Paternal depression/poor mental wellbeing				

Table 6 – Data collected about fathers of babies in ALSPAC G2 and Understanding Society

	Fathers' characteristics or demographics, economic activity and income	**Father's physical and mental health and health behaviours**	**Fathers' beliefs and attitudes relating directly to fathering and babies** including their couple relationship if have a partner	**Fathers' behaviours, interactions and relationships with their babies** including within-couple division of parental childcare or household tasks
ALSPAC G2 study[203]	Data available from previous ALSPAC data collection on demographics of G1 fathers (e.g. age, ethnicity) **If complete enrolment questionnaire during postnatal period –** Living arrangements / household members including children Ethnicity Legal marital status Education Tenure Socio-economic status coding Fertility history Current employment characteristics Current receipt of – Statutory paternity pay Occupational paternity pay and not working to look after home and family Income from full-time or part-time work; Problems with living	Clinical Interview Schedule (CIS) to measure mental health conditions – includes questions about overall health, appetite and physical health – Smoking/vaping/alcohol use Cognitive assessment Current medications and allergies Diary of dietary intake Physical activity and capability assessment Various clinical assessments including blood pressure, glucose monitoring, vision, hearing + lung Physical measurements, fat mass and bone density Blood, saliva and urine samples including DNA extraction **If complete enrolment questionnaire during postnatal period –** Global health rating Use of illegal drugs/sedatives / sleeping pills	**Collected antenatally-** Attitudes to infant feeding Parenting beliefs about 'how to raise a child'	**Reported by parent/s of baby at 6 months –** frequency of G2 child's time with birth father and any stepfather; and frequency of activities with child- Bathing, feeding, singing, reading/looking at pictures in books, playing with toys, cuddles, physical play, taking them for walks, taking them to soft play playgroup/parent-and-child-group, swimming, other

[203] ALSPAC G2 data about fathers postnatally on topics in this table are collected from the father – except for the frequency of father time with the baby and the frequency of various father-baby activities at infant age 6 months, which are collected from the baby's parent/s who complete this questionnaire about the baby.

	costs since child/ren born Statutory benefits including Child Benefit + Parent's learning allowance			
Understanding Society[204]	Comprehensive demographics, living arrangements and housing Fertility history Employment/parenting leave/flexible working arrangements/working hours + patterns/commuting + second jobs/gig economy/work conditions/job satisfaction Current paternity leave, and not working because looking after home and family Finances including income, expenditure, financial strain, material and child deprivation Political and social attitudes and engagement	Health and disability Smoking (including wants to give up because of the child/ren) alcohol, drug use Mental wellbeing/sleep quality Psychological characteristics/personality Cognitive assessment ? Diet and exercise (self-reported) Life satisfaction including amount of leisure time Loneliness, social support and networks, and neighbourhood belonging Positive and negative life events	Gender role attitudes (occasional waves) Plans for further children Couple relationship quality and happinesss Non-cohabiting partners including intention to live together Relationship with other birth parent if live separately, including decision-making about child	**Not specific to the baby if additional children in the father's household –** Time use / division of domestic labour *including transport to childcare/babysitters; playing with the child/ren; staying at home when child/ren ill, putting child/ren to bed; dressing the child/ren* **but not specific to the baby** Frequency of leisure trips with child/ren including going to the park; and of family meals How often praise child/ren , hug/cuddle child/ren, shout at child/ren, and 'spank or slap' child/ren Relationship and contact with child/ren or father living elsewhere -

[204] Understanding Society data about fathers postnatally on topics in this table are collected from the father – except for data collected from birth mothers (Understanding Society sample members) about their baby's birth father who lives elsewhere i.e. he is an OHF.

Table 7: Questionnaires searched for questions[205] about fathers during the cohort baby's first year for section 4

	Questionnaires primarily completed by mothers	Questionnaires primarily completed by Partner Fathers	Questionnaires primarily completed by Own Household Fathers
ALSPAC Generation 1 study – the babies born in the early 1990s	*'Me and my baby'* (mothers only) at 8 weeks infant age *'Looking after the baby'* ('main carer' questionnaire) at 8 months infant age Carer questionnaires | Avon Longitudinal Study of Parents and Children | University of Bristol *'My daughter/son'* (child-based questionnaire – about the baby) at 6 months infant age Child based questionnaires | Avon Longitudinal Study of Parents and Children | University of Bristol	'*Being a Father*' (fathers only) at 8 weeks infant age '*The baby and Me*' ('partner questionnaire') at 8 months infant age Partner questionnaires | Avon Longitudinal Study of Parents and Children | University of Bristol	-
Millennium Cohort Study	MCS 9 Months CAPI Questionnaire Documentation (2006) at around 9 months infant age CLS | MCS Age 9 months Sweep (ucl.ac.uk)	MCS 9 Months CAPI Questionnaire Documentation (2006) at around 9 months infant age CLS | MCS Age 9 months Sweep (ucl.ac.uk)	-
Growing Up in Scotland Birth Cohort 1	*Birth Cohort 1 & Child Cohort Sweep 1 Data Documentation* at around 10 months infant age Birth Cohort 1 & Child Cohort Sweep 1 Data Documentation	-	-
Growing Up in Scotland Birth Cohort 2	*Birth Cohort 2 Sweep 1 Questionnaire and Showcards* at around 10 months infant age Birth Cohort 2 Sweep 1 Questionnaire and Showcards	-	-

[205] The questions were tabulated, noting whether the data was obtained from fathers and/or from mothers.

ALSPAC Generation 2 study – the G2 babies of the 1990s cohort children[206]	***@30 Enrolment questionnaire for parents and parents to be*** questionnaire ***@30 birth questionnaire for mums*** questionnaire ***@30 Your child at 6 months*** questionnaire ***ALSPAC @30 protocol*** for clinic data collection	***@30 Enrolment questionnaire for parents and parents to be*** ***@30 Partner antenatal and birth experiences*** questionnaire ***ALSPAC @30 protocol*** for clinic data collection	-
Piloted/drafted Life Study questionnaires	***Birth Component – Mother Questionnaire*** at 6 months infant age Life Study Birth Component: Mother questionnaire – UCL Discovery	***Birth Component – Father/Partner Questionnaire*** at 6 months infant age Life Study Birth Component: Partner questionnaire – UCL Discovery	***Birth Component – Non-Resident Father Questionnaire*** at 6 months infant age Life Study Birth Component: Non-resident Father questionnaire – UCL Discovery
Understanding Society	***Mainstage questionnaire*** – waves 10, 11 and 12 Questionnaires | Understanding Society	***Mainstage questionnaire*** – waves 10, 11 and 12 Questionnaires | Understanding Society	***Mainstage questionnaire*** – waves 10, 11 and 12 Questionnaires | Understanding Society

[206] With thanks to the ALSPAC team at the University of Bristol for making available unpublished ALSPAC G2 questionnaires for the purposes of this *Bringing Baby Home* review.

7. Recommendations for research

It is important to **disaggregate research findings by sex/gender/role of parent** rather than collapsing data on 'parents' into a single category. Doing so may blur important issues specific to each category of parent which merit attention in relation to children and families. Using the term 'parent' as a euphemism or synonym for mother quietens men's and fathers' voices and excludes consideration of father-factors in research.

In research about children, parenting and families, including birth cohort studies, it is important to invest in **resources and fieldwork practices that will achieve a high level of engagement from fathers** as research participants. **Own Household Fathers, involved and less involved, should be included in research studies carried out during the postnatal year**.

In research, including cohort studies, it is important to **invest in resources (data and methods) that will allow for a better understanding of fathers belonging to one or more minority groups**[207]; **and that track fathers across the socio-economic spectrum**. Data and methods should enable multiple markers of difference and marginalisation and the implications of intersectionality to be addressed.

Fathering, father adjustment, father-infant relationship and co-parenting variables should be collected in quantitative studies of infants and families including birth cohort studies. There should be a more even allocation of interview time between a cohabiting mother and father. If there is a longer 'main caregiver or informant' interview, parents should select which of them undertakes it. Involved Own Household Fathers should be asked a similar range of questions about fathering and co-parenting as those asked of Cohabiting Partner Fathers.

Bodies such as Health Improvement England should collect data about fathers' health and health behaviours during the perinatal period alongside data collected about mothers. Analyses of health data collected in the Health Survey for England and Understanding Society for perinatal fathers should also be carried out to fill research gaps.

When researching fathers and fatherhood, it is important to **think critically about the statistical measures and analytic categories used**, including whether what they represent differs across the spectrum of fathers and families. Research should be undertaken on the **underlying processes linking father-factors to good and poor outcomes** – as a means of understanding the kinds of policy interventions needed. Consideration should be given to whether researcher biases inform the way in which statistical relationships between variables are interpreted.

[207] For example, LGBTQ2+ populations, fathers who are older, younger, have disabilities, are migrants, refugees, fathers of colour, living in rural areas or in socio-economic poverty.

8. References

Abbass-Dick, J., Brown, H. K., Jackson, K. T., Rempel, L., & Dennis, C.-L. (2019). Perinatal breastfeeding interventions including fathers/partners: A systematic review of the literature. *Midwifery, 75*, 41-51. http://www.sciencedirect.com/science/article/pii/S0266613819300841 doi:https://doi.org/10.1016/j.midw.2019.04.001

Abraham, E., & Feldman, R. (2018). The neurobiology of human allomaternal care; implications for fathering, coparenting, and children's social development. *Physiology & Behavior, 193*(Pt A), 25-34. doi:10.1016/j.physbeh.2017.12.034

Abraham, E., & Feldman, R. (2022). The neural basis of human fatherhood: A unique biocultural perspective on plasticity of brain and behavior. *Clin Child Fam Psychol Rev*. doi:10.1007/s10567-022-00381-9

Al Namir, H. M. A., Brady, A.-M., & Gallagher, L. (2017). Fathers and breastfeeding: Attitudes, involvement and support. *British Journal of Midwifery, 25*(7), 426-440. doi:10.12968/bjom.2017.25.7.426

Alderdice, F., Hamilton, K., McNeill, J., Lynn, F., Curran, R., & Redshaw, M. (2016). *Birth NI: A Survey of Women's Experience of Maternity Care in Northern Ireland* Belfast: School of Nursing and Midwifery, Queen's University http://www.qub.ac.uk/schools/SchoolofNursingandMidwifery/FileStore/Filetoupload,670193,en.pdf?platform=hootsuite

Alexander, A. L., Clarke, P., Rushworth, I., & Mastroyannopoulou, K. (2020). PTSS in fathers of VLBW infnts two to four years postpartum: a pilot study. *Clinical Practice in Pediatric Psychology*(1), 25-36. https://ueaeprints.uea.ac.uk/72269/1/Revised_final_accepted_Manuscript_CPPP_Final_03.06.19_with_Title_Page.pdf

Allen, M., & Donkin, A. (2015). *The impact of adverse experiences in the home on the health of children and young people, and inequalities in prevalence and effects* London: Institute of Health Equity, University College London https://www.basw.co.uk/system/files/resources/basw_13257-1_0.pdf

Allport, B. S., Johnson, S., Aqil, A., Labrique, A. B., Nelson, T., Kc, A., Marcell, A. V. (2018). Promoting father Involvement for child and family health. *Academic Pediatrics, 18*(7), 746-753. doi:10.1016/j.acap.2018.03.011

Amodia-Bidakowska, A., Laverty, C., & Ramchandani, P. G. (2020). Father-child play: A systematic review of its frequency, characteristics and potential impact on children's development. *Developmental Review, 57*, 100924. doi:10.1016/j.dr.2020.100924

Anderberg, D., & Moroni, G. (2021). Exposure to intimate partner violence and children's dynamic skill accumulation: evidence from a UK longitudinal study. *Oxford review of economic policy, 36*(4), 783-815. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7888407/pdf/graa052.pdf

Anderson, S., Bradshaw, P., Cunningham-Burley, S., Hayes, F., Jamieson, L., MacGregor, A., … Wasof, F. (2007). *Growing up in Scotland: Sweep 1 Overview Report*. Edinburgh: Scottish Government https://www.era.lib.ed.ac.uk/bitstream/handle/1842/2994/0044329.pdf?sequence=1&isAllowed=y

Auty, K. M., Farrington, D. P., & Coid, J. W. (2015). Intergenerational transmission of psychopathy and mediation via psychosocial risk factors. *The British Journal of Psychiatry, 206*(1), 26-31. https://www.cambridge.org/core/services/aop-cambridge-core/content/view/ADDE36B55FA04909A57FCD9EB6BE2024/S0007125000237343a.pdf/div-

class-title-intergenerational-transmission-of-psychopathy-and-mediation-via-psychosocial-risk-factors-div.pdf

Ayebare, E., Mwebaza, E., Mwizerwa, J., Namutebi, E., Kinengyere, A. A., & Smyth, R. (2015). Interventions for male involvement in pregnancy and labour: A systematic review. *African Journal of Midwifery and Women's Health, 9*(1), 23-28. doi:10.12968/ajmw.2015.9.1.23

Bacchus, L., Mezey, G., Bewley, S., & Haworth, A. (2004). Prevalence of domestic violence when midwives routinely enquire in pregnancy. *BJOG: An International Journal of Obstetrics & Gynaecology, 111*(5), 441-445. doi:10.1111/j.1471-0528.2004.00108.x

Baker, D., & Henderson, J. (1999). Differences between infants and adults in the social aetiology of wheeze. The ALSPAC Study Team. Avon Longitudinal Study of Pregnancy and Childhood. *Journal of Epidemiology and Community Health, 53*(10), 636-642. http://jech.bmj.com/content/53/10/636.full.pdf

Bakermans-Kranenburg, M. J., Lotz, A., Alyousefi-van Dijk, K., & van IJzendoorn, M. (2019). Birth of a Father: fathering in the first 1,000 days. *Child Development Perspectives, 13*(4), 247-253. https://srcd.onlinelibrary.wiley.com/doi/epdf/10.1111/cdep.12347

Baldwin, S., Malone, M., Murrells, T., Sandall, J., & Bick, D. (2021). A mixed-methods feasibility study of an intervention to improve men's mental health and wellbeing during their transition to fatherhood. *BMC Public Health, 21*(1), 1813. doi:10.1186/s12889-021-11870-x

Barnes, J., Ram, B., & Leach, P. (2007). Factors associated with negative emotional expression: a study of mothers of young infants. *Journal of Reproductive and Infant Psychology, 25*(2), 122-138. doi:10.1080/02646830701292399

Bartlett, E. (2004). The Effects of Fatherhood on the Health of Men; A Review of the Literature. *Journal of Men's Health and Gender, 1*(2-3), 159-169. doi:https://doi.org/10.1016/j.jmhg.2004.06.004

Bartley, M., Kelly, Y., Schoon, I., & Hope, S. (2004). Parent Health. In S. Dex & H. Joshi (Eds.), *Millennium Cohort Study First Survey: A User's Guide to Initial Findings*. London: Centre for Longitudinal Studies, University of London.

Batalova, J. A., & Cohen, P. N. (2002). Premarital cohabitation and housework: couples in cross-national perspective. *Journal of Marriage and Family, 64*(3), 743-755. doi:10.1111/j.1741-3737.2002.00743.x

Beail, N. A. (1984). *Father involvement in pregnancy, birth and early parenthood.* (PhD). University of London, London. https://discovery.ucl.ac.uk/id/eprint/10007300/7/Beail%2C%20Nigel%20A_Redacted.pdf

Ben-Shlomo, Y., Scharf, J. M., Miller, L. L., & Mathews, C. A. (2016). Parental mood during pregnancy and post-natally is associated with offspring risk of Tourette syndrome or chronic tics: prospective data from the Avon Longitudinal Study of Parents and Children (ALSPAC). *European Child & Adolescent Psychiatry, 25*(4), 373-381. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4820468/pdf/787_2015_Article_742.pdf

Benson, H., & Mckay, S. (2018). *Mummy's Boys, Daddy's Girls and Teenage Mental Health* Cambridge: The Marriage Foundation http://marriagefoundation.org.uk/wp-content/uploads/2018/08/MF-paper-Mummys-boys-Daddys-girls-02.08.18.pdf

Benson, H., & Mckay, S. (2019). *Happy Wife, Happy Life* Bristol: Marriage Foundation https://marriagefoundation.org.uk/wp-content/uploads/2019/09/MF-Happy-Wife-Happy-Life-FINAL.pdf

Benzeval, M. (2019). *Enhancing data around early life in Understanding Society: scientific opportunities and considerations*. Understandig Society Working Paper Series https://www.understandingsociety.ac.uk/research/publications/525963

Benzeval, M. (2021). *Understanding Families: Building better resources for research on families (Understanding Society family developments consultation. Professor Michaela Benzeval (Director, Understanding Society and Nicole James (ISER))*. Paper presented at the Understanding Society Changing Families mini-conference 2021, Online. https://www.understandingsocietyconference.co.uk/events/2021/01/29/changing-families-providing-care/

Benzeval, M., Burton, J., Crossley, T., Fisher, P., Jackle, A., H, L., & Read, B. (2020). *Understanding Society COVID-19 Survey, April Briefing Note: The Economic Effects, .* Working Paper Colchester: ISER, University of Essex https://www.understandingsociety.ac.uk/sites/default/files/downloads/general/ukhls_briefingnote_covid_economics_final.pdf

Bergstrøm, H., & Farrington, D. P. (2021). Stability of psychopathy in a prospective longitudinal study: Results from the Cambridge Study in Delinquent Development. *Behavioral Sciences & the Law, 39*(5), 611-623. doi:10.1002/bsl.2543

Berry, J., & Jones, W. (1995). The parental stress scale: initial psychometric evidence. *Journal of Personal ane Social Relationships, 12*, 463-472. doi:10.1177/0265407595123009

Bhairo, R. L., & Elliott, H. (2018). Encouraging breastfeeding: The role of fathers. *Journal of Health Visiting, 6*(6), 290-301. https://gala.gre.ac.uk/id/eprint/30766/7/30766%20ELLIOTT_Encouraging_Breastfeeding_The_Role_Of_Fathers_%28OA%29_2018.pdf

Bird, L. M., Sacker, A., & McMunn, A. (2020). Relationship satisfaction and concordance in attitudes to maternal employment in British couples with young children. *Journal of Social and Personal Relationships, 37*(7), 2184-2204. https://journals.sagepub.com/doi/epub/10.1177/0265407520919987

Blackburn, C., Bonas, S., Spencer, N., Dolan, A., Coe, C., & Moy, R. (2005). Smoking behaviour change among fathers of new infants. *Social Science & Medicine, 61*(3), 517-526. doi:10.1016/j.socscimed.2004.12.009

Blackburn, C. M., Bonas, S., Spencer, N. J., Coe, C. J., Dolan, A., & Moy, R. (2005). Parental smoking and passive smoking in infants: fathers matter too. *Health Educ Res, 20*(2), 185-194. doi:10.1093/her/cyg117

Blaffer Hrdy, S. (2009). *Mothers and Others: the evolutionary origins of mutual understanding*. Boston, Mass.: Harvard University Press.

Boots Family Trust Alliance. (2013). *Perinatal mental health: experiences of women and health professionals* London: Boots Family Trust Alliance https://maternalmentalhealthalliance.org/wp-content/uploads/Boots-Family-Trust-Alliance-report.pdf

Borkowska, M. (2019). *Improving population and sub-group coverage: who is missing and what can be done about it?* Understanding Society Working Paper 2019-15 Colchester: University of Essex https://www.iser.essex.ac.uk/research/publications/working-papers/understanding-society/2019-15

Bowen, E. (2015). The impact of intimate partner violence on preschool children's peer problems: an analysis of risk and protective factors. *Child Abuse and Neglect, 50*, 141-150. https://core.ac.uk/download/pdf/30619981.pdf doi:10.1016/j.chiabu.2015.09.005

Bowen, E., Heron, J., Waylen, A., & Wolke, D. (2005). Domestic violence risk during and after pregnancy: findings from a British longitudinal study. *BJOG An International Journal of Obstetrics & Gynaecology, 112*(8), 1083-1089. doi:10.1111/j.1471-0528.2005.00653.x

Boyle, P., Feijten, P., Feng, Z., Gayle, V., & Graham, E. (2009). Stepparenting and mental health. In J. Stillwell (Ed.), *Fertility, Living Arrangements, Care and Mobility* (pp. 151-170). London: Springer.

Bradshaw, P., Bromley, C., Hill, T., Mabelis, J., Parkes, A., Smith, K., … Wigh, D. (2013). *Growing Up in Scotland: Birth Cohort 2. Results from the first year*. Edinburgh: Scottish Government http://www.gov.scot/resource/0041/00414641.pdf

Bradshaw, P., Schofield, L., & Maynard, L. (2014). *The experiences of mothers aged under 20: analysis of data from the Growing Up in Scotland study*. Edinburgh: Scottish Government http://www.gov.scot/Resource/0044/00444511.pdf

Brockington, I., Fraser, C., & Wilson, D. (2006). The Postpartum Bonding Questionnaire: a validation. *Archives of Women's Mental Health, 9*(5), 233-242. doi:10.1007/s00737-006-0132-1

Bronte-Tinkew, J., Carrano, J., Horowitz, A., & Kinukawa, A. (2008). Involvement among resident fathers and links to infant cognitive outcomes. *Journal of Family Issues, 29*(9), 1211-1244. https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.900.9170&rep=rep1&type=pdf

Brown, A. (2017). What Do Women Really Want? Lessons for Breastfeeding Promotion and Education. *Breastfeeding Medicine, 11*(3), 102-110. http://online.liebertpub.com/doi/pdf/10.1089/bfm.2015.0175 doi:DOI: 10.1089/bfm.2015.0175

Brown, A., & Davies, R. (2014). Fathers' experiences of supporting breastfeeding: challenges for breastfeeding promotion and education. *Maternal & Child Nutrition, 10*(4), 510-526. doi:10.1111/mcn.12129

Brown, H., Hole, A. R., & Roberts, J. (2013). Going the same 'weigh': spousal correlations in obesity in the United Kingdom. *Applied Economics, 46*(2), 153-166. doi:10.1080/00036846.2013.837575

Brown, R., Eisner, M., Valdebenito, S., Walker, S., Tomlinson, M., Hughes, C., … Murray, A. (2021). What research questions should the next generation of birth cohort studies address? An Unternational Delphi Study of Experts. *Academic Pediatrics, 21*(1), 43-52. doi:10.1016/j.acap.2020.03.011

Bryson, C., Purdon, S., & Skipp, A. (2017). *Understanding the lives of separating and separated families in the UK: a scoping study of the evidence needs and the data we need to address them* London: Nuffield Foundation https://www.nuffieldfoundation.org/sites/default/files/files/Family%20Separation%20Scoping%20Study%20Report_final.pdf

Bunting, L., & McAuley, C. (2004). Teenage pregnancy and motherhood: The contribution of support. *Child & Family Social Work, 9*(2), 207-215. doi:10.1111/j.1365-2206.2004.00328.x

Burcher, S. A., Corey, L. A., Mentzer, K. M., Davis, L., McNamee, H., Horning, M. L., … Shlafer, R. J. (2021). Family home visiting and fathers: A scoping review. *Children and Youth Services Review, 128*, 106132. doi:10.1016/j.childyouth.2021.106132

Burgess, A., & Davies, J. (2017). *Cash or Carry? Fathers combining work and care in the UK (Full Report).* Contemporary Fathers in the UK series Marlborough: Fatherhood Institute. Available to download from the Research section of the Fatherhood Institute website.

Burgess, A., & Goldman, R. (2018). *Who's the bloke in the room? Fathers during pregnancy and at the birth in the United Kingdom (Full Report).* Contemporary Fathers in the UK Series Marlborough: Fatherhood

Institute. Available to download from the Research section of the Fatherhood Institute website.

Burgess, A., & Goldman, R. (2021). *Lockdown Fathers: the untold story* London: Fatherhood Institute. Available to download from the Research section of the Fatherhood Institute website.

Burgess, S., Propper1, C., Rigg, J., & Team, t. A. S. (2004). *The Impact of Low-Income on Child Health: Evidence from a Birth Cohort Study*. CMPO Working Paper Series No. 04/098 Bristol: Leverhulme Centre for Market and Public Organisation, University of Bristol http://www.bristol.ac.uk/media-library/sites/cmpo/migrated/documents/wp98.pdf

Burke, H., Leonardi-Bee, J., Hashim, A., Pine-Abata, H., Chen, Y., Cook, D. G., … McKeever, T. M. (2012). Prenatal and passive smoke exposure and incidence of asthma and wheeze: systematic review and meta-analysis. *Pediatrics, 129*(4), 735-744. http://pediatrics.aappublications.org/content/129/4/735.full.pdf

Butler, L. M. (2012). *Paternal depression, expressed emotion and child emotional and behavioural problems.* (PhD PhD). University of Exeter, Exeter. http://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.579848

Cadman, T., Kwong, A. S. F., Moran, P., O'Mahen, H., Culpin, I., Lawlor, D. A., & Pearson, R. M. (2021). Joint associations of parental personality traits and socio-economic position with trajectories of offspring depression: Findings from up to 6925 families in a UK birth cohort. *JCPP Advances, 1*(3), e12028. https://acamh.onlinelibrary.wiley.com/doi/epdf/10.1002/jcv2.12028

Calderwood, L., Kiernan, K., Joshi, H., Smith, K., & Ward, K. (2005). Parenthood and parenting. In S. Dex & H. Joshi (Eds.), *Children of the 21st century: From birth to nine months* (pp. 175-205). Bristol: Policy Press.

Campbell, A., Pearson, R. M., Lewis, R., Constantini, I., Cordero, M., Skinner, A., … Culpin, I. (Under submission (unpublished)). Maternal and paternal postnatal depression and parental vocalisation behaviours in infancy: findings from UK-based birth cohort.

Cappuccini, G., & Cochrane, R. (2000). Life with the first baby: Women's satisfaction with the division of roles. *Journal of Reproductive and Infant Psychology, 18*(3), 189-202. doi:10.1080/713683037

Carson, C., Redshaw, M., Gray, R., & Quigley, M. A. (2015). Risk of psychological distress in parents of preterm children in the first year: evidence from the UK Millennium Cohort Study. *BMJ Open, 5*(12). https://bmjopen.bmj.com/content/bmjopen/5/12/e007942.full.pdf

CDC&P. (2006). *The Health Consequences of Involuntary Exposure to Tobacco Smoke: A Report of the Surgeon General Office on Smoking and Health (US).* Atlanta: Centers for Disease Control and Prevention (US); https://www.ncbi.nlm.nih.gov/books/NBK44324/pdf/Bookshelf_NBK44324.pdf

Chanfreau, J., Barnes, M., Tomaszewski, W., Philo, D., Hall, J., & Tipping, S. G. (2011). *Growing Up in Scotland: Change in early childhood and the impact of significant events.* Edinburgh: Scottish Government http://www.gov.scot/Resource/Doc/350054/0117151.pdf

Child Safeguarding Practice Review Panel. (2021). *"The Myth of Invisible Men": Safeguarding children under 1 from non-accidental injury caused by male carers.* London https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1017944/The_myth_of_invisible_men_safeguarding_children_under_1_from_non-accidental_injury_caused_by_male_carers.pdf

Chin, R. H., Pauline;Daiches, Anna. (2011). Fathers' experiences of their transition to fatherhood: A metasynthesis. *Journal of Reproductive and Infant Psychology, 29*(1), 4-18. doi:10.1080/02646838.2010.513044

Cioffi, C. C., & DeGarmo, D. S. (2021). Improving parenting practices among fathers who misuse opioids: Fathering Through Change Intervention. *Frontiers in Psychology, 12*. https://www.frontiersin.org/articles/10.3389/fpsyg.2021.683008/full

Clayton, C. L. (2016). The lives of young vathers: a review of selected evidence. *Social policy and society, 15*(1), 129-140. https://www.cambridge.org/core/services/aop-cambridge-core/content/view/BDCDAEC321154FE01FC9D94939B196F3/S1474746415000470a.pdf/the-lives-of-young-fathers-a-review-of-selected-evidence.pdf

Coffey, H. (2016). Parents' experience of the care they received following a stillbirth: a literature review. *Evidence Based Midwifery, 14*(1), 16-21. https://www.proquest.com/openview/197f48db057bdeb20c7ed2e5f8ddf7f8/1.pdf?pq-origsite=gscholar&cbl=506296

Coffey, S. (2015). *Fathers' observed responsiveness towards their 12 month old infants: An*

Exploratory Investigation of Associations with Paternal Low Mood and Infant Development. (PhD). Bristol, University of Bristol. https://ore.exeter.ac.uk/repository/bitstream/handle/10871/13865/CoffeyS.pdf?sequence=4

Coles, L., & Collins, L. (2009). Including fathers in preventing non-accidental head injury. *Community Practitioner, 82*(4), 20-23. https://www.proquest.com/openview/39d04902ab464745903216ef1dc427b7/1?pq-origsite=gscholar&cbl=47216

Coles, L., Thorpe, K., Smith, S., Hewitt, B., Ruppanner, L., Bayliss, O., … Staton, S. (2021). Children's sleep and fathers' health and wellbeing: a systematic review. *SLEEP Advances, 2*(Supplement_1), A29-A29. doi:10.1093/sleepadvances/zpab014.072

Collin, S. M., Tilling, K., Joinson, C., Rimes, K. A., Pearson, R. M., Hughes, R. A., … Crawley, E. (2014). Maternal and childhood psychological factors predict chronic disabling fatigue at age 13 years. *Journal of Adolescent Health, 56*(2), 181-187. https://www.jahonline.org/action/showPdf?pii=S1054-139X%2814%2900382-6

Condon, J., Corkindale, J., & Boyce, P. (2008). Assessment of postnatal paternal-infant attachment: development of a questionnaire instrument. *Journal of Reproductive and Infant Psychology, 26*(3), 195-210. doi:10.1080/02646830701691335

Coope, C. M. (2013). *Maternal psychological distress and early-childhood externalising behaviour: a longitudinal analysis of the UK Millennium Cohort Study.* (PhD). University College, London, London. https://discovery.ucl.ac.uk/id/eprint/1388180/1/1388180_%20Coope_Thesis.pdf

Costa-Font, J., & Flèche, S. (2017). *Parental sleep and employment: evidence from a British cohort study*. CEP Discussion Paper London: Centre for Economic Performance http://cep.lse.ac.uk/pubs/download/dp1467.pdf

Cowan, C., & Cowan, P. (1988). Who does what when partners become parents: implications for men, women and marriage. *Marriage & Family Review, 12*(3/4). doi:10.1300/J002v12n03_07

Darwin, Z., Domoney, J., Iles, J., Bristow, F., McLeish, J., & Sethna, V. (2021). *Involving and supporting partners and other family members in specialist perinatal mental health services: a good pratice guide* London: NHS South London and Maudsley FOUNDATION TRUST https://www.england.nhs.uk/wp-content/uploads/2021/03/Good-practice-guide-March-2021.pdf

Darwin, Z., Domoney, J., Iles, J., Bristow, F., Siew, J., & Sethna, V. (2021). Assessing the mental health of fathers, other co-parents, and partners in the perinatal period: mixed methods evidence synthesis. *Frontiers in Psychiatry, 11*(1260). https://www.frontiersin.org/article/10.3389/fpsyt.2020.585479 doi:10.3389/fpsyt.2020.585479

Dave, F., & Knight, I. (1997). A study of proxy response on the Labour Force Survey. *ONS Survey Methodology Bulletin, 40*.

Davé, S., Nazareth, I., Sherr, L., & Senior, R. (2005). The association of paternal mood and infant temperament: a pilot study. *British Journal of Developmental Psychology, 23*(4), 609-621. doi:10.1348/026151004X22962

Davé, S., Petersen, I., Sherr, L., & Nazareth, I. (2010). Incidence of maternal and paternal depression in primary care: a cohort study using a primary care database. *Arch Pediatr Adolesc Med, 164*(11), 1038-1044. https://jamanetwork.com/journals/jamapediatrics/fullarticle/383936

Davies, J., & Goldman, R. (2021). *Non-accidental injury of infants by fathers, father figures and other informal male caregivers: a rapid review of evidence* London: Fatherhood Institute https://view.officeapps.live.com/op/view.aspx?src=http%3A%2F%2Fwww.fatherhoodinstitute.org%2Fwp-content%2Fuploads%2F2021%2F08%2FReview-of-NAI-by-fathers-Final.docx&wdOrigin=BROWSELINK

Davies, J., Goldman, R., & Burgess, A. (2017). *Methodology: How we compiled the literature library for our review*. Contemporary Fathers in the UK The Fatherhood Institute. Available to download from the Research section of the Fatherhood Institute website.

Davis-Kean, P., Chambers, R. I., Davidson, L. L., Kleinert, C., Ren, Q., & Tang, S. (2018). *Longitudinal Studies Strategic Review: 2017 Report to the Economic and Social Research Council* London: Economic and Social Research Council https://esrc.ukri.org/files/news-events-and-publications/publications/longitudinal-studies-strategic-review-2017/

Deater-Deckard, K., Pickering, K., Dunn, J., & Golding, J. (1998). Family structure and depressive symptoms in men preceding and following the birth of a child. The Avon Longitudinal Study of Pregnancy and Childhood Study Team. *The American Journal of Psychiatry, 155*(6), 818-823. https://ajp.psychiatryonline.org/doi/pdf/10.1176/ajp.155.6.818

Deeney, K., Lohan, M., Spence, D., & Parkes, J. (2012). Experiences of fathering a baby admitted to neonatal intensive care: a critical gender analysis. *Social Science & Medicine, 75*(6), 1106-1113. doi:10.1016/j.socscimed.2012.04.018

Dermott, E. (2008). *Intimate Fatherhood: a sociological analysis*. London: Routledge.

Dex, S., Joshi, H., Ward, K., & Londra, M. (2004). Parental Employment and Education. In S. Dex & H. Joshi (Eds.), *Millennium Cohort Study First Survey: A User's Guide to Initial Findings*. London: Centre for Longitudinal Studies, Bedford Group for Lifecourse & Statistical Studies Institute of Education, University of London.

Dex, S., & Ward, K. (2004). Childcare. In S. Dex & H. Joshi (Eds.), *Millennium Cohort Study First Survey: A User's Guide to Initial Findings*. London: Centre for Longitudinal Studies, University of London.

Dex, S., & Ward, K. (2007). *Parental Care and Employment in Early Childhood*. Working Paper Series No 57 Manchester: Equal Opportunities Commission http://www.fatherhoodinstitute.org/uploads/publications/257.pdf

DfES & DH. (2004). *National Service Framework for Children, Young People and Maternity Services: Maternity Services*. London: Department for Education and Skills/ Department of Health https://web.archive.org/web/20041012025403/http://www.dh.gov.uk/assetRoot/04/09/05/23/04090523.pdf

Diniz, E., Brandaio, T., Montero, L., & Verisimo, M. (2021). Father involvement during early childhood: A systematic review of the literature. *Journal of Family Theory & Review, 13*(1), 77–99. http://repositorio.ispa.pt/bitstream/10400.12/8062/1/Journal%20of%20Family%20Theory.pdf

Domoney, J. (2013). *Early Father-Child Interactions and child behaviour.* (D. Clin.Psy). University College London, London. https://discovery.ucl.ac.uk/id/eprint/1406919/2/Jill_Domoney_Thesis_D_Clin_Psy_Vol1_redacted.pdf

DWP. (2017). *Improving Lives: Helping Workless Families Analysis and Research Pack*. Online https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/696368/improving-lives-helping-workless-families-web-version.pdf

Earle, S. (2002). Factors affecting the initiation of breastfeeding: implications for breastfeeding promotion. *Health Promotion Intternational, 17*(3), 205-214. http://heapro.oxfordjournals.org/content/17/3/205.full.pdf

Earle, S., & Hadley, R. (2018a). Men's views and experiences of infant feeding: A qualitative systematic review. *Maternal & Child Nutrition, 14*(3), e12586. doi:10.1111/mcn.12586

Earle, S., & Hadley, R. (2018b). A systematic review of men's views and experiences of infant feeding: implications for midwifery practice. *MIDIRS Midwifery Digest, 28*(1). https://oro.open.ac.uk/52876/4/Earle.pdf

Easter, A., & Newburn, M. (2014). Fathers find more 'family time' means less 'couple time': how relationships change fornew parents. *Perspective – NCT's journal on preparing parents for birth and early parenthood*(24 (September)), 15-16. http://www.nct.org.uk/sites/default/files/related_documents/Easter%20Fathers%20find%20more%20family%20time%20means%20less%20couple%20time%20-%20how%20relationships%20change%20for%20new%20parents%20pp%2015-16.pdf

Edmondson, O. J., Psychogiou, L., Vlachos, H., Netsi, E., & Ramchandani, P. G. (2010). Depression in fathers in the postnatal period: assessment of the Edinburgh Postnatal Depression Scale as a screening measure. *Journal of Affective Disorders, 125*(1-3), 365-368. http://www.jad-journal.com/article/S0165-0327(10)00095-9/pdf

Eiden, R. D., & Leonard, K. (1996). Paternal alcohol use and the mother-infant relationship. *Development and Psychopathology, 8*(2), 307-323. doi:10.1017/S0954579400007112

Eiden, R. D., & Leonard, K. (1999). Parent-infant interactions among families with alcoholic fathers. *Development and Psychopathology, 11*(4), 745-762. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2659405/pdf/nihms97165.pdf

Einio, E., Nisén, J., & Martikainen, P. (2015). Is young fatherhood causally related to midlife mortality? A sibling fixed-effect study in Finland. *Journal of Epidemiology and Community Health, 69*(11), 1083-1090. https://helda.helsinki.fi/bitstream/handle/10138/236224/EinioNisenMartikainenJECH2015.pdf?sequence=1

Ellis, A., Chebsey, C., Storey, C., Bradley, S., Jackson, S., Flenady, V., … Siassakos, D. (2016). Systematic review to understand and improve care after stillbirth: a review of parents' and healthcare professionals' experiences. *BMC Pregnancy Childbirth, 16*, 16. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4727309/pdf/12884_2016_Article_806.pdf

Emmott, E. H. (2015). *Allomaternal investments and child outcomes in the United Kingdom.* (PhD). University College London, London. https://discovery.ucl.ac.uk/id/eprint/1468740/1/FINAL%20COPY%20of%20THESIS.pdf

Emmott, E. H., & Mace, R. (2015). Practical Support from Fathers and Grandmothers Is Associated with Lower Levels of Breastfeeding in the UK Millennium Cohort Study. *PLoS One, 10*(7), e0133547. doi:10.1371/journal.pone.0133547

Emmott, E. H., & Mace, R. (2021). Why the son-bias in fathering? Exploring sex-differences in the associations between paternal caregiving and child outcomes in England. *Journal of Family Issues, 42*(6), 1354-1383. https://discovery.ucl.ac.uk/id/eprint/10106208/1/EmmottMace_2020.pdf

Ermisch, J. (2008). Child support and non-resident fathers' contact with their children. *Journal of Population Economics, 21*(4), 827-853. https://www.iser.essex.ac.uk/files/iser_working_papers/2006-14.pdf

Fagan, C., & Norman, H. (2016). What makes fathers involved? An exploration of the longitudinal influence of fathers' and mothers' employment on father's involvement in looking after their pre-school children in the UK'. In E. R. e. I. Crespi (Ed.), *Balancing Work and Family in a Changing Society: the Fathers' Perspective*. Basingstoke: Palgrave.

Faircloth, C. (2020). When equal partners become unequal parents: couple relationships and intensive parenting culture. *Families, Relationships and Societies, 10*(2), 231-248. https://discovery.ucl.ac.uk/id/eprint/10089664/1/FRS-D-18-00063_R2.pdf

Fang, Y., Wang, Y., Peng, M., Xu, J., Fan, Z., Liu, C., … Zhang, H. (2020). Effect of paternal age on offspring birth defects: A systematic review and meta-analysis. *Aging, 12*. https://www.aging-us.com/article/104141/text

Fantin, R., Delpierre, C., Dimeglio, C., Lamy, S., Solís, C. B., Charles, M.-A., & Kelly-Irving, M. (2016). Disentangling the respective roles of the early environment and parental BMI on BMI change across childhood: A counterfactual analysis using the Millennium Cohort Study. *Prev Med, Aug:89*, 146-153. doi:10.1016/j.ypmed.2016.05.028

Farrow, A., Taylor, H., & Golding, J. (1997). Time spent in the home by different family members. *Environmental Technology, 18*(6), 605-613. doi:10.1080/09593331808616578

Feeley, N., Waitzer, E., Sherrard, K., Boisvert, L., & Zelkowitz, P. (2013). Fathers' perceptions of the barriers and facilitators to their involvement with their newborn hospitalised in the neonatal intensive care unit. *Journal of Clinical Nursing, 22*(3-4), 521-530. https://onlinelibrary.wiley.com/doi/full/10.1111/j.1365-2702.2012.04231.x

Feijten, P., Boyle, P., Graham, E., & Gayle, V. (2011). *Differences in mental health between adults in stepfamilies and 'first families'*. Working Paper Number 10 ESRC Centre for Population Change https://www.cpc.ac.uk/docs/2011_WP10_%20Differences_in_Mental_Health_Feijten_et_al.pdf

Feinberg, M. E., Brown, L. D., & Kan, M. L. (2012). A Multi-Domain Self-Report Measure of Coparenting. *Parenting, Science and Practice, 12*(1), 1-21. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3499623/pdf/nihms370055.pdf

Ferguson, H. (2016). Patterns of engagement and non-engagement of young fathers in early Intervention and safeguarding work. *Social policy and society, 15*(01), 99-111. https://www.cambridge.org/core/services/aop-cambridge-core/content/view/85EA69379B8C81EADF01F22C0141150D/S1474746415000573a.pdf/patterns-of-engagement-and-non-engagement-of-young-fathers-in-early-intervention-and-safeguarding-work.pdf

Filippa, M., Saliba, S., Esseily, R., Gratier, M., Grandjean, D., & Kuhn, P. (2021). Systematic review shows the benefits of involving the fathers of preterm infants in early interventions in neonatal intensive care units. *Acta Paediatrica, 110*(9). https://onlinelibrary.wiley.com/doi/epdf/10.1111/apa.15961

Fink, E., Browne, W. V., Isla, K., & Hughes, C. (2019). Couple relationship quality and the infant home language environment: gender-specific findings. *Journal of Family Psychology, 34*, 2. https://www.repository.cam.ac.uk/bitstream/handle/1810/295090/2019-49285-001.pdf?sequence=5&isAllowed=y

Fisher, P. (2020). *An assessment of the national representativeness of new mothers and women of childbearing age in Understanding Society* Understanding Society Working Paper 2020-06 Colchester: University of Essex https://www.understandingsociety.ac.uk/research/publications/526037

Fitzsimons, E., Goodman, A., Kelly, E., & Smith, J. P. (2017). Poverty dynamics and parental mental health: Determinants of childhood mental health in the UK. *Social Science and Medicine, 175*, 43-51. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5293621/pdf/nihms840331.pdf

Flouri, E., & Malmberg, L.-E. (2012). Father involvement, family poverty and adversity, and young children's behaviour in intact two-parent families. *Longitudinal and Life Course Studies, 3*(2), 254-267. http://www.llcsjournal.org/index.php/llcs/article/view/170/194

Flouri, E., Midouhas, E., & Narayanan, M. K. (2016). The relationship between father involvement and child problem behaviour in intact families: a 7-year cross-lagged study. *Journal of Abnormal Child Psychology, 44*(5), 1011-1021. doi:10.1007/s10802-015-0077-9

Flouri, E., Narayanan, M. K., & Midouhas, E. (2015). The crosì lagged relationship between father absence and child problem behaviour in the early years. *Child, 41*, 1090 –1097. https://onlinelibrary.wiley.com/doi/pdfdirect/10.1111/cch.12236

Flouri, E., Tzavidis, N., & Kallis, C. (2010). Area and family effects on the psychopathology of the Millennium Cohort Study children and their older siblings. *Journal of Child Psychology and Psychiatry, 51*(2), 152-161. doi:10.1111/j.1469-7610.2009.02156.x

Gage, J. D., Everett, K. D., & Bullock, L. (2007). A review of research literature addressing male partners and smoking during pregnancy. *Journal of Obstetric, Gynecologic, and Neonatal Nursing, 36*(6), 574-580. doi:10.1111/j.1552-6909.2007.00188.x

Gettler, L. T., McDade, T. W., Agustin, S. S., Feranil, A. B., & Kuzawa, C. W. (2015). Longitudinal Perspectives on Fathers' Residence Status, Time Allocation, and Testosterone in the Philippines. *Adaptive Human Behavior and Physiology, 1*(2), 124-149. https://link.springer.com/content/pdf/10.1007/s40750-014-0018-9.pdf

Golding, J., Gregory, S., Northstone, K., Iles-Caven, Y., Ellis, G., & Pembrey, M. (2019). Investigating possible trans/intergenerational associations with obesity in young adults using an exposome approach. *Frontiers of Genetics, 10*, 314. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6459952/pdf/fgene-10-00314.pdf

Golding, J., Gregory, S., Northstone, K., Pembrey, M., Watkins, S., Iles-Caven, Y., & Suderman, M. (2022). Human transgenerational observations of regular smoking before puberty on fat mass in grandchildren and great-grandchildren. *Scientific Reports, 12*(1), 1139. https://www.nature.com/articles/s41598-021-04504-0.pdf

Golding, J., Iles-Caven, Y., Ellis, G., Gregory, S., & Nowicki, S. (2021). Are the early childhood antecedents of men's external locus of control similar to those of their female partners? *Wellcome Open Research, 3*, 28. https://wellcomeopenresearch.org/articles/3-28

Goldman, R., Bradshaw, P., Burgess, A., & Vosnak, K. (2019). *Recruitment and retention of birth fathers in split-off households: Methodological considerations for cohort and longitudinal studies (Working Paper)* Edinburgh: Scottish Centre for Social Research / Fatherhood Institute https://www.ukri.org/wp-content/uploads/2022/03/ESRC-220311-ScotCen-RecruitmentRetentionBirthFathersSplitOffHouseholds-191204.pdf

Goldman, R., Bradshaw, P., Burgess, A., & Vosnaki, K. (2021). A disaggregated approach to recruiting Own Household Fathers in cohort studies. *Social Research Practice, Summer 2021*(11), 13-22. https://the-sra.org.uk/common/Uploaded%20files/Social%20Research%20Practice%20Journal/social-research-practice-journal-issue-11-summer-2021.pdf

Goldman, R., & Burgess, A. (2017). *Where's the Daddy? Fathers and father-figures in UK datasets* Marlborough: Fatherhood Institute http://www.fatherhoodinstitute.org/wp-content/uploads/2017/12/Wheres-the-daddy-Full-Report.pdf

González-Sancho, C. (2014). *Educational homogamy, parenting practices and children's early development.* (PhD). University of Oxford, Oxford. https://ora.ox.ac.uk/objects/uuid:69d45235-1fee-4f4b-a8f6-0f53a76fa2a2/download_file?file_format=pdf&safe_filename=THESIS02&type_of_work=Thesis

Goodman, J. (2005). Becoming an involved father of an infant. *Journal of Obstetric, Gynecologic, and Neonatal Nursing, 34*(2), 190-200. doi:10.1177/0884217505274581

Gordon, H., & Szram, J. (2013). Paternity leave experiences of NHS doctors. *Clinical Medicine, 13*(5), 426-430. doi:10.7861/clinmedicine.13-5-426

Graham, H., Hutchinson, J., Law, C., Platt, L., & Wardle, H. (2016). Multiple health behaviours among mothers and partners in England: Clustering, social patterning and intra-couple concordance. *SSM Population Health, 2*, 824-833. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5165044/pdf/main.pdf

Grande, L., Tribble, R., & Kim, P. (2020). Neural Plasticity in Human Fathers. In H. E. Fitzgerald, K. von Klitzing, N. J. Cabrera, J. Scarano de Mendonça, & T. Skjøthaug (Eds.), *Handbook of Fathers and Child Development: Prenatal to Preschool* (pp. 153-171). Cham: Springer International Publishing.

Gregg, P., & Washbrook, E. (2003). *The effects of early maternal employment on child development in the UK: preliminary results under project: Understanding the Impact of Poverty on Children of the 90's.* CMPO Working Paper Series No. 03/070 Bristol: http://www.bristol.ac.uk/media-library/sites/cmpo/migrated/documents/wp70.pdf

Griffiths, L. J., Dezateux, C., & Cole, T. J. (2007). Differential parental weight and height contributions to offspring birthweight and weight gain in infancy. *International Journal of Epidemiology, 36*(1), 104-107. doi:10.1093/ije/dyl210

Grundy, E., & Read, S. (2015). Pathways from fertility history to later life health: Results from analyses of the English Longitudinal Study of Ageing. *Demographic Research, 32*(Article 4), 107−146. https://www.demographic-research.org/volumes/vol32/4/32-4.pdf

Gutierrez-Galve, L., Stein, A., Hanington, L., Heron, J., Lewis, G., O'Farrelly, C., & Ramchandani, P. (2018). Association of maternal and paternal depression in the postnatal period with offspring depression at age 18 years. *JAMA Psychiatry., 76*(3), 290-296. https://jamanetwork.com/journals/jamapsychiatry/articlepdf/2719453/jamapsychiatry_gutierrezgalve_2018_oi_180094.pdf

Gutierrez-Galve, L., Stein, A., Hanington, L., Heron, J., & Ramchandani, P. (2015). Paternal depression in the postnatal period and child development: mediators and moderators. *Pediatrics, 135*(2), 339-347. doi:10.1542/peds.2014-2411

Hakovirta, M., Meyer, D. R., & Skinner, C. (2019). Does paying child support impoverish fathers in the United States, Finland, and the United Kingdom? *Children and Youth Services Review, 106*, 104485. https://www.sciencedirect.com/science/article/pii/S019074091930461X

Hanington, L., Heron, J., Stein, A., & Ramchandani, P. (2012). Parental depression and child outcomes--is marital conflict the missing link? *Child Care, Health and Development, 38*(4), 520-529. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3437476/pdf/cch0038-0520.pdf

Hanley, J. (2018). Mental health of the whole family. *Journal of Health Visiting, 6*(9), 464-465. doi:10.12968/johv.2018.6.9.464

Harkness, S., Borkowska, M., & Pelikh, A. (2019). *Employment pathways and occupational change after childbirth* London: Government Equalities Office https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/840062/Bristol_Final_Report_1610.pdf

Harold, G. T., Shelton, K. H., Rice, F., Boivin, J., Hay, D., Van Den Bree, M., & Thapar, A. (2008). Disentangling genetic and environmental influences on children's development: Introducing a novel methodology. *Acta Psychologica Sinica, 40*(10), 1124-1134. http://orca.cf.ac.uk/29928/

Harrison, S., Alderdice, F., Henderson, J., & Quigley, M. (2020). *You and Your Baby: A national survey of health and care* Oxford: National Perinatal Epidemiology Unit, University of Oxford https://www.npeu.ox.ac.uk/assets/downloads/maternity-surveys/reports/You%20and%20Your%20Baby%202018%20Survey%20Report.pdf

Harrison, S., Alderdice, F., McLeish, J., & Quigley, M. A. (2021). *You & Your Baby 2020: A national survey of health and care during the 2020 Covid-19 pandemic* Oxford: National Perinatal Epidemiology Unit https://www.npeu.ox.ac.uk/assets/downloads/maternity-surveys/reports/You_and_Your_Baby_2020_Survey_Report.pdf

Harvey, M. E. (2010). *The experiences and perceptions of fathers attending the birth and immediate care of their baby.* (PhD). Aston University, Birmingham. http://publications.aston.ac.uk/9547/1/262781-MEH-PDF.pdf

Haux, T., & Platt, L. (2015). *Parenting and contact before and after separation* Canterbury: University of Kent https://www.nuffieldfoundation.org/sites/default/files/files/ParentingReport_096-DigitalDistribution.pdf

Haux, T., Platt, L., & Rosenberg, R. (2015). *Parenting and post-separation contact: what are the links?* London: London School of Economics and Political Science http://sticerd.lse.ac.uk/dps/case/cp/casepaper189.pdf

Hinchliffe, S. (2013). *Collaboration between co-resident parents.* (PhD Ph). University of Edinburgh, Edinburgh. https://www.era.lib.ed.ac.uk/bitstream/handle/1842/9713/Hinchliffe2013.pdf?sequence=2

Holford, N., Channon, S., Heron, J., & Jones, I. (2018). The impact of postpartum psychosis on partners. *BMC Pregnancy Childbirth, 18*, 414. https://bmcpregnancychildbirth.biomedcentral.com/track/pdf/10.1186/s12884-018-2055-z.pdf

Hollywood, M., & Hollywood, E. (2011). The lived experiences of fathers of a premature baby on a neonatal intensive care unit. *Journal of Neonatal Nursing, 17*(1), 32-40. doi:http://dx.doi.org/10.1016/j.jnn.2010.07.015

Huerta, M. C. (undated). *Pathways to Young Fatherhood in the United Kingdom* London: Centre for Analysis of Social Exclusion, London School of Economics http://paa2007.princeton.edu/papers/70778

Huerta, M. C., Adema, W., Baxter, J., Han, W.-J., & Waldfogel, J. (2013). *Fathers' Leave, Fathers' Involvement and Child Development: Are They Related? Evidence from Four OECD Countries*. OECD Social, Employment and Migration Working Papers, No. 140 Paris: OECD https://www.oecd-ilibrary.org/docserver/5k4dlw9w6czq-en.pdf?expires=1653261322&id=id&accname=guest&checksum=EFD9BF59C34AEEDA7FD5DAEE655DE37C

Hughes, C., Devine, R., Blair, C., & Mesman, J. (2019). Parental well-being, couple relationship quality, andchildren's behavioral problems in the first 2 years of life. *Development and Psychopathology, 32*(3), 935-944. http://pure-

oai.bham.ac.uk/ws/files/59307022/Hughes_et_al_Parental_wellbeing_couple_relationship_quality_Development_and_Psychopathology_2019.pdf

Ireland, J., Khashu, M., Cescutti-Butler, L., van Teijlingen, E., & Jacqui, H.-T. (2016). Experiences of fathers with babies admitted to neonatal care units: A review of the literature. *Journal of Neonatal Nursing, 22*(4), 171-176. http://eprints.bournemouth.ac.uk/24795/1/Ireland%20NICUdads%20proof%20read%20final.pdf

Ives, J. (2014). Theorising the Deliberative Father: Compromise, progress and striving to do fatherhood well. *Families, Relationships and Societies., 10*. https://research-information.bristol.ac.uk/files/81909254/s9_1_.pdf

Janecka, M., Mill, J., Basson, M. A., Goriely, A., Spiers, H., Reichenberg, A., … Fernandes, C. (2017). Advanced paternal age effects in neurodevelopmental disorders – review of potential underlying mechanisms. *Translational Psychiatry, 7*(1), e1019. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5299396/pdf/tp2016294a.pdf

Johnson, J., Haider, F., Ellis, K., Hay, D. M., & Lindow, S. W. (2003). The prevalence of domestic violence in pregnant women. *BJOG An International Journal of Obstetrics & Gynaecology, 110*(3), 272-275. doi:10.1046/j.1471-0528.2003.02216.x

Jones, K., Robb, M., Murphy, S., & Davies, A. (2019). New understandings of fathers' experiences of grief and loss following stillbirth and neonatal death: a scoping review. *Midwifery, 79*(Article 102531). doi:10.1016/j.midw.2019.102531

Joshi, H., Dex, S., & Smith, K. (2004). Introduction. In S. Dex & H. Joshi (Eds.), *Millennium Cohort Study First Survey: A User's Guide to Initial Findings*. London: Centre for Longitudinal Studies, Institute of Education, University of London.

Kadar-Satat, G., & Koslowski, A. (2015). *Fathers in the early years: How do they balance their work and family life?* Edinburgh: Scottish Government http://www.gov.scot/Resource/0047/00477645.pdf

Keeley-Jones, K. M. (2012). *Fathers' experiences of maternal depression in the postnatal period: connecting with the child in the middle.* University of Leicester, Leicester. http://hdl.handle.net/2381/10842

Keizer, R. (2020). The role of athers in the intergenerational transmission of (dis)advantages: Linking sociological stratification questions to developmental psychology research. In H. E. Fitzgerald, K. von Klitzing, N. J. Cabrera, J. Scarano de Mendonça, & T. Skjøthaug (Eds.), *Handbook of Fathers and Child Development: Prenatal to Preschool* (pp. 47-64). Cham: Springer International Publishing.

Kendler, K. S., Gardner, C. O., Edwards, A., Hickman, M., Heron, J., Macleod, J., … Dick, D. M. (2013). Dimensions of parental alcohol use/problems and offspring temperament, externalizing behaviors, and alcohol use/problems. *Alcoholism: Clinical and Experimental Research, 37*(12), 2118-2127. doi:10.1111/acer.12196

Kiernan, K. (2006). Non-residential fatherhood and child involvement: evidence from the Millennium Cohort Study. *Journal of Social Policy, 35*(4), 651-659. http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.525.4286&rep=rep1&type=pdf

Kiernan, K. (2016). *Fathers and Partners in Life Study: Groundwork, Outcomes and Lessons* York: University of York http://www.nuffieldfoundation.org/data-about-fathers-birth-cohort-studies-life-study

Kiernan, K., McLanahan, S., Holmes, J., & Wright, M. (2011). *Fragile Families in the US and UK.* Working Paper WP 11-04-FF Princeton: Centre for Research and Wellbeing

Kiernan, K., & Pickett, K. E. (2006). Marital status disparities in maternal smoking during pregnancy, breastfeeding and maternal depression. *Social Science & Medicine, 63*(2), 335-346. https://isiarticles.com/bundles/Article/pre/pdf/38076.pdf

Kiernan, K., & Smith, K. (2003). Unmarried parenthood: new insights from the Millennium Cohort Study. *Population Trends (National Statistics 7), 114*, 26-33.

KilBride, K., Whitear, B., & Phillips, J. (2018). *Evaluation of the Healthy Child Wales Programme: interim report*. Welsh Government Social Research Cardiff: Welsh Government https://gov.wales/sites/default/files/statistics-and-research/2019-01/evaluation-of-the-healthy-child-wales-programme-interim-report.pdf

Kim, P., Rigo, P., Mayes, L. C., Feldman, R., Leckman, J. F., & Swain, J. E. (2014). Neural plasticity in fathers of human infants. *Social Neuroscience, 9*(5), 522-535. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4144350/pdf/nihms604605.pdf

Kneale, D. (2009). *Pathways to parenthood: exploring context as a predictor of time to first parenthood.* (PhD). University of London, London. http://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.506785

Koslowski, A., & Kadar-Satat, G. (2018). Fathers at work: explaining the gaps between entitlement to leave policies and uptake. *Community, Work & Family*, 1-17. doi:10.1080/13668803.2018.1428174

Kothari, R., Easter, A., Lewis, R., Howard, L. M., & Micali, N. (2015). Intimate partner violence among women with eating disorders during the perinatal period. *International Journal of Eating Disorders, 48*(6), 727–735. http://onlinelibrary.wiley.com/doi/10.1002/eat.22429/epdf

Kroll, M. E., Carson, C., Redshaw, M., & Quigley, M. A. (2016). Early father involvement and subsequent child behaviour at ages 3, 5 and 7 years: prospective analysis of the UK Millennium Cohort Study. *PLoS One, 11*(9), e0162339. https://ora.ox.ac.uk/objects/uuid:827c4fc9-98a6-4df2-974a-c8ecb1bc41e1/download_file?file_format=pdf&safe_filename=journal.pone.0162339.PDF&type_of_work=Journal+article

Kukla, L., Golding, J., & Stejskal, J. (1996). Lifetime medical history of the mother and her partner. In T. Dragonas, J. Golding, R. Ignatyeva, & R. Prokhorskas (Eds.), *Pregnancy in the 90s: The European Longitudinal Study of Pregnancy and Childhood* (pp. 16-25). Bristol: Sansom & Co.

Lamb, M. E. (1986). *The Father's Role: Applied Perspectives*. New York: John Wiley & Sons.

Lamb, M. E., Frodi, A. M., Hwang, C.-P., Frodi, M., & Steinberg, J. (1982). Mother– and father–infant interaction involving play and holding in traditional and nontraditional Swedish families. *Developmental Psychology, 18*(2), 215-221. doi:10.1037/0012-1649.18.2.215

Lamb, M. E., & Lewis, C. (2010). The development and significance of father-child relationships in two-parent families. In M. E. Lamb (Ed.), *The Role of the Father in Child Development* (pp. 94–153). Hoboken, N.J.: John Wiley & Sons Inc.

Lambregtse-van den Berg, M. P., Tiemeier, H., Verhulst, F. C., Jaddoe, V., Tindall, E., Vlachos, H., … Ramchandani, P. G. (2018). Early childhood aggressive behaviour: Negative interactions with paternal antisocial behaviour and maternal postpartum depressive symptoms across two international cohorts. *European Psychiatry, 54*, 77-84. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6172856/pdf/main.pdf

Latham, R. M., Mark, K. M., & Oliver, B. R. (2018). Coparenting and children's disruptive behavior: Interacting processes for parenting sense of competence. *Journal of Family Psychology, 32*(1), 151-156. https://discovery.ucl.ac.uk/id/eprint/10104207/1/Latham_Oliver_2018_coparenting-and-childrens-disruptive-behaviour.pdf

Lawlor, D. A., Lewcock, M., Rena-Jones, L., Rollings, C., Yip, V., Smith, D., … Executive, A. (2019). The second generation of The Avon Longitudinal Study of Parents and Children (ALSPAC-G2): a cohort profile. *Wellcome Open Research, 4*(36). https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6971848/

Lawlor, D. A., Timpson, N. J., Harbord, R. M., Leary, S., Ness, A., McCarthy, M. I., … Smith, G. D. (2008). Exploring the developmental overnutrition hypothesis using parental-offspring associations and FTO as an instrumental variable. *PLoS Med, 5*(3), e33. doi:10.1371/journal.pmed.0050033

Laws, T., & Keeling, J. (2018). Perspectives on supporting fathers affected by postnatal depression and a history of violence. *Journal of Health Visiting, 6*(1), 40-47. doi:10.12968/johv.2018.6.1.40

Lee, E. (2009). Pathologising fatherhood: the case of male Post Natal Depression in Britain. In B. Gough & S. Robertson (Eds.), *Men, Masculinities and Health: critical perspectives.* (pp. 161-177). Basingstoke: Palgrave Macmillan,.

Lekfuangfu, W. N., Cornaglia, F., Powdthavee, N., & Warrinnier, N. (2014). *Locus of Control and Its Intergenerational Implications for early childhood skill formation*. Discussion Paper No. 8487 London: CEP, London School of Economics and University of Leuven http://ftp.iza.org/dp8487.pdf

Lekfuangfu, W. N., Powdthavee, N., Clark, A. E., & Ward, G. (2015). *Early maternal employment and non-cognitive outcomes in early childhood and adolescence: evidence from British birth cohort data* London: Centre for Economic Performance, LSE http://cep.lse.ac.uk/pubs/download/dp1380.pdf

Levendosky, A. A., Bogat, G. A., & Huth-Bocks, A. C. (2011). The influence of domestic violence on the development of the attachment relationship between mother and young child. *Psychoanalytic Psychology, 28*(4), 512-527. doi:10.1037/a0024561

Levendosky, A. A., Bogat, G. A., & Martinez-Torteya, C. (2013). PTSD symptoms in young children exposed to intimate partner violence. *Violence Against Women, 19*(2), 187-201. doi:i10.1177/1077801213476458

Lewis, C. (1986). *Becoming a Father*. Milton Keynes: Open University Press.

Lewis, C., Newson, E., & Newson, J. (1982). Father-participation through childhood and its relationshp with career aspiratons and delinquency. In N. Beall & J. McGuire (Eds.), *Fathers: Psychological Perspectives* Colchester, Essex: Junction Books.

Lewis, G., Wen, S., Pearson, R. M., & Lewis, G. (2018). The association between paternal depressogenic cognitive styles during pregnancy and offspring depressogenic cognitive styles: an 18-year prospective cohort study. *Journal of Child Psychology and Psychiatry, 59*(5), 604-614. doi:10.1111/jcpp.12847

Lewis, S., West, A. F., Stein, A., Malmberg, L.-E., Bethell, K., Barnes, J., … Leach, P. (2009). A comparison of father-infant interaction between primary and non-primary care giving fathers. *Child Care, Health and Development, 35*(2), 199-207. doi:10.1111/j.1365-2214.2008.00913.x

Long, M., Puhlmann, L., & Vrtička, P. (2021). Hypothalamus volume in men: Investigating associations with paternal status, self-reported caregiving beliefs and adult attachment style. *Social Neuroscience, 16*(6), 639-652. https://psyarxiv.com/nfd7w/

Lut, I., Harron, K., Hardelidm, P., O'Brien, M., & Woodman, J. (2022). "What about the dads?' Linking fathers and children in administrative data: A systematic scoping review. *Big Data & Society, January-June*, 1-14. https://journals.sagepub.com/doi/pdf/10.1177/20539517211069299

Luthra, R., & Haux, T. (2022). The mental load in separated families. *Journal of Family Research*. https://ubp.uni-bamberg.de/jfr/index.php/jfr/article/view/743/640

Machin, A. J. (2018). *The Life of Dad: the making of a modern father*. London: Simon & Shuster.

Macleod, J., Hickman, M., Bowen, E., Alati, R., Tilling, K., & Smith, G. D. (2008). Parental drug use, early adversities, later childhood problems and children's use of tobacco and alcohol at age 10: birth cohort study. *Addiction, 103*(10), 1731-1743. doi:10.1111/j.1360-0443.2008.02301.x

Mahesh, P. K. B., Gunathunga, M. W., Arnold, S. M., Jayasinghe, C., Pathirana, S., Makarim, M. F., … Senanayake, S. J. (2018). Effectiveness of targeting fathers for breastfeeding promotion: systematic review and meta-analysis. *BMC Public Health, 18*(1), 1140. https://eprints.qut.edu.au/204904/1/68605128.pdf

Maisey, R., Speight, S., & Haywood, S. (2013). *Evaluation of Children's Centres in England (ECCE) Strand 2: Baseline Survey of Families Using Children's Centres in the Most Disadvantaged Areas*. London: Department for Education https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/191007/DFE-RR260.pdf

Malmberg, G., & Flouri, E. (2011). The comparison and interdependence of maternal and paternal influences on young children's behavior and resilience. *Journal of Clinical Child and Adolescent Psychology, 40*(3), 434-444. doi:10.1080/15374416.2011.563469

Malmberg, L.-E., Lewis, S., West, A., Murray, E., Sylva, K., & Stein, A. (2016). The influence of mothers' and fathers' sensitivity in the first year of life on children's cognitive outcomes at 18 and 36months. *Child Care Health Dev, 42*(1), 1-7. doi:10.1111/cch.12294

Malmberg, L.-E., Stein, A., West, A., Lewis, S., Barnes, J., Leach, P., & Sylva, K. (2007). Parent-infant interaction: a growth model approach. *Infant Behaviour and Development, 30*(4), 615-630. http://www.familieschildrenchildcare.org/wp-content/uploads/2019/05/23story_pdf.pdf

Márquez, F., Lucchini, C., Bertolozzi, M. R., Bustamante, C., Strain, H., Alcayaga, C., & Garay, N. (2019). Being a first-time father. Their experiences and meanings: A Qualitative Systematic Review. *Revista Chilena de Pediatría, 90*(1), 78-88. https://scielo.conicyt.cl/pdf/rcp/v90n1/0370-4106-rcp-rchped_v90i1_821.pdf

Marrs, J., Cossar, J., & Wroblewska, A. (2014). Keeping the family together and bonding: a father's role in a perinatal mental health unit. *Journal of Reproductive and Infant Psychology, 32*(4), 340-354. doi:10.1080/02646838.2014.920951

Marryat, L., Reid, S., & Wasoff, F. (2009). *Growing up in Scotland: Sweep 3 Non-resident Parent Report*. Edinburgh: Scottish Government https://core.ac.uk/download/pdf/4151694.pdf

Martin, A. F., Maughan, B., Jaquiery, M., & Barker, E. D. (2022). The protective role of father behaviour in the relationship between maternal postnatal depression and child mental health. *JCPP Advances*, e12075. https://acamh.onlinelibrary.wiley.com/doi/epdf/10.1002/jcv2.12075

Matheson, S. L., Shepherd, A. M., Laurens, K. R., & Carr, V. J. (2011). A systematic meta-review grading the evidence for non-genetic risk factors and putative antecedents of schizophrenia. *Schizophrenia Research, 133*(1-3), 133-142. doi:10.1016/j.schres.2011.09.020

McFadden, A., Gavine, A., Renfrew, M. J., Wade, A., Buchanan, P., Taylor, J. L., … et al. (2017). Support for healthy breastfeeding mothers with healthy term babies. *Cochrane Database of Systematic Reviews*(2). https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6464485/pdf/CD001141.pdf

McGarry, J., & Ali, P. (2018). Responding to domestic violence and abuse: Considerations for health visitors. *Journal of Health Visiting, 6*(2), 95-98. https://eprints.whiterose.ac.uk/142377/3/HV%20article%202018%20JM%20PA%20final.pdf doi:10.12968/johv.2018.6.2.95

McMunn, A. M., Lacey, R. E., Kumari, M., Worts, D., McDonough, P., & Sacker, A. (2016). Work-family life courses and metabolic markers in mid-life: evidence from the British National Child Development Study. *Journal of Epidemiology and Community Health, 70*(5), 481-487. https://jech.bmj.com/content/jech/70/5/481.full.pdf

McMunn, A. M., Martin, P., Kelly, Y., & Sacker, A. (2017). Fathers' involvement: correlates and consequences for child socioemotional behavior in the United Kingdom. *Journal of Family Issues, 38*(8), 1109-1131. doi:10.1177/0192513X15622415

Meijer, W. M., van Ijzendoorn, M. H., & Bakermans – Kranenburg, M. J. (2019). Challenging the challenge hypothesis on testosterone in fathers: Limited meta-analytic support. *Psychoneuroendocrinology, Dec;110:104435*. https://reader.elsevier.com/reader/sd/pii/S0306453019301271?token=97343E8066C3F2C178CC3800A05B0AC12C83A16D019646609ECF7B62F65C4EC44678C0B06259F957A09F7A1584AE76FB

Meil, G. (2013). European men's use of parental leave and their involvement in child care and housework. *Journal of Comparative Family Studies, 44*(5), 557-570. doi:10.3138/jcfs.44.5.557

Menzies, J. (2019). Fathers' experiences of the health visiting service: A qualitative study. *Journal of Health Visiting, 7*(10), 490-497. https://nrl.northumbria.ac.uk/id/eprint/41225/1/Menzies%20-%20Fathers%20experiences%20of%20the%20Health%20Visiting%20service%20AAM.pdf

Merritt R, Vogelb M, Ladburyc P, & S., J. (2019). A qualitative study to explore fathers' attitudes towards breastfeeding in South West England. *Primary Health Care Research & Development, 20(e24):*, 1-7. https://www.cambridge.org/core/services/aop-cambridge-core/content/view/865A26C85D7942651843F121B85FC3CA/S1463423618000877a.pdf/qualitative_study_to_explore_fathers_attitudes_towards_breastfeeding_in_south_west_england.pdf

Messer, J. (2011). An analysis of the socio-demographic characteristics of sole registered births and infant deaths. *Health Statistics Quarterly*(50), 79-107. https://link.springer.com/content/pdf/10.1057/hsq.2011.9.pdf

Miller, T. (2011). *Making sense of fatherhood: gender, caring and work*. Cambridge, UK: Cambridge University Press.

MIND. (2020). *Get it off your chest: Men's mental health 10 years on* London: MIND https://www.mind.org.uk/media/6771/get-it-off-your-chest_a4_final.pdf

Mojahed, A., Alaidarous, N., Kopp, M., Pogarell, A., Thiel, F., & Garthus-Niegel, S. (2021). Prevalence of Intimate Partner Violence Among Intimate Partners During the Perinatal Period: A Narrative Literature Review. *Frontiers in Psychiatry, 12*. https://www.frontiersin.org/article/10.3389/fpsyt.2021.601236 doi:10.3389/fpsyt.2021.601236

Morfitt, R. (2015). *Deprivation in Hull*. Hull City Council. Hull. Retrieved from http://www.hlc-vol.org/partner/humber-technical-assistance/assets/uploads/humber-technical-assistance/files/documents/ESIF_2014-20/CLLD%20Workshops%202015/CLLDDeprivationinHull.pdf

Muchena, G. (2007). Men's experiences of partners' postnatal mental illness. *Nursing Times, 103*(48), 32-33. https://cdn.ps.emap.com/wp-content/uploads/sites/3/2008/01/071127ResPostnatal.pdf

Nath, S. (2014). *The influence of paternal depressive symptoms on fathers' parenting, father-child attachment and children's outcomes during pre-school and school years.* (PhD). University of Exeter, Exeter. https://ethos.bl.uk/OrderDetails.do?did=429&uin=uk.bl.ethos.630901

Nath, S., Psychogiou, L., Kuyken, W., Ford, T., Ryan, E., & Russell, G. (2016). The prevalence of depressive symptoms among fathers and associated risk factors during the first seven years of their child's life: findings from the Millennium Cohort Study. *BMC Public Health, 16*(1), 1-13. http://dx.doi.org/10.1186/s12889-016-3168-9

Nath, S., Russell, G., Kuyken, W., Psychogiou, L., & Ford, T. (2016). Does father–child conflict mediate the association between fathers' postnatal depressive symptoms and children's adjustment problems at 7 years old? *Psychological Medicine, 46*(8), 1719-1733. doi:10.1017/S0033291716000234

National Statistics. (2017). *Health Survey for England 2017: adult and child overweight and obesity* London: National Statistics https://files.digital.nhs.uk/EF/AB0F0C/HSE17-Adult-Child-BMI-rep-v2.pdf

Nawa, N., Trude, A. C. B., Black, M. M., Richiardi, L., & Surkan, P. J. (2021). Associations between paternal anxiety and Infant weight gain. *Children, 8*(11), 977. https://www.mdpi.com/2227-9067/8/11/977/htm

Nelson, T. J. (2004). Low-Income Fathers. *Annual Review of Sociology, 30*(1), 427-451. doi:10.1146/annurev.soc.29.010202.095947

Ng, R. W. L., Shorey, S., & He, H.-G. (2019). Integrative review of the factors that Influence fathers' involvement in the breastfeeding of their Infants. *Journal of Obstetric, Gynecologic & Neonatal Nursing, 48*(1), 16-26. doi:10.1016/j.jogn.2018.10.005

Nguyen, T., Schleihauf, H., Kungl, M., Kayhan, E., Hoehl, S., & Vrtička, P. (2021). Interpersonal Neural Synchrony During Father–Child Problem Solving: An fNIRS Hyperscanning Study. *Child Development, 92*(4), e565-e580. https://srcd.onlinelibrary.wiley.com/doi/epdf/10.1111/cdev.13510

NICE. (2021). *Postnatal Care Guideline* London: National Institute of Health ahd Care Excellence https://www.nice.org.uk/guidance/ng194/resources/postnatal-care-pdf-66142082148037

NICHD. (2000). Factors associated with fathers' caregiving activities and sensitivity with young children. *Journal of Family Psychology, 14*(2), 200-219. https://www.apa.org/pubs/journals/releases/fam142200.pdf

Noonan, M., Jomeen, J., & Doody, O. (2021). A review of the Involvement of partners and family members in psychosocial interventions for supporting women at risk of or experiencing perinatal depression and anxiety. *Int J Environ Res Public Health, 18*(10), 5396. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8158393/pdf/ijerph-18-05396.pdf

Norman, H. (2011). *Involved fatherhood: an analysis of the conditions associated with paternal involvement in childcare and housework.* (PhD). University of Manchester, Manchester. http://www.manchester.ac.uk/escholar/uk-ac-man-scw:108486 jer D Ethos database.

Norman, H. (2020). Does paternal Involvement in childcare influence mothers' employment trajectories during the early stages of parenthood in the UK? *, 54*(2), 329-345. https://eprints.whiterose.ac.uk/156848/3/Paternal_involvement_and_mothers_employment_trajectories_July2019_final.pdf

Norman, H. (2021). *What Influences Paternal Childcare Involvement From Nine Months To Eleven Years Post Birth In The UK?* Paper presented at the RN13_T05_04: Gender-Arrangements and the Division of Work within Couples I -15th European Sociological Association: 31st Aug – 3rd Sept 2021 https://piecestudy.org/wp-content/uploads/2021/09/Fathers-involvement_birth-to-11years_-.pdf

Norman, H., Elliot, M., & Fagan, C. (2018). Does fathers' involvement in childcare and housework affect couples' relationship stability? *Social Science Quarterly, 99*(5), 1599-1613. https://onlinelibrary.wiley.com/doi/epdf/10.1111/ssqu.12523

Norman, H., & Elliott, M. (2015). Measuring paterntal involvement in housework and childcare. *Sociological Research Online, 20*(2). doi:10.5153/sro.3590

Nowicki, S., Gregory, S., Ellis, G. L., Iles-Caven, Y., & Golding, J. (2018a). Parental external locus of control in pregnancy is associated with subsequent teacher ratings of negative behavior in primary school: Findings from a British Birth Cohort. *Frontiers in Psychology, 9*(Article 120). https://www.frontiersin.org/articles/10.3389/fpsyg.2018.00120/full

Nowicki, S., Gregory, S., Ellis, G. L., Iles-Caven, Y., & Golding, J. (2018b). The pattern of stability and change in parental Locus of Control over 6 years and teacher ratings of child behavior. *Frontiers in Psychology, 9*(1427). https://www.frontiersin.org/article/10.3389/fpsyg.2018.01427

Nowicki, S., Iles-Caven, Y., Gregory, S., Ellis, G., & Golding, J. (2017). The impact of prenatal parental locus of control on children's psychological outcomes in infancy and early childhood: A prospective 5 year study. *Frontiers in Psychology, 8*, 1-13. https://research-information.bris.ac.uk/ws/portalfiles/portal/109397561/fpsyg_08_00546.pdf

O'Brien, M. (2018). Transforming infancy through paternity and parental leave. In P. Leach (Ed.), *Transforming infant wellbeing: Research, policy and practice for the first 1001 critical days.* (pp. 155-162). New York, NY: Routledge.

O'Brien, R., Hunt, K., & Hart, G. (2009). 'The average Scottish man has a cigarette hanging out of his mouth, lying there with a portion of chips': Prospects for change in Scottish men's constructions of masculinity and their health-related beliefs and behaviours. *Critical Public Health, 19*(3-4), 363-381. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2845931/pdf/ccph19-363.pdf

O'Connor, T. G., Pickering, K., Dunn, J., & Golding, J. (1999). Frequency and predictors of relationship dissolution in a community sample in England. *Journal of Family Psychology, 13*(3), 436-449. doi:10.1037/0893-3200.13.3.436

O'Donnell, R., McCulloch, P., Greaves, L., Semple, S., & Amos, A. (2021). What helps and what hinders the creation of a smoke-free home: A qualitative study of fathers in Scotland. *Nicotine & Tobacco Research*. doi:10.1093/ntr/ntab228

Obst, K. L., Due, C., Oxlad, M., & Middleton, P. (2020). Men's grief following pregnancy loss and neonatal loss: a systematic review and emerging theoretical model. *BMC Pregnancy Childbirth, 20*(11). doi:10.1111/jpc.14409_104

Ogbo, F. A., Akombi, B. J., Ahmed, K. Y., Rwabilimbo, A. G., Ogbo, A. O., Uwaibi, N. E., … (GloMACH), G. M. a. C. H. R. C. (2020). Breastfeeding in the community—how can partners/fathers help? A systematic review. *International Journal of Environmental Research and Public Heallth, 17*, 413. doi:10.3390/ijerph17020413.

ONS. (2014). *How do childhood circumstances affect poverty and deprivation as an adult?* London: Office for National Statistics http://www.ons.gov.uk/ons/rel/household-income/intergenerational-transmission-of-poverty-in-the-uk---eu/2014/sty-causes-of-poverty-uk.html

ONS. (2016). *Births in England and Wales: 2015*. London: Office for National Statistics https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/livebirths/bulletins/birthsummarytablesenglandandwales/2015

ONS. (2020a). *Births in England and Wales 2020*. London https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/livebirths/bulletins/birthsummarytablesenglandandwales/2020#:~:text=There%20were%20613%2C936%20live%20births,decreased%20across%20all%20age%20groups.

ONS. (2020b). *Conceptions in England and Wales: 2019* London: Office for National Statistics https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/conceptionandfertilityrates/bulletins/conceptionstatistics/2019

ONS. (2020c). *Domestic abuse in England and Wales overview: November 2020*. London https://www.ons.gov.uk/peoplepopulationandcommunity/crimeandjustice/bulletins/domesticabuseinenglandandwalesoverview/november2020#trends-over-time

Opondo, C., Redshaw, M., & Quigley, M. A. (2017). Association between father involvement and attitudes in early child-rearing and depressive symptoms in the pre-adolescent period in a UK birth cohort; homebased activities;. *Journal of Affective Disorders, 221*, 115-122. doi:10.1016/j.jad.2017.06.010

Opondo, C., Savage-McGlynn, E., Redshaw, M., Savage-McGlynn, E., & Quigley, M. A. (2016). Father involvement in early child-rearing and behavioural outcomes in their pre-adolescent children: evidence from the ALSPAC UK birth cohort. *British Medical Journal Open, 6*(11), 1-9. https://bmjopen.bmj.com/content/bmjopen/6/11/e012034.full.pdf

Orri, M., Russell, A. E., Mars, B., Turecki, G., Gunnell, D., Heron, J., … Geoffroy, M. C. (2020). Perinatal adversity profiles and suicide attempt in adolescence and young adulthood: longitudinal analyses from two 20-year birth cohort studies. *Psychological Medicine*, 1-13. doi:10.1017/S0033291720002974

Overy, C., Reynolds, L., & Tansey, E. e. (2012). *History of the Avon Longitudinal Study of Parents and Children (ALSPAC), c. 1980-2000*. Wellcome Witnesses to Twentieth Century Medicine London: Queen Mary, University of London. http://www.histmodbiomed.org/sites/default/files/76843.pdf

Palkovitz, R. (1984). *The Role of the Father Questionnaire* https://cpb-us-w2.wpmucdn.com/sites.udel.edu/dist/7/2667/files/2015/01/ROFQ-permissions-and-info-24v7z0x.pdf

Parfitt, Y. M. (2014). *The transition to parenthood: a prospective study of parental mental health, family relationships and infant development.* (PhD). University of Sussex, http://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.595728 jer D Ethos database.

Parfitt, Y. M., & Ayers, S. (2014). Transition to parenthood and mental health in firsttime parents. *Infant Mental Health Journal, 35*(3), 263–273. https://openaccess.city.ac.uk/id/eprint/5769/5/Main_document_The_transition_to_parenthood_and_mental_health_in_first_time_parents.pdf

Parfitt, Y. M., Ayers, S., Pike, A., Jessop, D. C., & Ford, E. (2014). A prospective study of the parent–baby bond in men and women 15 months after birth. *Journal of Reproductive and Infant Psychology, 32*(5), 441-456. https://openaccess.city.ac.uk/id/eprint/5770/6/Main_Document_A_prospective_study.pdf

Parfitt, Y. M., Pike, A., & Ayers, S. (2013a). The impact of parents' mental health on parent-baby interaction: a prospective study. *Infant Behav Dev, 36*(4), 599-608. https://openaccess.city.ac.uk/id/eprint/4749/6/Parfitt_et_al_2013_CARE_index_text_copy.pdf

Parfitt, Y. M., Pike, A., & Ayers, S. (2013b). Infant developmental outcomes: a family systems perspective. *Infant and Child Development, 23*(4), 353–373. https://openaccess.city.ac.uk/id/eprint/15444/

Parkes, A., Green, M., & Mitchell, K. (2019). Coparenting and parenting pathways from the couple relationship to children's behavior problems. *Journal of Family Psychology, 33*(2), 215. https://core.ac.uk/download/pdf/296212251.pdf

Parmenter, J. (1993). *Looking after baby: yeserday, today and tomorrow* Bristol: Children of the Nineties https://www.amazon.de/-/en/Julie-Parmenter/dp/1872971741

Pearson, H. (2016). *The Life Project: the extraordinary story of our ordinary lives*. London: Penguin Books (Allen Lane).

Pearson, R. M., Bornstein, M. H., Cordero, M., Scerif, G., Mahedy, L., Evans, J., … Stein, A. (2016). Maternal perinatal mental health and offspring academic achievement at age 16: the mediating role of childhood executive function. *Journal of Child Psychology and Psychiatry, 57*(4), 491-501. https://orca.cardiff.ac.uk/96009/1/c708ea17421aa1d121eb99b1f31581f619203da72ab60907efb70d4e9c76e935.pdf

Pearson, R. M., Evans, J., Kounali, D., Lewis, G., Heron, J., Ramchandani, P. G., … Stein, A. (2013). Maternal depression during pregnancy and the postnatal period: risks and possible mechanisms for offspring depression at age 18 years. *JAMA Psychiatry, 70*(12), 1312-1319. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3930009/pdf/emss-56890.pdf

Pelikh, A. (2019). *Birth cohorts in Understanding Society: a description.* Understanding Society Working Paper 2019-15 Colchester: University of Essex

Petridou, E. T., Georgakis, M. K., Erdmann, F., Ma, X., Heck, J. E., Auvinen, A., … Skalkidou, A. (2018). Advanced parental age as risk factor for childhood acute lymphoblastic leukemia: results from studies of the Childhood Leukemia International Consortium. *Eur J Epidemiol, 33*(10), 965-976. https://trepo.tuni.fi/bitstream/handle/10024/104416/Advanced_parental_age_2018.pdf?sequence=1

PHE/DH/RCM. (2015). *Getting maternity services right for pregnant teenagers and young fathers (3rd edition)*. London: Public Health England https://www.bestbeginnings.org.uk/Handlers/Download.ashx?IDMF=d9cf3890-c56e-4608-998c-397b920ead85

Philpott, L. F., Leahy-Warren, P., FitzGerald, S., & Savage, E. (2017). Stress in fathers in the perinatal period: A systematic review. *Midwifery, 55*, 113-127. doi:10.1016/j.midw.2017.09.016

Philpott, L. F., Savage, E., FitzGerald, S., & Leahy-Warren, P. (2019). Anxiety in fathers in the perinatal period: A systematic review. *Midwifery, 76*, 54-101. doi:10.1016/j.midw.2019.05.013

Philpott, L. F., Savage, E., Leahy-Warren, P., & FitzGearld, S. (2020). Paternal perinatal depression: a narrative review. *International Journal of Men's Social and Community Health, 3*, 491–501. https://ijmsch.com/index.php/IJMSCH/article/view/22/17

Pinquart, M., & Teubert, D. (2010). Effects of parenting education with expectant and mew arents: A Meta-Analysis. *Journal of Family Psychology, 24*(3), 316-327. doi:10.1037/a0019691

Plewis, I. (2007). *The Millennium Cohort Study: Technical Report on Sampling. 4th Edition.* London: Centre for Longitudinal Studies, Institute of Education, University of London https://cls.ucl.ac.uk/wp-content/uploads/2017/07/Technical-Report-on-Sampling-4th-Edition-August-2007.pdf

Poole, E., Speight, S., O'Brien, M., Connolly, S., & Aldrich, M. (2014). *Father involvement with children and couple relationships*. Modern fatherhood: fathers, work and families in the 21st Century London: National Centre for Social Research https://www.modernfatherhood.org/publications/father-involvement-with-children-in-couple-relationships/

Prady, S. L., & Kiernan, K. (2016). *The concordance between mothers and partners responses in surveys: paper prepared for Life Study SSC Expert Advisory Subgroup on Fathers and Partners*. University of York. Unpublished.

Prady, S. L., Kiernan, K., Bloor, K., & Pickett, K. E. (2012). Do risk factors for post-partum smoking relapse vary according to marital status? *Maternal and Child Health Journal, 16*(7), 1364-1373. doi:10.1007/s10995-011-0899-1

Prouhet, P. M., Gregory, M. R., Russell, C. L., & Yaeger, L. H. (2018). Fathers' stress in the Neonatal Intensive Care Unit: A systematic review. *Advances in Neonatal Care, 18*, 105-112-. doi:10.1097/ANC.0000000000000472

Provenzi, L., Lindstedt, J., De Coen, K., Gasparini, L., Peruzzo, D., Grumi, S., … Ahlqvist-Björkroth, S. (2021). The paternal brain in action: A review of human fathers' fMRI brain fesponses to child-related stimuli. *Brain Sciences, 11*(6), 816. doi:10.3390/brainsci11060816

Psychogiou, L., Russell, G., & Owens, M. (2019). Parents' postnatal depressive symptoms and their children's academic attainment at 16 years: Pathways of risk transmission. *British Journal of Psychology, 111*(1), 1-16. doi:10.1111/bjop.12378

Ragni, B., De Stasio, S., & Barni, D. (2020). Fathers and sleep: A systematic literature review of bidirectional links between paternal factors and children's sleep in the first three years of life. *Clinical Neuropsychiatry: Journal of Treatment Evaluation, 17*(6), 349-360. https://www.clinicalneuropsychiatry.org/download/fathers-and-sleep-a-systematic-literature-review-of-bidirectional-links-between-paternal-factors-and-childrens-sleep-in-the-first-three-years-of-life/

Rajyaguru, P., Kwong, A. S. F., Braithwaite, E., & Pearson, R. M. (2021). Maternal and paternal depression and child mental health trajectories: evidence from the Avon Longitudinal Study of Parents and Children. *BJPsych Open, 7*(5), e166. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8485341/pdf/S2056472421009595a.pdf

Raleigh, V. S., Hussey, D., Seccombe, I., & Hallt, K. (2010). Ethnic and social inequalities in women's experience of maternity care in England: results of a national survey. *Journal of the Royal Society of Medicine, 103*(5), 188-198. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2862068/pdf/188.pdf

Ramchandani, P. G., Domoney, J., Sethna, V., Psychogiou, L., Vlachos, H., & Murray, L. (2013). Do early father-infant interactions predict the onset of externalising behaviours in young children? Findings from a longitudinal cohort study. *Journal of Child Psychology and Psychiatry, 54*(1), 56-64. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3562489/pdf/jcpp0054-0056.pdf

Ramchandani, P. G., Ijzendoorn, M. v., & Bakermans-Kranenburg, M. J. (2010). Differential susceptibility to fathers' care and involvement: The moderating effect of infant reactivity. *Family Science, 1*(2), 93-101. https://www.tandfonline.com/doi/pdf/10.1080/19424621003599835?needAccess=true

Ramchandani, P. G., O'Connor, T. G., Evans, J., Heron, J., Murray, L., & Stein, A. (2008). The effects of pre- and postnatal depression in fathers: a natural experiment comparing the effects of exposure to depression on offspring. *Journal of Child Psychology and Psychiatry, 49*(10), 1069-1078. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2737608/pdf/jcpp0049-1069.pdf

Ramchandani, P. G., & Psychogiou, L. (2009). Paternal psychiatric disorders and children's psychosocial development. *Lancet, 374*(9690), 646-653. doi:10.1016/s0140-6736(09)60238-5

Ramchandani, P. G., Psychogiou, L., Vlachos, H., Iles, J., Sethna, V., Netsi, E., & Lodder, A. (2011). Paternal depression: an examination of its links with father, child and family functioning in the postnatal period. *Depression and Anxiety, 28*(6), 471-477. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3128925/pdf/da0028-0471.pdf

Ramchandani, P. G., Stein, A., Evans, J., & O'Connor, T. G. (2005). Paternal depression in the postnatal period and child development: a prospective population study. *Lancet, 365*(9478), 2201-2205. doi:10.1016/s0140-6736(05)66778-5

Ramchandani, P. G., Stein, A., Hotopf, M., & Wiles, N. J. (2006). Early parental and child predictors of recurrent abdominal pain at school age: results of a large population-based study. *Journal of the American Academy of Child and Adolescent Psychiatry, 45*(6), 729-736. doi:10.1097/01.chi.0000215329.35928.e0

Ramchandani, P. G., Stein, A., O'Connor, T. G., Heron, J., Murray, L., & Evans, J. (2008). Depression in men in the postnatal period and later child psychopathology: a population cohort study. *Journal of the American Academy of Child and Adolescent Psychiatry, 47*(4), 390-398. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2650418/pdf/ukmss-3982.pdf

Redshaw, M., & Heikkila, K. (2010). *Delivered with care: a national survey of women's experience of maternity care 2010* Oxford: National Perinatal Epidemiology Unit, University of Oxford https://www.npeu.ox.ac.uk/downloads/files/reports/Maternity-Survey-Report-2010.pdf

Redshaw, M., & Henderson, J. (2013). Fathers' engagement in pregnancy and childbirth: evidence from a national survey. *BMC Pregnancy Childbirth, 13*(70), 1-15. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3607858/pdf/1471-2393-13-70.pdf

Reid, H., Wieck, A., Matrunola, A., & Wittkowski, A. (2016). The experiences of fathers when their partners are admitted with their Infants to a psychiatric Mother and Baby Unit. *Clinical Psychology & Psychotherapy, 24*(4), 919–931. ht doi:10.1002/cpp.2056

Robertson, K. (2014). *A qualitative study of fathers' experiences of a Scottish neonatal intensive care unit.* (PhD). University of Glasgow, Glagow. https://theses.gla.ac.uk/5678/1/2014robertsondclinpsy.pdf

Robinson, E. L., StGeorge, J., & Freeman, E. E. (2021). A systematic review of father-child play interactions and the impacts on child development. *Children (Basel), 8*(5), 389. doi:10.3390/children8050389

Rubio, B., Vecho, O., Gross, M., van Rijn-van Gelderen, L., Bos, H., Ellis-Davies, K., … Lamb, M. E. (2020). Transition to parenthood and quality of parenting among gay, lesbian and heterosexual couples who conceived through assisted reproduction. *Journal of Family Studies, 26*(3), 422-440. doi:10.1080/13229400.2017.1413005

Ruiz Ortiz, R. M., & Barnes, J. (2019). Temperament, parental personality and parenting stress in relation to socio-emotional development at 51 months. *Early Child Development and Care, 189*(12), 1978-1991. doi:10.1080/03004430.2018.1425297

Rushton, L., Courage, C., & Green, E. (2003). Estimation of the impact on children's health of environmental tobacco smoke in England and Wales. *The Journal of the Royal Society for the Promotion of Health, 123*(3), 175-180. doi:10.1177/146642400312300315

Schaber, R., Kopp, M., Zähringer, A., Mack, J. T., Kress, V., & Garthus-Niegel, S. (2021). Paternal Leave and father-Infant bonding: findings from the population-based Cohort Study DREAM. *Frontiers in Psychology, 12*. https://www.frontiersin.org/article/10.3389/fpsyg.2021.668028

Schoon, I., & Hope, S. (2004). Parenting and parents' psychosocial adjustment. In S. Dex & H. Joshi (Eds.), *Millennium Cohort Study First Survey: A User's Guide to Initial Findings*. London: Centre for Longitudinal Studies, Institute of Education, University of London.

Scottish Government. (2017). *THE BEST START A Five-Year Forward Plan for Maternity and Neonatal Care in Scotland*. Edinburgh: Scottish Government http://www.gov.scot/Resource/0051/00513175.pdf

Scourfield, J., Culpin, I., Gunnell, D., Dale, C., Joinson, C., Heron, J., & Collin, S. M. (2016). The association between characteristics of fathering in infancy and depressive symptoms in adolescence: A UK birth cohort study. *Child Abuse & Neglect, 58*, 119-128. https://discovery.ucl.ac.uk/id/eprint/10086931/

Sethna, V., Murray, L., Edmondson, O., Iles, J., & Ramchandani, P. G. (2018). Depression and playfulness in fathers and young infants: A matched design comparison study. *Journal of Affective Disorders, 229*, 364-370. https://kclpure.kcl.ac.uk/portal/files/97261955/Depression_and_playfulness_in_SETHNA_First online3January2018_GREEN_AAM_CC_BY_NC_ND_.pdf

Sethna, V., Murray, L., Netsi, E., Psychogiou, L., & Ramchandani, P. G. (2015). Paternal depression in the postnatal period and early father–Infant Interactions. *Parenting, 15*(1), 1-8. https://centaur.reading.ac.uk/66058/3/Manuscript.pdf

Sethna, V., Murray, L., & Ramchandani, P. G. (2012). Depressed fathers' speech to their 3-month-old infants: a study of cognitive and mentalizing features in paternal speech. *Psychological Medicine, 42*(11), 2361-2371. https://www.cambridge.org/core/services/aop-cambridge-core/content/view/1992BEC4FE02638F3A33E9DB8FE08103/S0033291712000487a.pdf/depressed-fathers-speech-to-their-3-month-old-infants-a-study-of-cognitive-and-mentalizing-features-in-paternal-speech.pdf

Sethna, V., Perry, E., Domoney, J., Iles, J., Psychogiou, L., Rowbotham, N. E. L., … Ramchandani, P. G. (2017). Father–child interactions at 3 months and 24 months: Contributions to children's cognitive development at 24 months. *Infant Mental Health Journal, 38*, 378–390. https://centaur.reading.ac.uk/67959/4/Father-child%20interactions%20and%20cognitive%20outcome-%20Infant%20Mental%20Health%20Journal.pdf

Shaker, I., Scott, J. A., & Reid, M. (2004). Infant feeding attitudes of expectant parents: breastfeeding and formula feeding. *Journal of Advanced Nursing, 45*(3), 260-268. doi:10.1046/j.1365-2648.2003.02887.x

Sharp, G., Lawlor, D. A., & Richardson, S. (2018). It's the mother!: how assumptions about the causal primacy of maternal effects influence research on the developmental origins of health and disease. *Social Science & Medicine, 213*, 20-27. https://research-information.bris.ac.uk/ws/portalfiles/portal/164652670/Lawlor2018SocSciMed.pdf

Shawe, J., Patel, D., Joy, M., Howden, B., Barrett, G., & Stephenson, J. (2019). Preparation for fatherhood: A survey of men's preconception health knowledge and behaviour in England. *PLoS One, 14*(3), e0213897. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6426231/pdf/pone.0213897.pdf

Shepherd, C. K. P., K. G.;Carter, H. (2000). Examining the correspondence of breastfeeding and bottle-feeding couples' infant feeding attitudes. *J Adv Nurs, 31*(3), 651-660. http://onlinelibrary.wiley.com/doi/10.1046/j.1365-2648.2000.01320.x/abstract

Sherriff, N., & Hall, A. (2014). Rhetoric or reality? Father support in promoting breastfeeding. *International Journal of Birth and Parenting Education, 1*(4), 19-22. http://eprints.brighton.ac.uk/12794/1/Rhetoric%20or%20Reality%20March%202014%20Accepted%20Version.pdf

Sherriff, N., Panton, C., & Hall, V. (2014). A new model of father support to promote breastfeeding. *Community Practitioner, 87*(5), 20-24. http://eprints.brighton.ac.uk/12740/1/A%20new%20model%20%20of%20father%20support%202014.pdf

Shorey, S., He, H. G., & Morelius, E. (2016). Skin-to-skin contact by fathers and the impact on infant and paternal outcomes: an integrative review. *Midwifery, 40*, 207-217. doi:10.1016/j.midw.2016.07.007

Shribman, S., & Billingham, K. (2009). *Healthy Child Programme – Pregnancy and the first five years of life*. London: Department of Health https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/167998/Health_Child_Programme.pdf

Siew, J., Iles, J., Domoney, J., Bristow, F., Darwin, Z., & Sethna, V. (2020). The applicability and performance of tools used to assess the father-offspring relationship in relation to parental psychopathology and offspring outcomes. *Frontiers in Psychiatry, 11*, 596857. https://www.frontiersin.org/articles/10.3389/fpsyt.2020.596857/full

Sigle-Rushton, W. (2005). Young fatherhood and subsequent disadvantage in the United Kingdom. *Journal of marriage and the family, §67*(3), 735-753. doi:10.1111/j.1741-3737.2005.00166.x

Sihota, H., Oliffe, J., Kelly, M. T., & McCuaig, F. (2019). Fathers' experiences and perspectives of breastfeeding: a scoping review. *American Journal of Men's Health, 13*(3), 1-12. https://journals.sagepub.com/doi/pdf/10.1177/1557988319851616

Sisson, H., Jones, C., Williams, R., & Lachanudis, L. (2015). Metaethnographic synthesis of fathers' experiences of the neonatal intensive care unit environment during hospitalization of their premature infants. *Journal of Obstetric, Gynecologic & Neonatal Nursing, 44*(4), 471-480. https://hull-repository.worktribe.com/preview/2034241/10758%20Sisson.pdf

Smith, D., Northstone, K., C, B., Wells, N., Crawford, M., R, P., … Timpson, N. J. (2021). The Avon Longitudinal Study of Parents and Children – A resource for COVID-19 research: Generation 2 questionnaire data capture May-July 2020. [version 2; peer review: 3 approved]. *Wellcome Open Research, 5*(278). https://wellcomeopenresearch.org/articles/5-278/v2

Smith, H. R., Eryigit-Madzwamuse, S., & Barnes, J. (2013). Paternal Postnatal and Subsequent Mental Health Symptoms and Child Socio-Emotional and Behavioural Problems at School Entry. *Infant and Child Development, 22*(4), 335-348. https://core.ac.uk/download/pdf/141218683.pdf

Smith, K., & Joshi, H. (2002). The Millennium Cohort Study. *Population Trends* (107), 30-34. doi:PMID: 12152184

Smyth, E., & Rusell, H. (2021). *Fathers and children from infancy to middle childhood*. Research Series Dublin: The Economic and Social Research Institute https://www.esri.ie/system/files/publications/RS130.pdf

Srinivasan, R., Pearson, R. M., Johnson, S., Lewis, G., & Lewis, G. (2020). Maternal perinatal depressive symptoms and offspring psychotic experiences at 18 years of age: a longitudinal study. *Lancet Psychiatry, 7*(5), 431-440. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7606907/pdf/main.pdf

Stock, L., Acquah, D., Molloy, D., & Piergallini, I. (2017). *Interparental relationships, conflict and the impacts of poverty: An overview* London: Early Intervention Foundation https://www.eif.org.uk/report/interparental-relationships-conflict-and-the-impacts-of-poverty-an-overview

Tagiyeva, N., Semple, S., Devereux, G., Sherriff, A., Henderson, J., Elias, P., & Ayres, J. G. (2011). Reconstructing past occupational exposures: how reliable are women's reports of their partner's occupation? *Occupational & Environmental Medicine, 68*(6), 452-456. https://oem.bmj.com/content/68/6/452.long

Tanaka, S., & Waldfogel, J. (2007). Effects of parental leave and work hours on fathers' involvement with their babies: Evidence from the millennium cohort study. *Community, Work & Family, 10*(4), 409-426. doi:10.1080/13668800701575069

Thiel, F., Pittelkow, M. M., Wittchen, H. U., & Garthus-Niegel, S. (2020). The relationship between paternal and maternal depression during the [erinatal period: a systematic review and meta-analysis. *Frontiers in Psychiatry, 11*, 563287. doi:10.3389/fpsyt.2020.563287

TNS System Three. (2005). NHS maternity services quantitative research.

Tommerup, K., & Lacey, R. E. (2021). Maternal and paternal distress in early childhood and child adiposity trajectories: evidence from the Millennium Cohort Study. *Obesity, 29*(5), 888-899. https://onlinelibrary.wiley.com/doi/epdf/10.1002/oby.23

TUC. (2017). A quarter of new dads are missing out on paternity leave and pay [Press release]. https://www.tuc.org.uk/equality-issues/quarter-new-dads-are-missing-out-paternity-leave-and-pay-says-tuc

Twamley, K., Brunton, G., Sutcliffe, K., Hinds, K., & Thomas, J. (2013). Fathers' involvement and the impact on family mental health: evidence from Millennium Cohort Study analyses. *Community, work and family, 16*(2), 212-224. doi:10.1080/13668803.2012.755022

Vallotton, C. D., Foster. T., Harewood. T., Cook, J., & Adekoya, A. R. (2020). Fathers and young children at play: A scoping review of studies of fathers' play with sons and daughters from birth to preschool. In F. H.E. (Ed.), *Handbook of Fathers and Child Development* (pp. 357-391). Cham: Springer.

van Dijk, A. E., Dawe, K., Deanfield, J., Stronks, K., Gemke, R. J., Vrijkotte, T. G., & Lawlor, D. A. (2014). The association of maternal prenatal psychosocial stress with vascular function in the child at age 10-11 years: findings from the Avon longitudinal study of parents and children. *European Journal of Preventive Cardiology, 21*(9), 1097-1108. doi:10.1177/2047487313486039

Van Rijn-van Gelderen, L., Bos, H. W. M., Jorgensen, T. D., Ellis-Davies, K., Winstanley, A., Golombok, S., … Lamb, M. E. E. (2018). Wellbeing of gay fathers with children born through surrogacy: a comparison with lesbian-mother families and heterosexual IVF parent families. *Human Reproduction, 33*(1), 101-108. doi:10.1093/humrep/dex339

Walby, S., & Allen, J. (2004). *Domestic violence, sexual assault and stalking: Findings from the British Crime Survey*. London: Home Office http://eprints.lancs.ac.uk/3515/1/Domesticviolencefindings_2004_5BritishCrimeSurvey276.pdf

Walmsley, R., & Jones, T. (2016). Are fathers supported by neonatal teams?: An exploration of the literature. *Journal of Neonatal Nursing, 22*(6), 292-296. doi:10.1016/j.jnn.2016.09.006

Wanless, S. B., Rosenkoetter, S. E., & McClelland, M. M. (2008). Paternal depression and infant cognitive development: implications for research and intervention. *Infants & Young Children, 21*. doi:10.1097/01.IYC.0000314484.46958.e4

Ward, K., & Dex, S. (2007). Parental employment & education. In K. Hansen & H. Joshi (Eds.), *Millennium Cohort Study Second Survey: A User's Guide to Initial Findings*. London: Centre for Longitudinal Studies.

Washbrook, E. (2007). *Fathers, childcare and children's readiness to learn*. CMPO Working Paper Series No. 07/175 Bristol: University of Bristol https://www.bristol.ac.uk/media-library/sites/cmpo/migrated/documents/wp175.pdf

Washington, R. (2017). Secondhand tobacco smoke exposure: perhaps the most important cardiovascular risk factor for toddlers. *The Journal of Pediatrics, 189*, 1-2. doi:10.1016/j.jpeds.2017.08.020

Whitelock, A. (2016). Why do health visitors screen mothers and not fathers for depression in the postnatal period? *Journal of Health Visiting, 4*(6), 312-321. doi:10.12968/johv.2016.4.6.312

Wilson, H., & Finch, D. (2021). *Unemployment and mental health* London: The Health Foundation https://www.health.org.uk/sites/default/files/2021-04/2021%20-%20Unemployment%20and%20mental%20health.pdf

Wolke, D., Waylen, A., Samara, M., Steer, C., Goodman, R., Ford, T., & Lamberts, K. (2009). Selective drop-out in longitudinal studies and non-biased prediction of behaviour disorders. *British Journal of Psychiatry, 195*(3), 249–256. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2802508/

Wynter, K., Francis, L., Fletcher, R., McBride, N., Dowse, E., Wilson, N., & al, e. (2020). Sleep, mental health and wellbeing among fathers of infants up to 1 year postpartum: A scoping review. *Midwifery, Sep;88*, **102738**. doi:10.1016/j.midw.2020.102738.

Xu, Q., & O'Brien, M. (2014). Fathers and teenage daughters in Shanghai: Intimacy, gender and care. *Journal of Family Studies, 20*(3), 311-322. doi:10.1080/13229400.2014.11082014

Zilanawala, A., Abell, J., Bell, S., Webb, E., & Lacey, R. (2017). Parental nonstandard work schedules during infancy and children's BMI trajectories. *Demographic Research, 37*, 709–726. https://discovery.ucl.ac.uk/id/eprint/1566683/3/37-22.pdf

Zwysen, W. (2016). *Socio-economic inequality in the early career: the role of family and community.* (PhD). University of Essex, Colchester. https://ethos.bl.uk/OrderDetails.do?did=204&uin=uk.bl.ethos.691191.