Men and miscarriage

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Men and Miscarriage: a Systematic Review and Thematic Synthesis

Abstract

Miscarriage is common, affecting 1 in 5 pregnancies, but the psychosocial effects often go unrecognized and unsupported. The effects for men may be subject to unintentional neglect by healthcare practitioners, who typically focus on biological symptoms, confined to women. Therefore we set out to systematically review the evidence of lived experiences of male partners in high-income countries. Our search and thematic synthesis of the relevant literature identified 27 manuscripts reporting 22 studies with qualitative methods. The studies collected data from 241 male participants, and revealed the powerful effect of identities assumed and performed by men, or constructed for them in the context of miscarriage. We identified perceptions of female precedence, uncertain transition to parenthood, gendered coping responses, and ambiguous relations with healthcare practitioners. Men were often cast into roles that seemed secondary to others, with limited opportunities to articulate and address any emotions and uncertainties engendered by loss.

Introduction

Miscarriage, the loss of pregnancy at up to 24 weeks of gestation, is prevalent (RCOG, 2011). Many cases go unreported but there is evidence to suggest that more than 200,000 pregnancies end in miscarriage every year in the United Kingdom (Bottomley, 2011). The psychosocial effects may be profound but they often receive little or no attention, even from miscarriage care practitioners (Brier, 1999; R. Evans, 2012; Frost & Condon, 1996; Layne, 1990; Lee & Slade, 1996; Randolph, Hruby, & Sharif, 2015; van den Berg et al., 2018). Sometimes they are conflated with outcomes of other perinatal loss such as stillbirth and neonatal death, in academic studies and commentaries (Adolfsson, 2011; Bennett, Litz, Lee, & Maguen, 2005; Gold, Dalton, & Schwenk, 2007; Janssen, Cuisinier, & Hoogduin, 1996; Kersting & Wagner, 2012; Layne, 1990; Moore, Parrish, & Black, 2011; Randolph et al., 2015).

Most studies adopt a firm focus on outcomes among female partners (Adolfsson, 2011; Brier, 2004; R. Evans, 2012; Lee & Slade, 1996; Radford & Hughes, 2015; Randolph et al., 2015; Robinson, Baker, & Nackerud, 1999), or measure only pre-determined clinical diagnoses (Adolfsson, 2011; Brier, 2004, 2008; Klier, Geller, & Ritsher, 2002; Lee & Slade, 1996; Lewis, 2015; Lok & Neugebauer, 2007; Toedter, Lasker, & Janssen, 2001). There is less research to consider perceptions among men (Lewis, 2015; Rinehart & Kiselica, 2010) and still less with any qualitative approach. Moreover the previous studies are small and isolated. Therefore we performed a comprehensive search and thematic synthesis of the relevant literature, to understand the lived experiences of male partners during and after miscarriage, and to identify any support requirements, with a focus on those in high-income settings.

Methods

This manuscript follows published recommendations to enhance transparency in reporting the synthesis of qualitative research (ENTREQ: Tong, Flemming, McInnes, Oliver, & Craig, 2012). The prospectively registered study protocol (PROSPERO CRD 42016041991) was developed to achieve inductive, data-driven insight to the experiences of men living through miscarriage in high-income countries. Methods adopted to examine the evidence, to explore layered meanings and conceptual themes, were informed by the approach of Thomas and Harden: a systematic search of the literature preceded data extraction, critical appraisal and thematic synthesis (Thomas & Harden, 2008).

Systematic Search of the Literature

The review team adopted strict eligibility criteria to identify peer-reviewed manuscripts for inclusion in the study synthesis: original empirical investigation (not correspondence, editorial perspectives or case reports); available in English; undertaken in high-income countries (World Bank, 2019); reported emotions, choices, actions, and interactions of men with experience(s) of miscarriage (not elective termination of pregnancy) up to 24 completed weeks of pregnancy; and gathered and presented primary outcomes using qualitative methods, including those undertaken as part of mixed-methods studies. Ethical approvals were not required to review these manuscripts in the public domain.

Searches were performed in Medline, Embase, PsycInfo, the Cumulative Index to Nursing and Allied Health Literature (CINAHL), British Nursing Index, and Web of Science databases, all from inception to December 2018. Search terms (**Supplementary Text S1**) were applied with consideration for Sample, Phenomenon of Interest, Design, Evaluation and Research (SPIDER: Cooke, Smith, & Booth, 2012) and appreciation of the challenges inherent in searching for qualitative texts (Booth, 2016; Campbell et al., 2011; D. Evans, 2002; Ring, Ritchie, Mandava, &

Jepson, 2011). In addition, the reference lists of theses identified by the same search terms applied to the E-Theses Online Service (EThOS), and the reference lists of studies identified for inclusion in the synthesis, were searched by hand. When the searches were concluded, titles and abstracts were collated, and duplications removed by a single reviewer (Helen Williams).

Titles and abstracts were screened for relevance by a single reviewer (Helen Williams). Any citations of ambiguous relevance were further considered by three reviewers (Laura Jones, Arri Coomarasamy and Annie Topping). All publications considered relevant were obtained in full where available, and reviewed for inclusion by a single reviewer (Helen Williams). Three reviewers (Laura Jones, Arri Coomarasamy and Annie Topping) independently assessed approximately ten percent of these manuscripts selected randomly, in addition to all those considered relevant or ambiguous by the first reviewer. Any uncertainties or disagreements were resolved through discussion.

Data Extraction, Critical Appraisal and Thematic Synthesis

Multiple manuscripts presenting data from the same cohort of participants were included but grouped and the association noted. A single reviewer (Helen Williams) extracted details of study location, methods, sample numbers, participant characteristics and subject focus using a proforma designed for this purpose. The extracted data were verified by a second reviewer (Laura Jones).

Previous literature explores different methods to critically evaluate reports of qualitative research (Dixon-Woods, Booth, & Sutton, 2007; Hannes, Lockwood, & Pearson, 2010; Newton, Rothlingova, Gutteridge, LeMarchand, & Raphael, 2012; Sandelowski, Docherty, & Emden, 1997). Here a single reviewer (Helen Williams) considered issues such as clarity of purpose, methodological rigour, ethical standards and reflexivity (Doucet, 2007; Dowling, 2006; Finlay, 2002a, 2002b; Finlay & Gough, 2008; Mauthner & Doucet, 2003; Newton et al., 2012; Pillow, 2003) within the scope of the Critical Appraisal Skills Programme (CASP: Critical Appraisal

Skills Programme, 2013) and conceptual richness (Noblit, Hare, & Dwight Hare, 1988). The appraisals were verified by a second reviewer (Laura Jones).

Empirical findings and the discussions of primary researchers, alongside any direct quotations from study participants, were imported to NVivo (Version 11 for Windows: QSR International, 2012) to manage and inductively ascribe meanings to the qualitative data therein (Bergdahl & Bertero, 2015; Bradley, Curry, & Devers, 2007; Popper, 2001). Texts were coded to represent meanings inherent in the original manuscripts rather than to fit any pre-determined theoretical model(s), until all data were coded and no new codes were derived (Braun & Clarke, 2006). Concepts common to different manuscripts but not necessarily expressed in identical words were recognized and associated as appropriate (Thomas & Harden, 2008).

Codes were examined and discussed several times among all authors, to ascertain similarities, differences, and connections between them (Campbell et al., 2003; Thomas & Harden, 2008). Where appropriate, adjustments were made to ensure the codes were applied with consistent meanings and without duplicated meanings (Braun & Clarke, 2006; Javadi & Zarea, 2016). Codes with duplicated meanings were collapsed into one another, codes with similarities or connections were attributed to parent codes or subthemes, and parent codes were broken down or otherwise refined. Subthemes with similarities or connections were brought together beneath umbrella themes, with care to recognize and retain any data that revealed exceptions or contradictions. Finally, operational definitions were developed to explain the meaning of each code and theme, to acknowledge any latent assumptions or contextual factors, and to indicate any relationships to other definitions.

Results

Our search (**Figure F1**) identified 27 relevant manuscripts reporting 22 studies (**Supplementary Table S2**): five studies were published in more than one manuscript (Abboud & Liamputtong,

2002, 2005; Cullen, Coughlan, Casey, Power, & Brosnan, 2017; Cullen et al., 2018; Hutti, 1988, 1992; Johnson & Puddifoot, 1996; Murphy, 1998; Murphy & Hunt, 1997; Puddifoot & Johnson, 1997) to answer different, albeit sometimes overlapping, research questions. Collectively the studies represented the views of 241 men whose partners had miscarried. They were conducted in eight different high-income countries (Australia, Canada, Ireland, Israel, Qatar, Sweden, the United Kingdom and United States of America), although most were undertaken in the United Kingdom (Brady, Brown, Letherby, Bayley, & Wallace, 2008; Johnson & Puddifoot, 1996; Letherby, 1993; Murphy, 1998; Murphy & Hunt, 1997; Puddifoot & Johnson, 1997; Sehdev, Parker, & Reddish, 1997) or the United States of America (Armstrong, 2001; Bute & Brann, 2015; DeFrain, Millspaugh, & Xie, 1996; Harris, Sandelowski, & Holditch-Davis, 1991; Hutti, 1988, 1992; Radwan Speraw, 1994).

All 27 manuscripts reported (some) primary data in unstructured textual form, and numerous (20) texts described the experiences of women in addition to the experiences of men. However five documents contained only limited material of relevance (Brady et al., 2008; DeFrain et al., 1996; Harris et al., 1991; Letherby, 1993; Peters, Jackson, & Rudge, 2007) because the authors aimed chiefly to explore subject matter beyond the scope of our review, such as female experiences (Brady et al., 2008; DeFrain et al., 1996; Letherby, 1993) or perceptions of infertility (Harris et al., 1991; Peters et al., 2007). None of these manuscripts were excluded from our synthesis on the basis of critical appraisal (**Supplementary Table S3**).

Thematic Summary

Men's experiences of miscarriage were manifest in four umbrella themes with two or three subthemes each, and connections between them (**Figure F2**). They were influenced by the identities assumed and performed by men, or constructed for them through relationships with others in their lives:

1. Secondary status in comparison to the female partner
    - Biological precedence of the female partner
    - Emotional precedence of the female partner
2. Uncertain transition to parenthood
    - Perceptions of the ended pregnancy
    - Perceptions of future parenthood
3. Gender roles and coping responses
    - Coping through detachment and deflection
    - Coping through silence and stoicism
    - Coping through rationality
4. Ambiguous entitlement to healthcare
    - Perceptions of care
    - Perceptions of neglect
    - Perceptions of differential entitlement

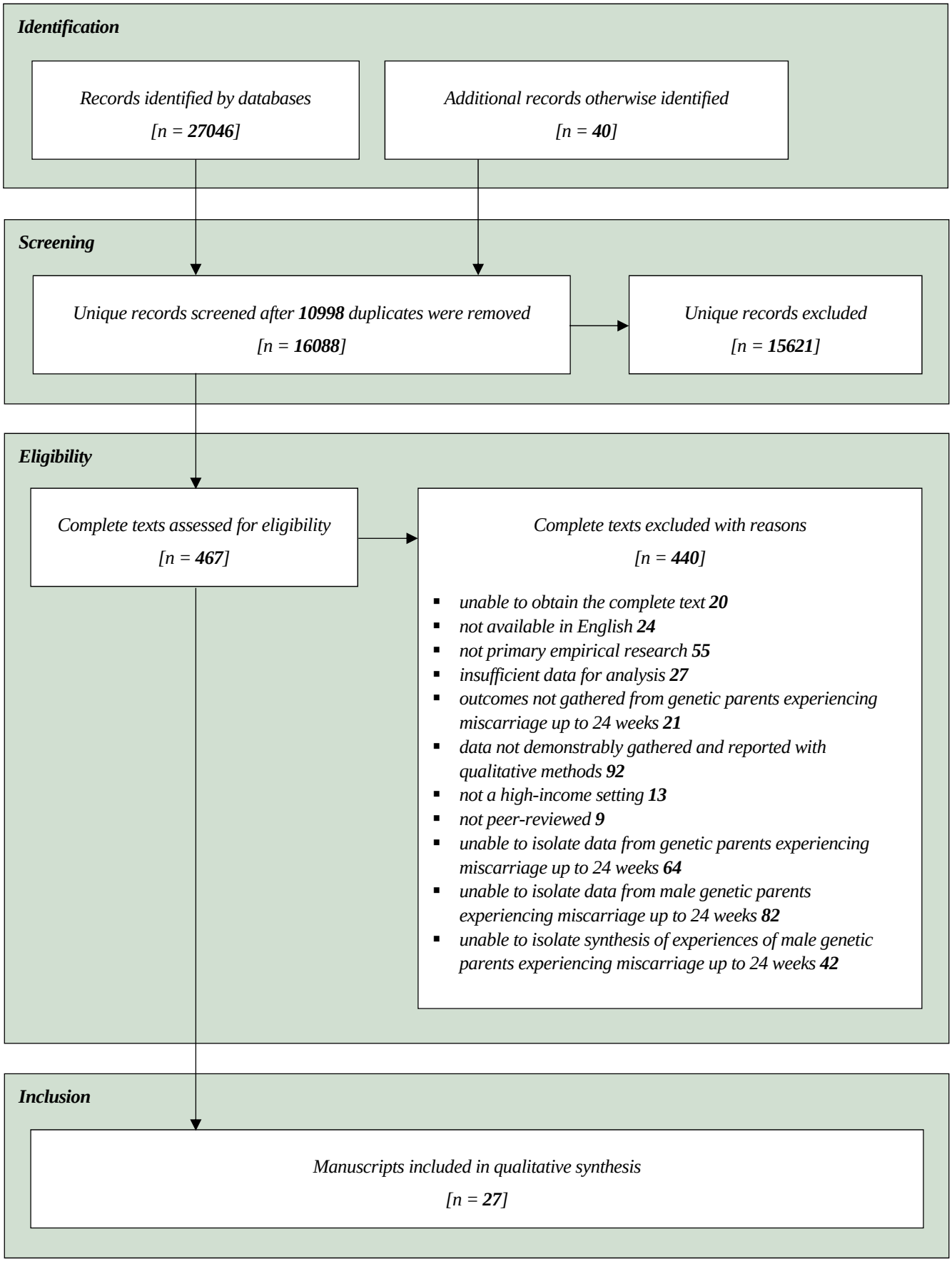
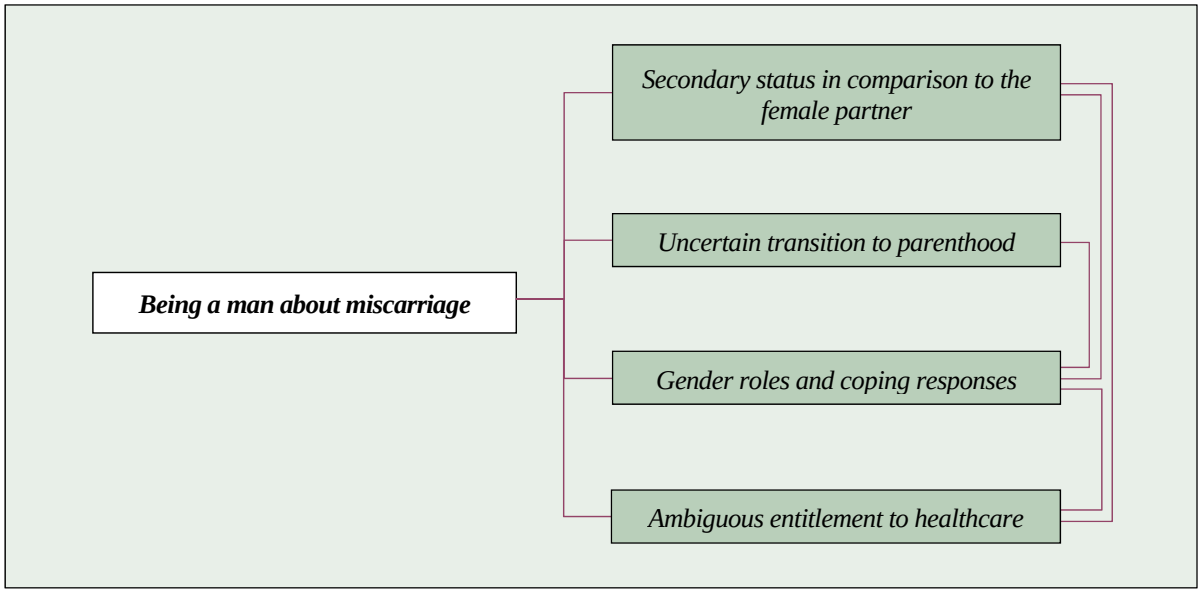


FIGURE F1: SEARCH AND SELECTION OF INCLUDED MANUSCRIPTS

FIGURE F2: EXPERIENCES AND IDENTITIES MEDIATED BY INTERPERSONAL RELATIONSHIPS AND SOCIAL NORMS



Although individuals described these experiences differently, they were overall characterized by perceptions of marginalization in the context of miscarriage. Some men expected themselves, and were expected by others, to be unaffected by the loss: yet they recounted feelings, uncertainties, and desire for support beyond anything they would have anticipated. Many suggested that social expectations and relationships with others including healthcare practitioners obstructed them from articulating and addressing unfamiliar emotions, uncertainties, and any support requirements.

For the purpose of reporting the synthesis, primary quotations from male partners are emboldened, italicized and presented in quotation marks, and interpretations of the study authors are italicized and presented in quotation marks.

Secondary Status in Comparison to the Female Partner

BIOLOGICAL PRECEDENCE OF THE FEMALE PARTNER

Miscarriage happens within the female body, and as a result many men perceived that miscarriage happened first and foremost to their female partners (Abboud & Liamputtong, 2002, 2005; Armstrong, 2001; Bute & Brann, 2015; Conway & Russell, 2000; Ekelin, Crang-Svalenius, Nordstrom, & Dykes, 2008; Hamama-Raz, Hemmendinger, & Buchbinder, 2010; Hutti, 1988, 1992; Johnson & Puddifoot, 1996; Kilshaw et al., 2017; Letherby, 1993; Meaney, Corcoran, Spillane, & O'Donoghue, 2017; Miron & Chapman, 1994; Murphy, 1998; Murphy & Hunt, 1997; Puddifoot & Johnson, 1997; Radwan Speraw, 1994; Sehdev et al., 1997; Wagner, Vaughn, & Tuazon, 2018) whereas they identified themselves as "*secondary actors*" (Puddifoot & Johnson, 1997).

> "***She was going through the changes [miscarriage]. She was feeling everything inside, whereas I was just hearing about it from her.***" (Hutti, 1988, p367)

They attributed precedence to physical health outcomes over any other effects of the loss, and came to understand themselves as "***observer(s) on the sidelines***" (Radwan Speraw, 1994) because they could neither share (Abboud & Liamputtong, 2002, 2005; Bute & Brann, 2015; Conway & Russell, 2000; Ekelin et al., 2008; Hamama-Raz et al., 2010; Hutti, 1988, 1992; Johnson & Puddifoot, 1996; Letherby, 1993; Meaney et al., 2017; Miron & Chapman, 1994; Murphy, 1998; Murphy & Hunt, 1997; Puddifoot & Johnson, 1997; Wagner et al., 2018) nor ameliorate (Abboud & Liamputtong, 2002, 2005; Bute & Brann, 2015; Ekelin et al., 2008; Hamama-Raz et al., 2010; Hutti, 1988, 1992; Johnson & Puddifoot, 1996; Miron & Chapman, 1994; Murphy, 1998; Murphy & Hunt, 1997; Puddifoot & Johnson, 1997; Radwan Speraw, 1994; Sehdev et al., 1997) the biological symptoms of miscarriage. They could appreciate these

signs and sensations only as bystanders, or as communicated by their female partners. Consequently, they felt disorientated by unfamiliar and seemingly uncontrollable circumstances (Abboud & Liamputtong, 2005; Ekelin et al., 2008; Johnson & Puddifoot, 1996; Meaney et al., 2017; Miron & Chapman, 1994; Murphy, 1998; Murphy & Hunt, 1997; Radwan Speraw, 1994; Wagner et al., 2018). Some observed or imagined their partners in such acute physical distress that they feared for their lives (Miron & Chapman, 1994; Murphy, 1998; Murphy & Hunt, 1997; Radwan Speraw, 1994). They also reported feelings of frustration that they could not do more to help (Abboud & Liamputtong, 2002, 2005; Bute & Brann, 2015; Cullen et al., 2018; Edwards, Birks, Chapman, & Yates, 2018; Ekelin et al., 2008; Hamama-Raz et al., 2010; Hutti, 1988, 1992; Johnson & Puddifoot, 1996; Miron & Chapman, 1994; Murphy, 1998; Murphy & Hunt, 1997; Puddifoot & Johnson, 1997; Radwan Speraw, 1994; Sehdev et al., 1997; Wagner et al., 2018).

> *"**I was lost... Nobody prepares you for this... Nobody tells you what to do in this situation [miscarriage]. So there we were. Sarah needing me, and I am lost like a little boy who can't find his mummy. I felt so useless, incompetent...**"* (Puddifoot & Johnson, 1997, p841)

Fears and frustration appeared to be intensified by absence of any clear guidance in how to support their female partners (Abboud & Liamputtong, 2005; Edwards et al., 2018; Miron & Chapman, 1994; Murphy & Hunt, 1997; Puddifoot & Johnson, 1997; Radwan Speraw, 1994; Sehdev et al., 1997) and by perceptions of exclusion, or being unwanted, in the clinical environment (Edwards et al., 2018; Hutti, 1988; Johnson & Puddifoot, 1996; Miron & Chapman, 1994; Murphy, 1998; Murphy & Hunt, 1997; Puddifoot & Johnson, 1997; Radwan Speraw, 1994; Sehdev et al., 1997). Many men suggested that healthcare practitioners recognized women as the rightful recipients of clinical attention (see also **Perceptions of Differential Entitlement** below): therefore by default they found themselves cast into roles as inactive observers or even

outsiders (Cullen et al., 2018; Edwards et al., 2018; Hutti, 1988; Johnson & Puddifoot, 1996; Miron & Chapman, 1994; Murphy, 1998; Murphy & Hunt, 1997; Puddifoot & Johnson, 1997; Radwan Speraw, 1994; Sehdev et al., 1997). Some described waiting alone in suspense and fear of what was happening behind closed doors (Cullen et al., 2018; Hamama-Raz et al., 2010; Miron & Chapman, 1994; Murphy & Hunt, 1997; Puddifoot & Johnson, 1997; Radwan Speraw, 1994).

> "***They ask you to go out the room... OK, I can understand that they are busy... But then they forget about you, you are left on your own, worried. They even walk past you and don't even stop to explain anything... I know this may sound soft but those hours were the longest of my life because all you can do is fret.***" (Puddifoot & Johnson, 1997, p843)

EMOTIONAL PRECEDENCE OF THE FEMALE PARTNER

Men appeared to consider the emotions communicated by their female partners to be legitimate because the women embodied ownership of pregnancy loss (Abboud & Liamputtong, 2002, 2005; Bute & Brann, 2015; Conway & Russell, 2000; Ekelin et al., 2008; Hamama-Raz et al., 2010; Hutti, 1988, 1992; Johnson & Puddifoot, 1996; Letherby, 1993; Meaney et al., 2017; Miron & Chapman, 1994; Murphy, 1998; Murphy & Hunt, 1997; Puddifoot & Johnson, 1997; Wagner et al., 2018).

> "***Not only was I grieving the loss of a child but I was also sympathetic to the loss only a mother could feel.***" (Conway & Russell, 2000, p535)

Without such biological justification for their feelings, and as a result of dominant gender paradigms, many men perceived that they were unentitled or less entitled than women to experience or communicate emotions engendered by miscarriage (Abboud & Liamputtong, 2002, 2005; Armstrong, 2001; Bute & Brann, 2015; Conway & Russell, 2000; Edwards et al., 2018;

Ekelin et al., 2008; Hamama-Raz et al., 2010; Hutti, 1988, 1992; Johnson & Puddifoot, 1996; Letherby, 1993; Miron & Chapman, 1994; Murphy, 1998; Murphy & Hunt, 1997; Puddifoot & Johnson, 1997; Radwan Speraw, 1994; Sehdev et al., 1997; Wagner et al., 2018: see also **Coping Through Detachment and Deflection** and **Coping Through Silence and Stoicism** below). Moreover they described a duty to offer rather than receive assistance (Abboud & Liamputtong, 2002, 2005; Armstrong, 2001; Bute & Brann, 2015; Conway & Russell, 2000; Edwards et al., 2018; Ekelin et al., 2008; Hamama-Raz et al., 2010; Hutti, 1992; Johnson & Puddifoot, 1996; Letherby, 1993; Meaney et al., 2017; Miron & Chapman, 1994; Murphy, 1998; Murphy & Hunt, 1997; Puddifoot & Johnson, 1997; Radwan Speraw, 1994; Wagner et al., 2018). Some men believed themselves to be ill prepared to perform such a supportive role, especially without encouragement or guidance from healthcare practitioners or others in their lives (Conway & Russell, 2000; Edwards et al., 2018; Ekelin et al., 2008; Hutti, 1992; Johnson & Puddifoot, 1996; Letherby, 1993; Miron & Chapman, 1994; Murphy, 1998; Murphy & Hunt, 1997; Puddifoot & Johnson, 1997; Radwan Speraw, 1994: see also **Perceptions of Differential Entitlement** below).

> "***It's hard when anybody's having a tough emotional time to… figure out what you should do yourself so as not to make matters worse, support them but not bring matters up that sort of thing.***" (Murphy, 1998, p329)

In summary, many men felt that they lacked entitlement to receive attention to their own experiences of miscarriage: they identified themselves in a secondary role (see also **.**

Gender Roles and Coping Responses below), with expectations that they should support their female partners (Abboud & Liamputtong, 2002, 2005; Armstrong, 2001; Bute & Brann, 2015; Conway & Russell, 2000; Edwards et al., 2018; Ekelin et al., 2008; Hamama-Raz et al., 2010; Hutti, 1988, 1992; Johnson & Puddifoot, 1996; Letherby, 1993; Meaney et al., 2017; Miron & Chapman, 1994; Murphy, 1998; Murphy & Hunt, 1997; Puddifoot & Johnson, 1997; Radwan Speraw, 1994; Sehdev et al., 1997; Wagner et al., 2018). These marginalized and vicarious male

identities were intertwined and sometimes dissonant with other identities described in relation to the ended pregnancy.

Uncertain Transition to Parenthood

PERCEPTIONS OF THE ENDED PREGNANCY

The synthesized data indicated that grief and other emotional responses to miscarriage were influenced by different perceptions of the ended pregnancy, and different perceptions of future parenthood (**Box B1)**.

BOX B1: DIFFERENT PERCEPTIONS OF PREGNANCY AND PARENTHOOD

- Pregnancy as unseen and unreal [1; 3; 12; 14; 15; 17; 21; 23; 26; 27]
- Pregnancy as inert biological tissue without emotional implications [3; 12-15; 17]
- Miscarriage as a temporary impediment to parenthood [1; 2; 3; 12; 13; 18; 21; 22; 24]
- Pregnancy means a new and unique person who is beloved as a member of the family [1-3; 7; 10; 11; 13-17; 23; 25-27]
- Non-parenthood means social exclusion [1; 11; 13-17; 22-25; 27]
- Parenthood means responsibility [6; 16; 21-23; 25; 27] to "***provide and protect and nurture***" [27]
- Miscarriage means uncertainty and anxiety for future pregnancies [1; 3; 5; 6; 11; 13; 16; 20; 21; 24-26]

Prior to any visible appearance of pregnancy in their female partners (Armstrong, 2001; Hutti, 1988, 1992; Johnson & Puddifoot, 1996; Sehdev et al., 1997; Wagner et al., 2018) some men struggled to grasp the reality of the life that ended (Abboud & Liamputtong, 2002; Armstrong, 2001; Hamama-Raz et al., 2010; Hutti, 1988, 1992; Miron & Chapman, 1994; Murphy, 1998; Puddifoot & Johnson, 1997; Sehdev et al., 1997; Wagner et al., 2018). They considered being a father as a possibility in the abstract future rather than a certainty in the tangible present, and so

"*they did not feel it (the miscarriage) as a true loss, but rather as a loss of potential*" (Hamama-Raz et al., 2010).

> "***I couldn't see it [the pregnancy] or anything. I was still getting used to the idea of the pregnancy, and I think that made it a lot easier on me.***"
> (Hutti, 1988, p367)

Among the study participants, some men described miscarriage in biological terms that did not merit emotional investment or recognition of personhood (Armstrong, 2001; Hamama-Raz et al., 2010; Harris et al., 1991; Hutti, 1988, 1992; Puddifoot & Johnson, 1997). They identified the ended pregnancy as human tissue rather than a human being.

> "***The pregnancy didn't develop properly. It ended, and there's no emotional relationship with this abortus, it's not something you've become attached to; it's in a very, very initial stage, there's no sense of a child yet, or anything special, it just feels like a technical hitch.***"
> (Hamama-Raz et al., 2010, p255)

Thus emotional attachment could be refuted (see also **Coping Through Detachment and Deflection** below). Miscarriage could be understood as a temporary obstacle to future parenthood, to be remedied with another pregnancy (Abboud & Liamputtong, 2002, 2005; Armstrong, 2001; Hamama-Raz et al., 2010; Harris et al., 1991; Kilshaw et al., 2017; Miron & Chapman, 1994; Murphy & Hunt, 1997; Peters et al., 2007: see also **Coping Through Rationality** below).

> "***It's gone. It's finished, now we have to start to think we do another one.***" (Abboud & Liamputtong, 2005, p8)

Yet other men denied any possibility for previous or subsequent pregnancies to replace or compensate for the loss (Armstrong, 2001; Edwards et al., 2018; Ekelin et al., 2008; Puddifoot &

Johnson, 1997; Radwan Speraw, 1994). They identified the miscarried pregnancy as a unique individual to whom they were emotionally attached: a person and already a member of the family rather than an inert biological product (Abboud & Liamputtong, 2002, 2005; Armstrong, 2001; Cullen et al., 2017; Ekelin et al., 2008; Harris et al., 1991; Hutti, 1988, 1992; Johnson & Puddifoot, 1996; Murphy, 1998; Murphy & Hunt, 1997; Puddifoot & Johnson, 1997; Radwan Speraw, 1994; Sehdev et al., 1997; Wagner et al., 2018). They rejected depersonalized descriptions of miscarriage articulated by some healthcare practitioners and others (Edwards et al., 2018; Johnson & Puddifoot, 1996; Murphy, 1998; Murphy & Hunt, 1997; Puddifoot & Johnson, 1997; Radwan Speraw, 1994; Wagner et al., 2018: see also **Perceptions of Neglect** below). Some study texts suggested that seeing the pregnancy in ultrasound pictures or fetal movements intensified such emotional attachment (Armstrong, 2001; Ekelin et al., 2008; Harris et al., 1991; Hutti, 1988, 1992; Johnson & Puddifoot, 1996; Murphy, 1998; Murphy & Hunt, 1997; Puddifoot & Johnson, 1997; Wagner et al., 2018).

> "***For me, seeing the scan was so special it was like an opportunity to be introduced to your baby.***" (Puddifoot & Johnson, 1997, p841)

Some of those who had become emotionally attached and assumed parental identity described prolonged and possibly chronic heartache (Armstrong, 2001; Brady et al., 2008; DeFrain et al., 1996; Ekelin et al., 2008; Hutti, 1988, 1992; Johnson & Puddifoot, 1996; Miron & Chapman, 1994; Murphy, 1998; Murphy & Hunt, 1997; Puddifoot & Johnson, 1997; Radwan Speraw, 1994; Sehdev et al., 1997). They reported that they continued to mourn the baby or child they loved and miscarried even after the birth of other children (Johnson & Puddifoot, 1996; Murphy, 1998; Sehdev et al., 1997) and possibly decided against trying again (Abboud & Liamputtong, 2002; Conway & Russell, 2000; Ekelin et al., 2008; Meaney et al., 2017).

> "***Even though I have two wonderful children I still mourn the ones I've lost, because I had dreams and hopes for them, and yes I have dreams for***

> ***my two living children, but that's for them, it's loss of potential, it's a waste. You know I often think that they may have made a difference to someone's life. That's what we lose in this, dreams and aspirations.***"
> (Johnson & Puddifoot, 1996, p324)

PERCEPTIONS OF FUTURE PARENTHOOD

Some of the men who reported emotional attachment to the ended pregnancy described the parental role they had anticipated in detail (Ekelin et al., 2008; Hutti, 1988, 1992; Johnson & Puddifoot, 1996; Murphy, 1998; Murphy & Hunt, 1997; Puddifoot & Johnson, 1997; Wagner et al., 2018). Especially in the absence of other children, miscarriage obstructed social belonging through shared experiences of family life: loss of pregnancy brought feelings of social exclusion and marginalization from peers (Abboud & Liamputtong, 2002; Ekelin et al., 2008; Harris et al., 1991; Hutti, 1988, 1992; Johnson & Puddifoot, 1996; Murphy, 1998; Murphy & Hunt, 1997; Peters et al., 2007; Puddifoot & Johnson, 1997; Radwan Speraw, 1994; Wagner et al., 2018).

> "***Walking down the road with the baby in the pram to show it off to all the world, playing in the park on Sundays, all of this has just been taken away in an instant.***" (Puddifoot & Johnson, 1997, p841-842)

> "*The role of fathers was viewed as a social responsibility, such as preparing your child to be a responsible citizen. Fatherhood was also discussed as inherently meaningful, something that would provide a sense of accomplishment, pride, and would be deeply satisfying.*" (Wagner et al., 2018, p2)

Among those for whom parenthood represented a normal or expected rite of passage, the prospect of non-parenthood could introduce an unwelcome sense of biological deviation and even feelings of betrayal (Ekelin et al., 2008; Harris et al., 1991; Murphy, 1998; Murphy & Hunt,

1997; Peters et al., 2007; Radwan Speraw, 1994) or resentment of healthcare practitioners who were expected to ensure healthy pregnancies (Abboud & Liamputtong, 2002; Peters et al., 2007; Puddifoot & Johnson, 1997: see also **Ambiguous Entitlement to Healthcare** below).

> "***I mean, the thing is we were encouraged, we did have feelings of hope that things would work.***" (Peters et al., 2007, p128)

Men who described emotional attachment also articulated a sense of failure to protect the pregnancy from harm (Johnson & Puddifoot, 1996; Miron & Chapman, 1994; Murphy, 1998; Murphy & Hunt, 1997; Radwan Speraw, 1994; Wagner et al., 2018: see also **Coping Through Rationality** below) and frustration as a result of powerlessness to prevent the loss (Abboud & Liamputtong, 2002, 2005; Bute & Brann, 2015; Ekelin et al., 2008; Hamama-Raz et al., 2010; Hutti, 1988, 1992; Johnson & Puddifoot, 1996; Miron & Chapman, 1994; Murphy, 1998; Murphy & Hunt, 1997; Puddifoot & Johnson, 1997; Radwan Speraw, 1994; Sehdev et al., 1997; Wagner et al., 2018).

> "***Well, just really total frustration and anguish at being totally helpless and something that you really wanted so much as a family sort of slipping away from you and you can't do anything about it.***" (Murphy & Hunt, 1997, p88)

Those with a history of infertility (Harris et al., 1991; Peters et al., 2007) tended to recognize the vulnerability of pregnancy even before they encountered a loss, whereas among others miscarriage suddenly created a new sense of uncertainty and anxiety for the future (Abboud & Liamputtong, 2002; Armstrong, 2001; Bute & Brann, 2015; Conway & Russell, 2000; Ekelin et al., 2008; Johnson & Puddifoot, 1996; Meaney et al., 2017; Miron & Chapman, 1994; Radwan Speraw, 1994; Sehdev et al., 1997). Some men described monitoring and trying to protect any subsequent pregnancies more closely, in order to prevent another disappointment (Armstrong,

2001; Conway & Russell, 2000; Ekelin et al., 2008; Harris et al., 1991; Meaney et al., 2017; Miron & Chapman, 1994). Others with a history of repeated loss tried to stop themselves from becoming emotionally invested in parenthood before birth (Abboud & Liamputtong, 2002; Harris et al., 1991; Johnson & Puddifoot, 1996; Meaney et al., 2017: see also **Coping Through Detachment and Deflection** below).

> "***It [the loss] has certainly made us, gave us, I guess, a heightened sense of risk and awareness. We know that things can go wrong.***" (Armstrong, 2001, p151)

Collectively the data demonstrated a range of different responses to adjusted parental status in the aftermath of miscarriage. Perceptions of the pregnancy as a person appeared to be associated with feelings of parental attachment and grief articulated as a result of the loss (Abboud & Liamputtong, 2002, 2005; Armstrong, 2001; Cullen et al., 2017; Edwards et al., 2018; Ekelin et al., 2008; Harris et al., 1991; Hutti, 1988, 1992; Johnson & Puddifoot, 1996; Meaney et al., 2017; Murphy, 1998; Murphy & Hunt, 1997; Puddifoot & Johnson, 1997; Radwan Speraw, 1994; Sehdev et al., 1997; Wagner et al., 2018). Men who had expected a smooth transition to parenthood articulated feelings of disappointment and social marginalization (Abboud & Liamputtong, 2002; Ekelin et al., 2008; Harris et al., 1991; Hutti, 1988, 1992; Johnson & Puddifoot, 1996; Murphy, 1998; Murphy & Hunt, 1997; Peters et al., 2007; Puddifoot & Johnson, 1997; Radwan Speraw, 1994; Wagner et al., 2018).

Gender Roles and Coping Responses

Male experiences were further influenced by gender roles assumed and performed by men, or constructed for them by others (**Box B2**: Abboud & Liamputtong, 2002, 2005; Armstrong, 2001; Brady et al., 2008; Bute & Brann, 2015; Conway & Russell, 2000; Cullen et al., 2018; DeFrain et al., 1996; Edwards et al., 2018; Ekelin et al., 2008; Hamama-Raz et al., 2010; Harris et al., 1991;

Hutti, 1988, 1992; Johnson & Puddifoot, 1996; Kilshaw et al., 2017; Letherby, 1993; Meaney et al., 2017; Miron & Chapman, 1994; Murphy, 1998; Murphy & Hunt, 1997; Puddifoot & Johnson, 1997; Radwan Speraw, 1994; Sehdev et al., 1997; Wagner et al., 2018). Alongside and connected to perceptions of secondary status during and after loss of pregnancy (see also **Secondary Status in Comparison to the Female Partner** above), men often described the notion of "being a man" in terms of qualities such as emotional detachment or preference for action (Abboud & Liamputtong, 2002, 2005; Armstrong, 2001; Brady et al., 2008; Conway & Russell, 2000; Edwards et al., 2018; Ekelin et al., 2008; Hamama-Raz et al., 2010; Harris et al., 1991; Hutti, 1992; Johnson & Puddifoot, 1996; Letherby, 1993; Miron & Chapman, 1994; Murphy, 1998; Murphy & Hunt, 1997; Puddifoot & Johnson, 1997; Radwan Speraw, 1994; Wagner et al., 2018), silence (Abboud & Liamputtong, 2002, 2005; Armstrong, 2001; Brady et al., 2008; Bute & Brann, 2015; Conway & Russell, 2000; DeFrain et al., 1996; Edwards et al., 2018; Ekelin et al., 2008; Hutti, 1988; Johnson & Puddifoot, 1996; Miron & Chapman, 1994; Murphy, 1998; Murphy & Hunt, 1997; Puddifoot & Johnson, 1997; Radwan Speraw, 1994; Wagner et al., 2018) and rationality (Abboud & Liamputtong, 2002; Armstrong, 2001; Conway & Russell, 2000; DeFrain et al., 1996; Edwards et al., 2018; Ekelin et al., 2008; Hamama-Raz et al., 2010; Harris et al., 1991; Johnson & Puddifoot, 1996; Miron & Chapman, 1994; Murphy & Hunt, 1997; Puddifoot & Johnson, 1997; Radwan Speraw, 1994; Wagner et al., 2018).

BOX B2: GENDER ROLES AND (SOMETIMES CONTRADICTORY) COPING RESPONSES OF MEN LIVING THROUGH MISCARRIAGE

- Emotional detachment [1-4; 6; 10-13; 15-17; 19; 21-23; 25; 27]
- Deflection to female partners and tangible tasks [1-3; 6; 10-12; 16-23; 25-27]
- Stoic silence [1-6; 9-11; 14; 16; 17; 21-23; 25; 27]
- (Disclosure of emotions to others) [1; 3; 5; 6; 12; 17; 27]
- Rationalization by search for reasons [1; 3; 6; 8-13; 16-18; 21; 25; 27]
- Rationalization by search for alternative purpose in life [1; 3; 9; 11-13; 17; 22]

Some study participants assumed such traditional attributes of manliness without apparent difficulty (Abboud & Liamputtong, 2005; Armstrong, 2001; Hamama-Raz et al., 2010; Hutti, 1992; Miron & Chapman, 1994; Puddifoot & Johnson, 1997). Traditional gender roles could be enacted to blunt or cover up emotional discomfort and manage uncertainties during and after miscarriage (Abboud & Liamputtong, 2002, 2005; Armstrong, 2001; Brady et al., 2008; Bute & Brann, 2015; Conway & Russell, 2000; DeFrain et al., 1996; Edwards et al., 2018; Ekelin et al., 2008; Hamama-Raz et al., 2010; Harris et al., 1991; Hutti, 1988, 1992; Johnson & Puddifoot, 1996; Letherby, 1993; Miron & Chapman, 1994; Murphy, 1998; Murphy & Hunt, 1997; Peters et al., 2007; Puddifoot & Johnson, 1997; Radwan Speraw, 1994; Sehdev et al., 1997; Wagner et al., 2018). Yet other men described feeling burdened by the gendered expectations of themselves, family, friends, and healthcare practitioners: they reported resentment of prescriptive social norms (Abboud & Liamputtong, 2002; Brady et al., 2008; Edwards et al., 2018; Ekelin et al., 2008; Johnson & Puddifoot, 1996; Letherby, 1993; Murphy, 1998; Murphy & Hunt, 1997; Puddifoot & Johnson, 1997; Radwan Speraw, 1994; Sehdev et al., 1997; Wagner et al., 2018) because they could not reconcile these masculine ideals with the emotional responses they felt to loss of pregnancy and parental identity (see also **Uncertain Transition to Parenthood** above).

> "***Yes it's different, but it's not less painful, it's no less substantial. No, I did not carry the child, but it's still part of me.***" (Wagner et al., 2018, p5)

COPING THROUGH DETACHMENT AND DEFLECTION

From the synthesized data it became evident that in the context of miscarriage many men felt expected to be emotionally less affected than women (see also **Emotional Precedence of the Female Partner** above) and perhaps even unaffected because they and others understood masculinity to mean absence of emotion (Abboud & Liamputtong, 2002, 2005; Armstrong, 2001; Brady et al., 2008; Conway & Russell, 2000; Edwards et al., 2018; Ekelin et al., 2008; Hamama-Raz et al., 2010; Johnson & Puddifoot, 1996; Letherby, 1993; Miron & Chapman, 1994; Murphy, 1998; Murphy & Hunt, 1997; Puddifoot & Johnson, 1997; Radwan Speraw, 1994; Sehdev et al., 1997; Wagner et al., 2018). Some men denied any difficulty or regret to maintain emotional detachment (Abboud & Liamputtong, 2005; Armstrong, 2001; Hamama-Raz et al., 2010; Hutti, 1992; Miron & Chapman, 1994; Puddifoot & Johnson, 1997).

> "***I bought a ticket and it wasn't a winner... So she got pregnant and she didn't have a baby... You don't get upset about not winning the lottery.***"
> (Puddifoot & Johnson, 1997, p840)

Perceptions of the Ended Pregnancy as biological tissue or as a technical and temporary obstacle to be remedied in the future could relieve painful emotions in the present (Abboud & Liamputtong, 2002, 2005; Armstrong, 2001; Hamama-Raz et al., 2010; Harris et al., 1991; Hutti, 1988, 1992; Miron & Chapman, 1994; Murphy & Hunt, 1997; Peters et al., 2007; Puddifoot & Johnson, 1997). Other study participants instinctively or deliberately redirected emotional energy towards the active duty they perceived to support their female partners (Abboud & Liamputtong, 2002, 2005; Armstrong, 2001; Conway & Russell, 2000; Edwards et al., 2018; Ekelin et al., 2008; Hamama-Raz et al., 2010; Johnson & Puddifoot, 1996; Letherby, 1993; Meaney et al.,

2017; Miron & Chapman, 1994; Murphy, 1998; Murphy & Hunt, 1997; Puddifoot & Johnson, 1997; Radwan Speraw, 1994; Sehdev et al., 1997; Wagner et al., 2018) and additional dependents (Abboud & Liamputtong, 2005; Armstrong, 2001; Johnson & Puddifoot, 1996; Murphy & Hunt, 1997). Although external support in "*what needed to be done practically*" (Wagner et al., 2018) was not necessarily unwelcome (Abboud & Liamputtong, 2005; Wagner et al., 2018), focus on tangible tasks such as childcare or employment could deflect any internal recognition of distress (Abboud & Liamputtong, 2005; Armstrong, 2001; Johnson & Puddifoot, 1996; Letherby, 1993; Miron & Chapman, 1994; Murphy, 1998; Murphy & Hunt, 1997; Radwan Speraw, 1994; Wagner et al., 2018). It was as if competence to contain their feelings and manage their lives without support from others enabled them to maintain an inward sense of manliness (Abboud & Liamputtong, 2002, 2005; Armstrong, 2001; Conway & Russell, 2000; Edwards et al., 2018; Ekelin et al., 2008; Hamama-Raz et al., 2010; Johnson & Puddifoot, 1996; Letherby, 1993; Miron & Chapman, 1994; Murphy, 1998; Murphy & Hunt, 1997; Puddifoot & Johnson, 1997; Radwan Speraw, 1994; Wagner et al., 2018).

> "*Activities such as caring for other children, removing baby furniture from the home, and dealing with family and friends fell to these fathers. None expressed displeasure, however, and accepted this as their role and a way in which they could support and care for their families.*" (Armstrong, 2001, p150)

Many such efforts to maintain emotional detachment persisted through subsequent pregnancies: men described reluctance to become emotionally invested in future children, in order to prevent more disappointment (Armstrong, 2001; Harris et al., 1991; Meaney et al., 2017; Miron & Chapman, 1994: see also **Perceptions of Future Parenthood** above).

> "***It makes me nervous to get too involved right away because… I hate to get my heart set on it and then to lose it.***" (Harris et al., 1991, p218)

COPING THROUGH SILENCE AND STOICISM

Even among those who recognized painful emotions within themselves, public control of emotional expression preserved an outward appearance of manliness (Abboud & Liamputtong, 2002, 2005; Armstrong, 2001; Brady et al., 2008; Bute & Brann, 2015; Conway & Russell, 2000; DeFrain et al., 1996; Edwards et al., 2018; Ekelin et al., 2008; Hutti, 1988; Johnson & Puddifoot, 1996; Miron & Chapman, 1994; Murphy, 1998; Murphy & Hunt, 1997; Puddifoot & Johnson, 1997; Radwan Speraw, 1994; Wagner et al., 2018: see also **Emotional Precedence of the Female Partner** above). Evidently some men were silent because they did not know what to say (Abboud & Liamputtong, 2002; Bute & Brann, 2015; Johnson & Puddifoot, 1996; Murphy, 1998; Puddifoot & Johnson, 1997; Radwan Speraw, 1994) but many explained that they did not expect any emotional benefit from disclosure (Abboud & Liamputtong, 2002, 2005; Armstrong, 2001; Conway & Russell, 2000; Ekelin et al., 2008; Hutti, 1988; Puddifoot & Johnson, 1997; Wagner et al., 2018) and even anticipated embarrassment, shame or exclusion (Abboud & Liamputtong, 2005; Armstrong, 2001; Brady et al., 2008; Bute & Brann, 2015; Conway & Russell, 2000; Johnson & Puddifoot, 1996; Murphy & Hunt, 1997; Puddifoot & Johnson, 1997). They described silence and/or cursory or indirect communications to escape any social discomfort for themselves and others (Abboud & Liamputtong, 2002, 2005; Armstrong, 2001; Brady et al., 2008; Bute & Brann, 2015; Conway & Russell, 2000; Johnson & Puddifoot, 1996; Miron & Chapman, 1994; Murphy & Hunt, 1997; Puddifoot & Johnson, 1997; Wagner et al., 2018).

> "***I told some friends and what not, but I didn't sit down and get down into it and a sob story. I don't know, maybe it's just a male reaction to cut it off.***" (Armstrong, 2001, p150)

> "***Usually, I had my little breakdowns either on my own time when my wife was not there, like, on a drive to work, during a morning quiet time***

> ***when my wife was still upstairs asleep, or late at night after my wife had fallen asleep.***" (Wagner et al., 2018, p5)

Some studies suggested that such stoicism and embarrassment to engage in deeper or more meaningful conversations about miscarriage suffused social interactions irrespective of gender identities (Bute & Brann, 2015; Cullen et al., 2017; DeFrain et al., 1996; Ekelin et al., 2008; Murphy & Hunt, 1997; Radwan Speraw, 1994). Yet others demonstrated possibilities for men to find comfort in communication and closeness to their partners (Abboud & Liamputtong, 2002; Armstrong, 2001; Bute & Brann, 2015; Conway & Russell, 2000; Hamama-Raz et al., 2010; Puddifoot & Johnson, 1997) or in reciprocal disclosure among others with experience of miscarriage, with whom they felt affinity through mutual bereavement (Bute & Brann, 2015; Wagner et al., 2018). Some men also appreciated outward symbols (rituals and/or visual representations) of emotional attachment to the ended pregnancy (Abboud & Liamputtong, 2002, 2005; Armstrong, 2001; Ekelin et al., 2008). Silence was widespread, but not universal.

> "***That's actually opened doors for me to have conversations with people I work with who have been through infertility problems themselves and have children through IVF (in vitro fertilization) or that they've had loss themselves. So I've been able to have conversations with people and share experiences in that way.***" (Bute & Brann, 2015, p33)

COPING THROUGH RATIONALITY

Many male responses to miscarriage were also characterized by efforts to answer aetiological questions (Abboud & Liamputtong, 2002; Armstrong, 2001; Conway & Russell, 2000; Cullen et al., 2018; DeFrain et al., 1996; Edwards et al., 2018; Ekelin et al., 2008; Hamama-Raz et al., 2010; Harris et al., 1991; Johnson & Puddifoot, 1996; Kilshaw et al., 2017; Miron & Chapman, 1994; Puddifoot & Johnson, 1997; Radwan Speraw, 1994). Some men sought rational

explanations in order that loss could become a reparable and thus temporary obstacle in their reproductive life stories (Abboud & Liamputtong, 2002; Armstrong, 2001; Cullen et al., 2018; DeFrain et al., 1996; Ekelin et al., 2008; Hamama-Raz et al., 2010; Harris et al., 1991; Johnson & Puddifoot, 1996; Kilshaw et al., 2017; Miron & Chapman, 1994; Puddifoot & Johnson, 1997; Radwan Speraw, 1994: see also **Perceptions of the Ended Pregnancy** above).

> "***I needed a reason to make sense of it [the miscarriage]... to help her put it in perspective.***" (Miron & Chapman, 1994, p68)

Many men pressed for biological explanations from clinicians, or imagined biological reasons themselves (Abboud & Liamputtong, 2002; Cullen et al., 2017; Cullen et al., 2018; DeFrain et al., 1996; Miron & Chapman, 1994; Puddifoot & Johnson, 1997). Although some came to accept the absence of any uncontested answers (Abboud & Liamputtong, 2002; Ekelin et al., 2008; Miron & Chapman, 1994; Puddifoot & Johnson, 1997), others attributed blame for the miscarriage, even in the absence of evidence (Abboud & Liamputtong, 2002; Puddifoot & Johnson, 1997). They reported a range of reasons for loss, including inappropriate healthcare from practitioners whom they had expected to ensure healthy pregnancies (Abboud & Liamputtong, 2002; DeFrain et al., 1996; Hamama-Raz et al., 2010; Puddifoot & Johnson, 1997; Wagner et al., 2018: see also **Perceptions of Neglect** below).

> "***Emotionally we got to accept it and things happen we can't help, but it's not the fault of anyone. No one is doing any fault. Things happen and it's expected.***" (Abboud & Liamputtong, 2002, p48)

> "***He [the doctor] should have done something, but no he just patted her on her hand and told her not to worry. Well, he was wrong wasn't he, there was something to worry about. He could, no he should have done something...***" (Puddifoot & Johnson, 1997, p842)

A small number of study participants blamed themselves for failure to prevent miscarriage (see also **Perceptions of Future Parenthood** above), again even in the absence of evidence, and reported feeling guilty (DeFrain et al., 1996; Edwards et al., 2018; Puddifoot & Johnson, 1997; Wagner et al., 2018).

> "***Knowing I had coerced intercourse upon my wife when she was spotting, what else could be expected?***" (DeFrain et al., 1996, p335)

Whereas some found alternative, often faith-based explanations for pregnancy outcomes, such as divine providence or destiny (Armstrong, 2001; DeFrain et al., 1996; Hamama-Raz et al., 2010; Harris et al., 1991; Kilshaw et al., 2017; Puddifoot & Johnson, 1997; Wagner et al., 2018).

> "***He [God] had reasons for it. He also has reasons for this pregnancy. For me it's very much a spiritual thing. God has His hand in everything, and I feel He had His hand in that (loss) and this pregnancy. I'm more able to accept that. My spirituality helped me with my loss, with my grief.***" (Armstrong, 2001, p150)

Some men tried to rationalize and quell emotional discomfort by comparing their own circumstances to what they perceived as even less desirable outcomes of pregnancy (Armstrong, 2001; Ekelin et al., 2008; Hamama-Raz et al., 2010; Harris et al., 1991; Puddifoot & Johnson, 1997). Others found comfort in living children from previous or subsequent pregnancies (Abboud & Liamputtong, 2002; Armstrong, 2001) and still others tried to realize alternative sources of hope and meaning in their lives (DeFrain et al., 1996; Hamama-Raz et al., 2010; Murphy & Hunt, 1997).

> "***And then you reasoned, it felt like you thought it was better to lose the baby now than if you had gone even longer or even give birth to a baby***

> ***that was ill. Or have a badly handicapped child, irrespective of how it is, one wants a healthy child.***" (Ekelin et al., 2008, p451)
>
> "***Some good that can come of all this pain, if that's possible, is the freedom to do something together, and I'm talking about simple things. Like with any pain, it's important to give it space, to channel it toward building.***" (Hamama-Raz et al., 2010, p257)

Ambiguous Entitlement to Healthcare

All except two (Brady et al., 2008; Kilshaw et al., 2017) included studies broached the subject of professional support in the context of miscarriage (Abboud & Liamputtong, 2002, 2005; Armstrong, 2001; Bute & Brann, 2015; Conway & Russell, 2000; Cullen et al., 2017; Cullen et al., 2018; DeFrain et al., 1996; Edwards et al., 2018; Ekelin et al., 2008; Hamama-Raz et al., 2010; Harris et al., 1991; Hutti, 1988, 1992; Johnson & Puddifoot, 1996; Letherby, 1993; Meaney et al., 2017; Miron & Chapman, 1994; Murphy, 1998; Murphy & Hunt, 1997; Peters et al., 2007; Puddifoot & Johnson, 1997; Radwan Speraw, 1994; Sehdev et al., 1997; Wagner et al., 2018) but many perceptions of the assistance men received (or not) were entangled with perceptions of care afforded to their partners. They ranged widely between appreciation and criticism.

PERCEPTIONS OF CARE

The observations of participants in some studies indicated trust in clinical expertise, authority, and integrity (Abboud & Liamputtong, 2002, 2005; Armstrong, 2001; Cullen et al., 2017; Cullen et al., 2018; DeFrain et al., 1996; Ekelin et al., 2008; Hutti, 1992; Meaney et al., 2017; Miron & Chapman, 1994; Murphy, 1998; Peters et al., 2007; Puddifoot & Johnson, 1997; Radwan Speraw, 1994; Sehdev et al., 1997; Wagner et al., 2018). Some men appreciated instrumental interventions to alleviate the physical discomfort or pain of their partners (DeFrain et al., 1996;

Murphy, 1998; Puddifoot & Johnson, 1997). They also desired and valued reliable information to dispel uncertainties, such as diagnosis, reasons for the loss, and future prognosis (Abboud & Liamputtong, 2002, 2005; Armstrong, 2001; Conway & Russell, 2000; Cullen et al., 2018; Ekelin et al., 2008; Hutti, 1992; Miron & Chapman, 1994; Murphy & Hunt, 1997; Puddifoot & Johnson, 1997; Radwan Speraw, 1994; Sehdev et al., 1997).

> "***That doctor was very good and he told us the information and everything… It gave a little bit of closure to it.***" (Cullen et al., 2018, p314)

Others mentioned benefit from emotional support by healthcare practitioners, manifest in personal warmth, empathy for bereavement, and follow-up contact (Armstrong, 2001; Cullen et al., 2017; Ekelin et al., 2008; Hutti, 1992; Meaney et al., 2017; Miron & Chapman, 1994; Wagner et al., 2018).

> "***They [the healthcare practitioners] made me feel like I mattered.***"
> (Miron & Chapman, 1994, p67)

> "***It was dealt with such good sensitivity that it made us feel a lot more comfortable… with that care, that made a bad situation that bit more bearable...***" (Cullen et al., 2017, p113)

Positive experiences of professional care reportedly reduced discomfort and distress during and after miscarriage (Armstrong, 2001; Cullen et al., 2017; Cullen et al., 2018; DeFrain et al., 1996; Ekelin et al., 2008; Hutti, 1992; Miron & Chapman, 1994; Murphy, 1998; Puddifoot & Johnson, 1997; Wagner et al., 2018) but they were not shared by all, and many study participants and authors also reflected upon the limitations and shortcomings of clinical services (Abboud & Liamputtong, 2002, 2005; Conway & Russell, 2000; Cullen et al., 2017; Cullen et al., 2018; Edwards et al., 2018; Ekelin et al., 2008; Hutti, 1988, 1992; Johnson & Puddifoot, 1996; Miron &

Chapman, 1994; Murphy, 1998; Murphy & Hunt, 1997; Puddifoot & Johnson, 1997; Radwan Speraw, 1994; Sehdev et al., 1997; Wagner et al., 2018).

PERCEPTIONS OF NEGLECT

Prevalent among the synthesized data were perceptions of inadequate information to negotiate the unexpected and unfamiliar circumstances of miscarriage (Abboud & Liamputtong, 2002, 2005; Conway & Russell, 2000; Cullen et al., 2018; Edwards et al., 2018; Ekelin et al., 2008; Hutti, 1992; Miron & Chapman, 1994; Murphy & Hunt, 1997; Puddifoot & Johnson, 1997; Radwan Speraw, 1994; Sehdev et al., 1997). Many men described not knowing or understanding what was happening, or what would happen next, without professional guidance (Abboud & Liamputtong, 2002, 2005; Cullen et al., 2018; Edwards et al., 2018; Ekelin et al., 2008; Hutti, 1992; Miron & Chapman, 1994; Murphy & Hunt, 1997; Puddifoot & Johnson, 1997; Radwan Speraw, 1994; Sehdev et al., 1997). It was as if some healthcare practitioners had become unintentionally habituated (Johnson & Puddifoot, 1996; Murphy, 1998; Murphy & Hunt, 1997; Puddifoot & Johnson, 1997; Radwan Speraw, 1994; Sehdev et al., 1997) to consider miscarriage as "*a routine or trivial event*" (Sehdev et al., 1997) and therefore failed to realize or tackle any unmet requirements for explanatory or prognostic information (Abboud & Liamputtong, 2002, 2005; Conway & Russell, 2000; Cullen et al., 2018; Ekelin et al., 2008; Hutti, 1992; Miron & Chapman, 1994; Murphy & Hunt, 1997; Puddifoot & Johnson, 1997; Radwan Speraw, 1994; Sehdev et al., 1997).

> "***They [the healthcare practitioners] didn't explain everything what they were doing and what we can expect. It was all a surprise for us.***"
> (Abboud & Liamputtong, 2005, p13)

The data also demonstrated male perceptions of inappropriate or inadequate clinical premises and instrumental interventions to prevent or manage miscarriage (Abboud & Liamputtong, 2002,

2005; Cullen et al., 2018; Edwards et al., 2018; Hutti, 1988; Johnson & Puddifoot, 1996; Puddifoot & Johnson, 1997; Radwan Speraw, 1994) alongside inadequate emotional support to negotiate fear, frustration, and disappointment engendered by the loss (Cullen et al., 2017; Edwards et al., 2018; Hutti, 1988, 1992; Johnson & Puddifoot, 1996; Miron & Chapman, 1994; Murphy, 1998; Murphy & Hunt, 1997; Puddifoot & Johnson, 1997; Radwan Speraw, 1994; Sehdev et al., 1997; Wagner et al., 2018). Some men reported mechanistic and administrative interactions (Edwards et al., 2018; Johnson & Puddifoot, 1996; Miron & Chapman, 1994; Murphy, 1998; Murphy & Hunt, 1997; Radwan Speraw, 1994) that could seem "***cold and calculated***" (Murphy, 1998). Others remembered and resented clinical descriptions of the loss in technical terms that could seem to discredit parental attachment: these men preferred acknowledgment from healthcare practitioners that the pregnancy was a person worthy of respectful care and honor (Cullen et al., 2017; Johnson & Puddifoot, 1996; Murphy, 1998; Murphy & Hunt, 1997; Puddifoot & Johnson, 1997; Radwan Speraw, 1994; Wagner et al., 2018: see also **Perceptions of the Ended Pregnancy** above).

> "***You know, don't you, that they (the healthcare practitioners) refer to our dead baby as products? What a horrible way to describe a baby... Also, I wish they would not put the word abortion on our records, it has such a nasty connotation to it.***" (Puddifoot & Johnson, 1997, p843)

PERCEPTIONS OF DIFFERENTIAL ENTITLEMENT

Some men evidently considered that interactions with healthcare practitioners were jointly experienced by both partners: they described themselves as "***us***" rather than "***me***" (Abboud & Liamputtong, 2005; Armstrong, 2001; Bute & Brann, 2015; Cullen et al., 2017; Cullen et al., 2018; DeFrain et al., 1996; Ekelin et al., 2008; Harris et al., 1991; Miron & Chapman, 1994; Murphy, 1998; Peters et al., 2007; Radwan Speraw, 1994; Sehdev et al., 1997; Wagner et al.,

2018). Even among those who adopted singular pronouns, the safety and satisfaction of female partners appeared to be a strong influence in male perceptions of miscarriage support (Abboud & Liamputtong, 2002, 2005; Armstrong, 2001; Bute & Brann, 2015; Cullen et al., 2018; Johnson & Puddifoot, 1996; Miron & Chapman, 1994; Murphy, 1998; Murphy & Hunt, 1997; Puddifoot & Johnson, 1997; Radwan Speraw, 1994; Wagner et al., 2018: see also **Secondary Status in Comparison to the Female Partner** above). Yet alongside these joint or indirect interpretations of assistance or neglect from healthcare practitioners, study manuscripts also reported some behaviors directed towards men only (Cullen et al., 2018; Edwards et al., 2018; Johnson & Puddifoot, 1996; Miron & Chapman, 1994; Puddifoot & Johnson, 1997; Sehdev et al., 1997). Interactions in the clinical environment seemed to be influenced by wider social tendencies to marginalize male experiences in comparison to female experiences of pregnancy loss (see also **Biological Precedence of the Female Partner** and **Emotional Precedence of the Female Partner** above). Consequently men assumed identities as observers or even outsiders (Cullen et al., 2018; Edwards et al., 2018; Hutti, 1988; Johnson & Puddifoot, 1996; Miron & Chapman, 1994; Murphy, 1998; Murphy & Hunt, 1997; Puddifoot & Johnson, 1997; Radwan Speraw, 1994; Sehdev et al., 1997). A small number of men accepted and perpetuated such identities (Puddifoot & Johnson, 1997; Sehdev et al., 1997) but others reported regret and resentment of differential entitlement to support (Cullen et al., 2018; Edwards et al., 2018; Johnson & Puddifoot, 1996; Miron & Chapman, 1994; Murphy, 1998; Murphy & Hunt, 1997; Puddifoot & Johnson, 1997; Radwan Speraw, 1994; Sehdev et al., 1997).

> "***They [the healthcare practitioners] paid very little attention to me... I may as well not have been there. For some unknown reason, the father is forgotten. Whilst [wife] went through it all, emotionally you both go through it. Everybody forgets the husband is involved.***" (Sehdev et al., 1997, p170)

> *"The partners noted the only time they were addressed by the nursing staff was upon discharge where they felt pressured into being supportive and assuming a role that of being the man as they were informed their energies should be spent being supportive and caring for their partners.*" (Edwards et al., 2018, p6)

Although the data represented a range of responses to miscarriage care, some consistent features emerged among the preferences reported by research participants and study authors. Overall they favored detailed explanatory and prognostic information (Cullen et al., 2018; Ekelin et al., 2008; Miron & Chapman, 1994; Murphy & Hunt, 1997; Puddifoot & Johnson, 1997; Radwan Speraw, 1994; Sehdev et al., 1997) and compassionate emotional support (Abboud & Liamputtong, 2002; Armstrong, 2001; Cullen et al., 2017; Edwards et al., 2018; Ekelin et al., 2008; Harris et al., 1991; Hutti, 1988, 1992; Johnson & Puddifoot, 1996; Letherby, 1993; Meaney et al., 2017; Miron & Chapman, 1994; Murphy, 1998; Murphy & Hunt, 1997; Puddifoot & Johnson, 1997; Radwan Speraw, 1994; Sehdev et al., 1997; Wagner et al., 2018).

Discussion

The evidence eligible for inclusion in our synthesis indicated that male experiences of miscarriage were influenced by the socially constructed identities men adopted and performed in relation to others. Many men cast themselves or were cast by others into secondary roles in the context of pregnancy loss. But the experiences were also characterized by individuality rather than conformity to any standard narrative. Male experiences were subject to differences between individuals, influenced by different expectations of parental identities, and assumed or enforced gender roles. These identities were negotiated through interactions with family, friends, and healthcare practitioners. They contributed to emotions and uncertainties, yet also prevented some

men from articulating their thoughts and feelings about the loss, or requesting and obtaining support.

Parental identities and gender roles were negotiated amid social norms of smooth transition to parenthood, and masculinity characterized by emotional detachment, silence, and rationality. Men simultaneously sought to preserve pre-miscarriage identities and to assimilate miscarriage into a new sense of themselves. Some had not begun to consider themselves in the role of a parent at the time of the loss: they were able to maintain emotional equilibrium. Others considered the loss in biological terms: they were able to deflect emotional discomfort. Others directed attention and energy towards female partners, subsequent pregnancies, living children, and alternative sources of meaning in their lives, to overcome any feelings of disappointment, abnormality, or social exclusion. Yet others acknowledged intense and protracted grief in the loss of hopes and dreams for themselves and the ended pregnancy: they rejected social expectations for men to be unaffected by miscarriage.

The differences construed between individual identities, expectations, and experiences of miscarriage were influenced by interactions with others, such as healthcare practitioners. These interactions were suffused with imbalances of power that could marginalize men in the context of miscarriage. Many studies suggested that some healthcare practitioners recognized only women as the rightful recipients of miscarriage support, and by default identified men as observers or even outsiders. The code of conduct embedded within a clinical environment is underpinned by social expectations for healthcare practitioners to offer competent, ethical, and accountable healing services to registered patients (Bhugra, 2014). Without any biological claim to patient status, some men reported that male support requirements were unrecognized and unmet, or satisfied only through the inclinations of female partners to share information and emotional support resources. Although not all men described feeling neglected or denied support, undoubtedly marginalization intensified emotional distress for many in the aftermath of

miscarriage. This finding validates our recommendation that healthcare practitioners recognize, acknowledge, or otherwise respond to the requirements of both women **and** men for information and emotional support.

Strengths, Limitations and Relevance to Previous Literature

This study builds upon and lends perspective to previous literature. To our knowledge it is the first systematic examination and qualitative synthesis of miscarriage experiences among men in high-income countries. It is strengthened by a rigorous, comprehensive search for relevant evidence, with an auditable pathway between primary texts and secondary interpretations. From the outset the reviewers determined to take advantage of complementary clinical (Arri Coomarasamy), methodological (Laura Jones and Annie Topping) and administrative (Helen Williams) expertise among themselves, and met frequently throughout the lifetime of the project to discuss threads of situation and subjectivity in data synthesis. The study results are thus informed by reflexive insights from team members with a broad understanding of theoretical issues, alongside those with field-based contextual understanding and professional commitment to supply and support miscarriage care.

Our synthesis of the experiences of men living through miscarriage represents only evidence collected in studies with qualitative methods in high-income countries, and reported in English with sufficient detail to isolate findings of relevance. Thus we recognise possibilities for cultural bias or omissions in our interpretations, arguably not directly transferable to different settings and samples.

Implications for Practice and Further Research

Miscarriage is a common complication of pregnancy, and brings considerable disruption to the lives and relationships of many. Yet perhaps not surprisingly there is no single, universal experience of loss. Therefore it may be helpful for healthcare practitioners to observe and listen to

men in addition to women in the context of miscarriage, to be ready to offer information and empathy to those affected by the loss, yet simultaneously to recognize that support may be unnecessary to others, and to remember that social expectations may influence responses.

Different expectations, perceptions and support requirements present a challenge to those offering help, especially amidst growth in public expectations of person-centered care (All-Party Parliamentary Group on Baby Loss, 2016; NHS England, 2017; The Health Foundation, 2014; Whiteman, 2013). There is evidence to suggest that miscarriage management in a range of primary and secondary healthcare settings (Edey, Draycott, & Akanda, 2007; National Institute for Health and Care Excellence, 2012, 2014; NHS Choices, 2015) may be hampered by lack of professional time, space, and structured protocols to guide emotional support (Bolton, 2000; R. Evans, 2012; Gergett & Gillen, 2014; Gold, 2007; Jonas-Simpson & McMahon, 2005; Jonas-Simpson, Pilkington, MacDonald, & McMahon, 2013; McCreight, 2005; Radford & Hughes, 2015; Wallbank & Robertson, 2008, 2013). It is further plausible that occupational habituation to miscarriage may inadvertently inhibit empathy with those to whom it is unexpected and unfamiliar (Gergett & Gillen, 2014; Jonas-Simpson & McMahon, 2005; Wallbank & Robertson, 2008).

Our findings suggest that many men who are affected by miscarriage could benefit from more information about it, to assist comprehension of any identifiable reasons, and to understand clinical investigations and interventions. Some could benefit from more emotional support, to enable them to recognize and address difficult feelings, and to build hope for the future with or without children. Such requirements may persist beyond the immediate aftermath of loss, but capacity for routine follow up is inevitably limited (Brier, 1999; Forster et al., 2016; Geller, Psaros, & Kornfield, 2010; Lee & Slade, 1996; Murphy, Lipp, & Powles, 2012; Prettyman & Cordle, 1992; Stratton & Lloyd, 2008; van den Akker, 2011).

We aimed to achieve a comprehensive review of miscarriage experiences among men in high-income countries. Consequently the relevance of our synthesis to policy and practice in this context is broad. Yet such is the richness of human experience that every personal story is unique. For example, different reproductive histories (such as recurrent miscarriage or miscarriage after fertility treatment) and different sociocultural conditions engender different expectations and experiences of the world. More research is necessary to illuminate the diversity in detail: and to explore perceptions among different samples in different settings such as low and middle income countries. It could also be helpful for future reports of primary studies to offer explicit demographic descriptions of individual participants, to deepen contextual understanding of the data presented.

Conclusions

Social norms appear to perpetuate expectations for male partners to be unaffected by miscarriage. Yet emotions and uncertainties among men who experience miscarriage may be intensified by marginalization. Our qualitative synthesis reveals tensions between thoughts, feelings and identities assimilated by men during and after miscarriage. It demonstrates that some men are deeply affected by the absence of parental status they previously expected: manifest in grief, frustration and searches for explanation or purpose. Overwhelmingly this study bolsters recommendations for men living through miscarriage to be acknowledged and validated by healthcare practitioners.

Declaration of Conflicting Interests

The authors declare that there are no conflicts of interest.

Funding

This study was financially supported by Tommy's National Centre for Miscarriage Research. The funders took no role in study design, data collection and analysis, decision to publish, or preparation of the manuscript.

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