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Comparing psychological impacts on male partners after experiencing various types of early pregnancy loss: A systematic literature review

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Abstract

Introduction: Early pregnancy loss is still arguably considered primarily a "women's issue"; unfortunately, no acknowledgment of the male partners' involvement. We aim to explore various psychological impacts on male partners after experiencing different types of early pregnancy loss to invite medical practitioners to recognise male partners in the early pregnancy loss process.

Methodology: The OVID MEDLINE® database was searched from 1946 until August Week 2 of 2020. The Embase database was searched from 1974 until Week 34 of 2020. 2458 papers (1236 from OVID MEDLINE® without Revisions; 1222 from Embase) were retrieved, and forty-two (42) papers were accepted. Due to inadequate coverage from both databases on molar and ectopic pregnancies, six (6) from Google Scholar were added, and 48 articles were finalised for further review. Articles were summarised, reviewed qualitatively and themes extracted.

Results: Male partners express diverse feelings in different types of early pregnancy loss, such as grief, sadness, depression, anguish, and devastation. However, relief was experienced in some conditions. Different feelings are experienced in specific types of loss.

Conclusion: Male partner' emotional responses are often overlooked. Their psychological well-being needs acknowledgment and including them in the process of managing early pregnancy loss.

Keywords: Male partners emotional responses, variable types of early pregnancy loss

Synopsis: Study shows various psychological impacts on male partner after different types of early pregnancy loss, often overlooked, needs to be acknowledged and included in management. Word count 2200.

1. Introduction

The National Health Service Pregnancy Loss Guidelines (2018) [15] defined early pregnancy loss is defined as less than 24 weeks gestation by the and falls into four types, namely i) miscarriage, ii) abortion, iii) ectopic and molar pregnancies. Early pregnancy loss is not rare as it accounts for one in four women who had been pregnant up to 39 years of age (Avalos *et al*, 2012) [4].

Over the years, from the 1960s until the recent publications in 2020, research that relies on fathers' perspectives during a pregnancy loss has evolved. The emotional struggles faced by a male partner most commonly include feelings of grief and depression. The two terms are theoretically apart from one another, where grief is mainly associated with facing a loss of an object or person through yearning and reviving memories, but grief changes over time, whereas depression, is a concept that involves emotions in hopes of denying or not wanting to confront a loss through portrayals of emotions such as irritability, discouragement, irritation, or guilt (Beutel *et al.*, 1996) [6]. Additionally, most men express a wide range of emotions, including anger, grief, confusion, blame, anger and disgust, similar feelings reported by other articles. Some men facing both the loss of the child and grief of their partner have no way of expressing these feelings, which places entirely new and undiscovered pressure on themselves (Puddifoot & Johnson, 1997) [44]. Therefore, this study explores varieties of psychological impacts on male partners to different types of early pregnancy loss to create awareness among medical practitioners on the psychological effects of early pregnancy loss on male partners by comparing how these males react to various types of early pregnancy loss and include them in the management of post early pregnancy loss. The review examines the body of literature related to pregnancy loss and male partners to answer the following questions.

How do different types of early pregnancy loss impact male partners psychologically?

2. Materials and Method

Patient, intervention, comparison, outcome (PICO) strategy was used to build the study's overall approach. According to Eriksen and Fransen (2018) ^[12], PICO is preferred in clinical-based

studies as it allows the researcher to i) focus on the issue or results that the patient believes in; ii) use a computerised search using selected keywords; and iii) identify problems, intervention and outcomes related to the patients' current treatment. In this study's scope, PICO is summarised in the following table (see Table 1).

Table 1: PICO Strategy

PICO	Representation
Population	Male partners experiencing early pregnancy loss
Intervention	Compare male partners' reactions to various types of early pregnancy loss.
Content	Psychological impacts of various types of early pregnancy loss on male partners.
Outcome	Sending an invitation to medical practitioners to recognise male partners in the early pregnancy loss process.

The analysis was conducted from 15 June 2020 to 15 December 2020 through systematic review for peer review literature published in Ovid MEDLINE® without Revisions and Embase database. The Medline database searched for articles from 1946 to the present, and EmBase database searched for relevant literature published from 1974 to the second week of August 2020.

2.1 Inclusion and Exclusion Criteria

The study's inclusion and exclusion criteria specified the sample population, effect content, and claimed outcomes (see Table 2). The study's method also addressed the potential sources of bias by not exploring all databases or global health systems. Articles searched and included in the review are in English or translated to English. The grey database was not searched due to an overwhelming number of articles found.

Table 2: Inclusion and Exclusion Criteria

Inclusion	Exclusion
Male partners	Same-gender partners
Miscarriage	Pregnancy loss after 24 weeks
Ectopic pregnancy	Partners' death
Molar pregnancy	Pregnancy loss associated complications
Abortion	Staff behaviour towards the couple
Pregnancy loss before 24 weeks	Social impact
Persistent trophoblastic disease	Pregnancy loss due to accidents
Acute Psychological impact	
Chronic Psychological impact	
Papers written in English	
Papers translated to English	

2.2 Review Protocol

The following keywords were used to search for articles.

(Male partner.mp. OR fathers/ or spouses/ OR life partner*.mp. OR boyfriend*.mp. OR husband*.mp. OR dad*.mp. OR companion*.mp.) AND (abortion, spontaneous/ or exp abortion, habitual/ or abortion, incomplete/ or abortion, missed/ or abortion, septic/ or embryo loss/) OR (early pregnancy loss.mp) OR (exp Pregnancy, Ectopic/) OR (failed pregnancy.mp.) OR (exp Abortion, Induced/) OR (unsuccessful pregnancy.mp.) OR (exp Hydatidiform mole/) OR (molar pregnancy.mp.) OR (hydatid mole.mp.) OR (Gestational Trophoblastic Disease/)] NOT (exp Animals/ NOT exp Humans/).

The term 'psychological impact' was not part of the search criteria as the inclusion of the said term has greatly reduced the number of papers searched, which may lead to many papers being missed out. Furthermore, the male partners' responses are vastly diverse (e.g., anxiety, depression, etc.), and it is impossible to predict their reactions. The psychological impact was detected upon reviewing all papers collected, and relevant articles were included. Articles included from the database are red (abstracts or full article) to select those within the inclusion criteria. Full articles were collected for the article, which was not accessible. For these articles, the authors were emailed, and some responded by sending full articles; however, several authors responded by sending abstracts of their publications.

2.3 Results and Findings

A total of 2458 papers (Medline: 1236; Embase: 1222) were

retrieved and assessed but based on inclusion criteria, only forty-two (42) papers (thirty (30) on miscarriages, eleven (11) on abortion, and one (1) on molar pregnancy) were accepted. 697 papers were removed as duplicates, and 1698 papers were filtered out due to their irrelevance to the current review. Eight (8) papers were rejected as they were not empirical studies. Twelve (12) papers, despite their possible suitability to the research, were not included due to accessibility issues, and (one) 1 paper was not considered as it was not written in English. We observed that some areas were not covered adequately (abortion, molar pregnancy, and ectopic pregnancy). A search on Google Scholar led to the inclusion of six (6) papers, three (3) were on abortion, one (1) on molar and two (2) papers were on ectopic pregnancy. In total, there are 48 (42 + 6) papers included in our systematic review (Table 3). Other team members repeated the same search method separately to assure reliability and reproducibility.

Table 3: Searched Databases and number of papers found

Databases searched	Number of articles found
Medline	1236 papers
Embase	1222 papers
Google Scholar	6 papers

The following diagram (Figure 1) shows how the selected articles were reviewed and filtered based on the pre-determined inclusion and exclusion criteria.

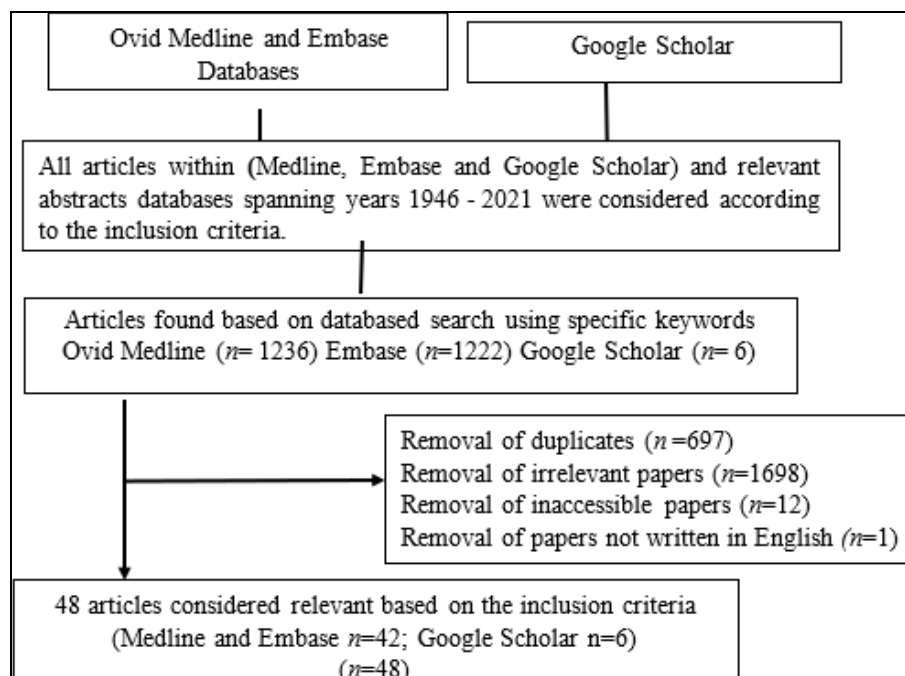


Fig 1: Steps identifying articles for the systematic literature review

2.4 assessment of bias across studies

A diagram is plotted to assess the risk of bias, including reporting, evidence selection, risk of bias in the primary study, detection, performance, attrition, and outcome reporting bias; all showed no bias detection in all articles used (appendix).

The papers included for the review are summarised in the following table (See Table 4).

i. Miscarriage

Table 4: Summary of Selected Literature

	Author	Database	Research Design	Population/ Sampling	Data Collection Method	Country
1	Puddifoot and Johnson (1999) [43]	EmBase	Qualitative	323 male partners of women who suffered from a miscarriage	Perinatal Grief Scale (PGS)	United Kingdom
2	Obst and Due (2019)	EmBase Ovid Medline (R) without Revisions	Qualitative	Eight (8) men who have experienced support after experiencing pregnancy loss	Clinical Interviews	Australia
3	Conway and Russell (2000) [7]	EmBase Ovid Medline (R) without Revisions	Qualitative	Thirty-nine (39) women and thirty-two (32) partners	Perinatal Grief Scale (PGS)	Australia
4	Daly <i>et al.</i> (1996) [8]	EmBase	Qualitative	Twenty-five (25) partners of women who experienced a spontaneous miscarriage in the previous six (6) weeks	Structured Interview	Ireland
5	Kong <i>et al.</i> (2010) [28]	EmBase Ovid Medline (R) without Revisions	Quantitative	Eighty-three (83) couple who had experienced miscarriage	Questionnaire 12-item General Health Questionnaire (GHQ-12) and Beck Depression Inventory (BDI)	Hong Kong
6	Tseng <i>et al.</i> (2017) [50]	EmBase	Quantitative	Thirty (30) couples whose babies were either miscarried or stillborn.	Questionnaire	Taiwan
7	Rinehart and Kiselica (2010) [46]	EmBase	Review Paper			United States of America
8	Volgsten <i>et al.</i> (2018) [51]	EmBase Ovid Medline (R) without Revisions	Quantitative	103 women who suffered a miscarriage and seventy-eight (78) male partners were selected	Multi-step questionnaire	Sweden
9	Horstman <i>et al.</i> (2020) [18]	EmBase	Qualitative	Forty-five (45) cis-gender men between the ages of 26–55 years old	Structured Interview	United States of America
10	Hutti (1992) [19]	EmBase	Qualitative	Six (6) married couples who experienced a miscarriage 12–18 months before data collection	Open-ended interviews	United States of America
11	Abboud and Liamputtong (2005) [11]	EmBase Ovid Medline (R) without Revisions	Qualitative	Six (6) women who miscarried and their partners	Multi-step questionnaire Structured Interview	Australia

12	Franche (2001) [13]	EmBase Ovid Medline (R) without Revisions	Quantitative	Sixty (60) pregnant women with a history of miscarriages or perinatal deaths, and 50 of their partners.	Questionnaires	Canada
13	Koert <i>et al.</i> (2019) [27]	EmBase Ovid Medline (R) without Revisions	Qualitative	Thirteen (13) couples with a history of three (3) pregnancy losses before twelve (12) weeks gestation	Interviews	Denmark
14	Swanson <i>et al.</i> (2009) [49]	EmBase	Quantitative	341 couples with pregnancy loss history	Clinical trials	United States of America
15	Miller <i>et al.</i> (2019)	EmBase	Qualitative	Ten (10) Australian men, whose partners miscarried between three (3) months and (ten) 10 years ago	Interviews Thematic Analysis	Australia
16	Beutel <i>et al.</i> , (1996) [6]	EmBase Ovid Medline (R) without Revisions	Quantitative	Fifty-six (56) couples with a history of miscarriage	Questionnaire	Germany
17	Miron and Chapman (1994) [34]	EmBase Ovid Medline (R) without Revisions	Qualitative	Eight (8) men whose partners had experienced miscarriages	Structured interviews	Canada
18	Murphy and Hunt (1997) [35]	EmBase Ovid Medline (R) without Revisions	Qualitative	Five (5) male partners of women with a history of miscarriage	Structured interviews	United Kingdom
19	Johnson and Puddifoot (1996) [23]	EmBase Ovid Medline (R) without Revisions	Mixed method	Male partners of 126 women with a history of miscarriage	Perinatal Grief Scale (PGS) Interviews	United Kingdom
20	Puddifoot and Johnson (1997) [44]	EmBase Ovid Medline (R) without Revisions	Qualitative	Twenty (20) partners of women with a history of miscarriage	Interviews	United Kingdom
21	Jansson <i>et al.</i> (2017) [20]	EmBase Ovid Medline (R) without Revisions	Quantitative	140 couples	Revised Impact of Miscarriage Scale (RIMS)	Sweden
22	Williams <i>et al.</i> (2020) [52]	EmBase	Qualitative	Twenty-seven (27) studies on men and miscarriages	Systematic Literature Review	United Kingdom
23	Nguyen <i>et al.</i> (2019) [40]	EmBase	Qualitative	Fifteen (15) articles focusing on men and their experience with miscarriages	Systematic Literature Review	Australia
24	Miller <i>et al.</i> (2018) [32, 33]	EmBase	Qualitative	Ten (10) Australian men, whose partners miscarried between three (3) months and ten (10) years ago	Semi-structured interviews	Australia
25	Horstman and Holman (2018) [17]	EmBase	Quantitative	183 couples with a history of miscarriage	Questionnaires	United States of America
26	Meaney <i>et al.</i> (2017) [31]	EmBase Ovid Medline (R) without Revisions	Qualitative	Purposive sampling of ten (10) women and six (6) men	Semi-structured interviews Thematic analysis	Ireland
27	Abboud and Liamputtong, (2003) [2]	EmBase	Qualitative	Six (6) women with miscarriage history and their partners	In-depth interview	Australia
28	Johnson and Puddifoot (1998)	EmBase	Quantitative	158 male partners of women who miscarried before the start of the 25th week of pregnancy	Questionnaires	United Kingdom
29	Aoki <i>et al.</i> (1998) [3]	EmBase	Qualitative	29 couples with a history of two consecutive first-trimester miscarriages and no live births	Semi-structured interview	Japan

ii. Abortion

	Author	Database	Research	Population/Sampling	Data Collection Method	Country
1	Becker <i>et al.</i> (2006)	EmBase Ovid Medline (R) without Revisions	Qualitative	774 patients visiting the clinic	Questionnaire	United States of America
2	Kero <i>et al.</i> , (2010) [26]	EmBase Ovid Medline (R) without Revisions	Qualitative	Twenty-three (23) couples whose male partners were present during the home abortion process	Interview	Sweden

3	Lieh-Mak <i>et al.</i> (1979)	EmBase Ovid Medline (R) without Revisions	Quantitative	130 husbands of women undergoing abortion process at the government hospitals	Questionnaire	Hong Kong
4	Johansson <i>et al.</i> (1998) ^[22]	EmBase Ovid Medline (R) without Revisions	Qualitative	Husbands of twenty (20) women who had undergone an abortion at the clinic	Interview	Vietnam
5	Naziri (2007) ^[38]	EmBase Ovid Medline (R) without Revisions	Qualitative	Sixteen (16) men from Belgium and fourteen (14) men from Greece	In-depth semi-structured interviews	Belgium
6	Leichtentritt and Weinberg-Kurnik (2016) ^[29]	EmBase Ovid Medline (R) without Revisions	Qualitative	Seventeen (17) men who experienced feticide	In-depth semi-structured interviews	Israel
7	Duwadi and Shrestha (2007) ^[11]	EmBase Ovid Medline (R) without Revisions	Review paper			Nepal
8	Nguyen <i>et al.</i> (2018) ^[39]	EmBase Ovid Medline (R) without Revisions	Mixed method	Twenty-nine (29) men for interview 210 men completed the survey	In-depth interview Survey	United States of America
9	Sun <i>et al.</i> (2018) ^[48]	EmBase Ovid Medline (R) without Revisions	Qualitative	Twenty (20) fathers whose partners had undergone a medical abortion	In-depth interviews	Taiwan
10	Kero <i>et al.</i> (1999) ^[25]	EmBase Ovid Medline (R) without Revisions	Qualitative	Seventy-five (75) men who were part of legal abortion processes	In-depth interviews	Sweden
11	Hirz <i>et al.</i> (2017) ^[16]	EmBase Ovid Medline (R) without Revisions	Qualitative	Fifteen (15) men living in urban areas in the Philippines	In-depth interviews Focus group interviews	Philippines
12	Kelly and Gochanour (2019) ^[24]	Google Scholar	Qualitative	Systematic Literature Review		United States of America
13	Summers <i>et al.</i> (2019)	Google Scholar	Qualitative	Systematic Literature Review		United States of America
14	Nagy and Rigó (2019) ^[36]	Google Scholar	Review Paper			Hungary

iii. Molar Pregnancy

	Author	Database	Research	Population/Sampling	Data Collection Method	Country
1	Quinlivan <i>et al.</i> (2012) ^[45]	EmBase Ovid Medline (R) without Revisions	Quantitative	Sixty-six (66) male partners of women who experienced a molar pregnancy	Questionnaire/ Survey Focus group	Australia
2	Garner <i>et al.</i> (2003) ^[14]	Google Scholar	Qualitative	Systematic Literature Review		United States of America

iv. Ectopic Pregnancy

	Author	Database	Research	Population/Sampling	Data Collection Method	Country
1	Due <i>et al.</i> (2017) ^[9]	EmBase Ovid Medline (R) without Revisions	Qualitative	Twenty-nine (29) studies investigating the impact of pregnancy loss on men	Systematic Literature Review	Australia
2	Dunn <i>et al.</i> (1991) ^[10]	Google Scholar	Quantitative	138 females and fifty-six (56) males (spouses/partners)	Questionnaire	United States of America
3	Sperry and Sperry (2004) ^[47]	Google Scholar	Review Paper			United States of America

3.0 Summary of Evidence

Male partners show diverse emotions on different types of early pregnancy loss; generally, all types of the loss share grief, sadness, depression, anguish, and devastation. Fear and anxiety were experienced in miscarriage, abortions and was specifically towards possible inability to get normal pregnancy after molar pregnancy. Loss of family's hope and dreams to have a child and loss of father's identity was shared in miscarriage and abortions, wherein both partners felt helpless, angry, and lonely, both were

relieved after the incident due to "Cessation of symptoms", or it passed off well or best choice for the relationship/family economy. Self or partner blame was experienced in both ectopic and molar pregnancies. Morally distressed with a 'sinful' act, guilt for neglecting contraception and inability to control the outcome of the pregnancy was noticed with abortions, while stress leads to less sexual desire after molar pregnancy was noted.

Table 5: Comparison of Emotional Impact experienced by male partners based on different types of early pregnancy loss

Types of Emotions Experienced by Male partners based on themes	Types of Pregnancy Loss			
	Miscarriage	Abortion	Molar Pregnancy	Ectopic Pregnancy
Negative emotions: What I feel	<ul style="list-style-type: none"> • Grief, anxiety, anger • Loss of potential/identity as a father • Loss of family's hope and dreams • Helpless from preventing it from happening • Sadness on partner's behalf • Others: anguish, devastation, loss, frustration etc. 	<ul style="list-style-type: none"> • Loss of child and the potential opportunity of becoming a father • Could not control the outcome of the pregnancy • Fear partner may become distressed • Morally distressed with a 'sinful' act • Guilt for neglecting contraception • Grief, anger, helplessness, fear, guilt • Unable to express grief related to the decision to terminate the pregnancy 	<ul style="list-style-type: none"> • Worries about possible inability to get normal pregnancy • Feels responsible and blames self (or partner) • Stress leads to low sexual desire • Fear, anxiety, depression etc. • Expected to be strong emotionally despite experiencing similar grief 	<ul style="list-style-type: none"> • Does not grieve immediately after the loss, thus reacts with anger and loneliness • Blames the partner/ mother, e.g., age, getting pregnant too soon after a previous loss • Self-blame • Grieve in silence and the state of denial
Positive Emotions	<ul style="list-style-type: none"> • Cessation of symptoms 	<ul style="list-style-type: none"> • Relieved that the procedure went well • Felt that the procedure was necessary for the family's well-being and finances 		

4.0 Discussion

4.1 Miscarriage

Daly *et al.* (1996)^[8] and Jansson *et al.* (2017)^[20] posited that fathers did not seem to possess any psychological characteristics such as depression and anxiety following their partner's miscarriage and experienced less devastation than their female partners. On the other hand, Conway and Russel (2000)^[7] found out that there is a contrast in terms of results of previous research which stated that male partners scored relatively higher than their female partners in the PGS (Perinatal Grief Scale). Abboud & Liamputtong (2003)^[2] believed that the scores were due to men's tendency to forget about the experience much faster than their women partners and are more future-oriented. Their views are echoed by Volgsten *et al.* (2018)^[51], who reported that, unlike women, male partners feel grief and depressed after miscarriage as men, although experiencing high emotional dilemmas when facing a miscarriage, are not provided with suitable channels and support programs to help them manage and express their grief Miller *et al.* (2018)^[32, 33]. Huffman and Swanson (2015)^[49] also confirmed that men experience guilt and isolation, and these emotions are inclined to intensify with their history of depression, anxiety, and grief.

Murphy and Hunt (1997)^[35] argued that men who experienced early miscarriage felt a sense of sadness, devastation, powerlessness, fear, shock, and even loss of identity and confusion in handling the situation. They are not exempted from being affected by grief and frustration though they are expected to be emotionally unaffected by social norms William *et al.* (2020)^[52]. Similarly, Miron and Chapman (1994)^[34] concluded that they felt emotions such as anger, sadness, disappointment, loss, and disconnection with their partners but decided to keep aside their emotional dilemmas to support their female partners. Koert *et al.* (2019)^[27] corroborated these findings after examining the impact of recurrent pregnancy loss on male partners. The result implied that men felt a sense of pressure to stay positive and support their wives despite their feelings of loss and grief.

Some factors affect male partners' emotions, such as the duration of the pregnancy and seeing visuals of a foetus before the loss may have an adverse impact on their psychological stability (Hutti, 1992^[19]; Daly *et al.* 1996^[8]; Johnson &

Puddifoot, 1996^[23]; Johnson & Puddifoot, 1998^[22]; Puddifoot & Johnson, 1999)^[43]. Obst & Due (2019) suggested that grief experienced by men is highly individualised and not entirely related to the gestation age of the foetus, as suggested by several researchers. Other factors such as a dissatisfactory marriage, less support provided by the partner's parents have triggered adverse psychological impacts on both men and women post experiencing a pregnancy loss (Kong *et al.*, 2010; Tseng *et al.*, 2017)^[28, 50]. In another research, it was argued that men's emotional states were affected by four factors, including individual factors (attachment to the baby), interpersonal factors (relationship quality with a partner), community/socio-cultural factors (disenfranchisement of grief) and fourthly public policies (maternity and support services) (Obst *et al.*, 2020)^[42].

Other influences on the male partners' psychological health are the frequency of pregnancy loss. Aoki *et al.* (1998)^[3] stated that a second miscarriage has even more severe impacts on both partners and may last longer, and Swanson *et al.* (2009)^[49] further added that lack of knowledge in terms of contraceptive methods among couples is seen as a major factor in emotional and adverse psychological effects because of pregnancy loss.

4.2 Abortion

After experiencing loss through abortion, emotional struggles were divided into four categories: no explanations, blaming the mother, physical problems, and fate compared to their physician's explanations, which were heavily inclusive of medical justifications^[49]. Other studies by Puddifoot and Johnson (1999)^[43] indicated that male partners display less immediate active grief but show signs of vulnerability through feelings of despair and difficulties coping with such a loss. Along the same vine, Franche (2001)^[13] found out men experienced active grief, depression, feelings of despair, complicated marriage paired with self-criticism. Another factor affecting the male partners' emotions in abortions is their lack of involvement in the decision-making process. According to Becker *et al.* (2006), women are hardly accompanied by their male partners when undergoing abortions, particularly in the United States. Men face similar emotions as women, such as anger, shame, sadness, and guilt after experiencing an induced abortion (Nagy & Rigó, 2019)^[36].

4.3 Ectopic pregnancy

There is a contrast in the limited results retrieved by researchers through the years, male partners do experience grieving emotions such as depression but are less likely to react as vibrantly as women do, but they do feel emotions such as anger as a layout of their emotional frustrations post a pregnancy loss especially an ectopic pregnancy (Beutel *et al.* 1996)^[6].

4.4 Molar pregnancy

Garner *et al.* (2003)^[14] pointed out that men are likely to feel more anxious than depressed once faced with a molar pregnancy. The anxiety resulted from frustration faced by the male partner over the loss of control over their fertility. Similarly, Due *et al.* (2017)^[9] suggested that men felt fear and anxiety because of a molar pregnancy, and these emotional symptoms may prevail for years among the male partners after the occurrence of molar pregnancy.

5. Conclusion

There are shared impacts in all types of early pregnancy loss; however, each type has specific variations. The review highlighted the emotional turmoil of male partners when experiencing pregnancy loss, such as miscarriages and abortions. However, due to the limited number of studies addressing the impact of molar and ectopic pregnancies on male partners, little is known on how these losses affected them psychologically. Overall, the reviewed literature suggests that the male partners'

post-pregnancy loss psychological well-being is often overlooked as they are perceived as supporters. The misconception has caused a vague understanding and ignorance relating to how men react emotionally to such losses. The above literature review highlights that men are equally psychologically involved when experiencing pregnancy loss. Therefore, male partners going through a pregnancy loss must be provided with the necessary psychological support.

6. Limitations

Publications selected was either written or translated into English. As the search involved only two databases, other articles relevant to the topic might have been omitted. Moreover, grey data and other studies published during the time of review were also excluded.

Conflict of interest

All authors declare no conflict of interest and agree for publication.

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Ethical approval

Ref: 2455/2020 from 'Research, Policy, Intelligence and Ethics Team, Newcastle University Research Office'.

Appendix:
Assessment of bias risk:

No	Article	Reporting Bias	Evidence Selection Bias	Risk Of Bias In Primary Studies	Detection bias	Performance bias	Attrition bias	outcome reporting bias
	Puddifoot, J. E., & Johnson, M. P. (1999). Active grief, despair, and difficulty coping: Some measured characteristics of male response following their partner's miscarriage. <i>Journal of Reproductive and Infant Psychology</i> , 17(1), 89–93. https://doi.org/10.1080/02646839908404587	-	-	-	-	-	-	-
	Obst, K. L., & Due, C. (2019). Australian men's experiences of support following pregnancy loss: A qualitative study. <i>Midwifery</i> , 70, 1–6. https://doi.org/10.1016/j.midw.2018.11.013	-	-	-	-	-	-	-
	Conway and Russel (2000). Couples' Grief and experience of support in the aftermath of miscarriage. <i>British Journal of Medical Psychology</i> , Vol 73, Pg 531-545	-	-	-	-	-	-	-
	Daly, S. F., Harte, L., O'Beirne, E., McGee, H., & Turner, M. J. (1996). Does miscarriage affect the father? <i>Journal of Obstetrics and Gynaecology</i> , 16(4), 260–261. https://doi.org/10.3109/01443619609020727	-	-	-	-	-	-	-
	Kong, G. W. S., Chung, T. K. H., Lai, B. P. Y., & Lok, I. H. (2010). Gender comparison of psychological reaction after miscarriage - A 1-year longitudinal study. <i>BJOG: An International Journal of Obstetrics and Gynaecology</i> , 117(10), 1211–1219. https://doi.org/10.1111/j.1471-0528.2010.02653.x	-	-	-	-	-	-	-
	Volgsten, H., Jansson, C., Svanberg, A. S., Darj, E., & Stavreus-Evers, A. (2018). Longitudinal study of emotional experiences, grief and depressive symptoms in women and men after miscarriage. <i>Midwifery</i> , 64(May), 23–28. https://doi.org/10.1016/j.midw.2018.05.003	-	-	-	-	-	-	-
	Miron J, Chapman S J,(N/A),Supporting:Men's experiences with the Event of their partners' Miscarriage. <i>Canadian Journal of Nursing Research</i> , Vol 26, No 2	-	-	-	-	-	-	-
	Murphy F A, (1998).The experience of early miscarriage from male perspective. <i>Journal of Clinical Nursing</i> , Vol 7, Pg 3-5,332	-	-	-	-	-	-	-
	Jansson C,Volgsten H,Huffman C,Skoong S A,Swanson K M,Stavreus-Evers A.(2017).Validation Of The Revised Impact Of Miscarriage Scale For Swedish Conditions And Comparison Between Swedish And American Couples'	-	-	-	-	-	-	-
	Tseng, Y. F., Cheng, H. R., Chen, Y. P., Yang, S. F., & Cheng, P. T. (2017). Grief reactions of couples to perinatal loss: A one-year prospective follow-up. <i>Journal of Clinical Nursing</i> , 26(23–24), 5133–5142. https://doi.org/10.1111/jocn.14059	-	-	-	-	-	-	-
	Rinehart, M. S., & Kiselica, M. S. (2010). Helping men with the trauma of miscarriage. <i>Psychotherapy</i> , 47(3), 288–295. https://doi.org/10.1037/a0021160	-	-	-	-	-	-	-
	Horstman, H. K., Holman, A., & McBride, M. C. (2020). Men's Use of Metaphors to Make Sense of Their Spouse's Miscarriage: Expanding the Communicated Sense-Making Model. <i>Health Communication</i> , 35(5), 538–547. https://doi.org/10.1080/10410236.2019.1570430	-	-	-	-	-	-	-
	Hutti, M. H. (1992). Parents' perceptions of the miscarriage experience. <i>Death Studies</i> , 16(5), 401–415. https://doi.org/10.1080/07481189208252588	-	-	-	-	-	-	-
	Abhoud, L. N., & Liamputtong, P. (2003). Pregnancy loss: What it means to women who miscarry and their partners. <i>Social Work in Health Care</i> , 36(3), 37–62. https://doi.org/10.1300/J010v36n03_03	-	-	-	-	-	-	-
	Swanson, K. M., Chen, H. T., Graham, J. C., Wojnar, D. M., & Petras, A. (2009). Resolution of depression and grief during the first year after miscarriage: A randomized controlled clinical trial of couples-focused interventions. <i>Journal of Women's Health</i> , 18(8), 1245–1257. https://doi.org/10.1089/jwh.2008.1202	-	-	-	-	-	-	-
	Beutel, M., Willner, H., Deckardt, R., Von Rad, M., & Weiner, H. (1996) ^[6] . Similarities and differences	-	-	-	-	-	-	-

	in couples' grief reactions following a miscarriage: Results from a longitudinal study. <i>Journal of Psychosomatic Research</i> , 40(3), 245–253. https://doi.org/10.1016/0022-3999(95)00520-X							
	Johnson, M. P., & Puddifoot, J. E. (1996) The grief response of partners of women who miscarry. <i>British Journal of Medical Psychology</i> , 69, 313–327.	-	-	-	-	-	-	-
	Kero, A., Lalos, A., & Wulff, M. (2010). Home abortion - Experiences of male involvement. <i>European Journal of Contraception and Reproductive Health Care</i> , 15(4), 264–270. https://doi.org/10.3109/13625187.2010.485257	-	-	-	-	-	-	-
	Lieh-Mak, F., Tam, Y. K., & Ng, S. (1979). Husbands of abortion applicants: A comparison with husbands of women who complete their pregnancies. <i>Social Psychiatry</i> , 14(2), 59–64. https://doi.org/10.1007/BF00582084	-	-	-	-	-	-	-
	Naziri, D. (2007). Man's involvement in the experience of abortion and the dynamics of the couple's relationship: A clinical study. <i>European Journal of Contraception and Reproductive Health Care</i> , 12(2), 168–174. https://doi.org/10.1080/13625180701201178	-	-	-	-	-	-	-
	Nguyen, B. T., Hebert, L. E., Newton, S. L., & Gilliam, M. L. (2018). Supporting Women at the Time of Abortion: A Mixed-Methods Study of Male Partner Experiences and Perspectives. <i>Perspectives on Sexual and Reproductive Health</i> , 50(2), 75–83. https://doi.org/10.1363/psrh.12059	-	-	-	-	-	-	-
	Leichtentritt, R. D., & Weinberg-Kurnik, G. (2016). No one sees the fathers: Israeli fathers' experience of feticide. <i>Social Science and Medicine</i> , 168, 159–166. https://doi.org/10.1016/j.socscimed.2016.09.002	-	-	-	-	-	-	-
	Duwadi, N., & Shrestha, P. S. (2007). Safe abortion services in Nepal: some insights. <i>Nepal Medical College Journal : NMCI</i> , 9(1), 27–31.	-	-	-	-	-	-	-
	Sun, J. C., Rei, W., Chang, M. Y., & Sheu, S. J. (2018). The Experiences of Fathers Whose Spouses Are Hospitalized for Pregnancy Termination Due to Fetal Chromosome Abnormality in Taiwan. <i>Journal of Nursing Research</i> , 26(4), 297–305. https://doi.org/10.1097/jnr.0000000000000246	-	-	-	-	-	-	-
	Kelly, K., & Gochanour, A. A. (2019). Men and 'post abortion syndrome': claims versus evidence. <i>European Journal of Contraception and Reproductive Health Care</i> , 24(1), 13–17. https://doi.org/10.1080/13625187.2018.1563066	-	-	-	-	-	-	-
	Due, C., Chiarolli, S., & Riggs, D. W. (2017). The impact of pregnancy loss on men's health and wellbeing: A systematic review. <i>BMC Pregnancy and Childbirth</i> , 17(1), 1–13. https://doi.org/10.1186/s12884-017-1560-9	-	-	-	-	-	-	-
	Taylor Summers, Susan Piras, Dolores Bowman. The lost Male Partner in the Post Abortion Experience. <i>American Journal of Public Health</i> https://publish.tntech.edu/index.php/PSRCI/article/view/573 2019	-	-	-	-	-	-	-
	Nagy, B., & Rigó, A. (2019). The Psychosocial Aspects of Induced Abortion: Men in the Focus. <i>Men and Masculinities</i> , 1–19. https://doi.org/10.1177/1097184X19856399	-	-	-	-	-	-	-
	Hirz, A. E., Avila, J. L., & Gipson, J. D. (2017). The role of men in induced abortion decision making in an urban area of the Philippines. <i>International Journal of Gynecology and Obstetrics</i> , 138(3), 267–271. https://doi.org/10.1002/ijgo.12211	-	-	-	-	-	-	-
	Quinlivan, J. A., Ung, K. A., & Petersen, R. W. (2012). The impact of molar pregnancy on the male partner. <i>Psycho-Oncology</i> , 21(9), 970–976. https://doi.org/10.1002/pon.1992	-	-	-	-	-	-	-
	Johnson, M. P., & Puddifoot, J. E. (1998). Miscarriage: Is vividness of visual imagery a factor in the grief reaction of the partner? <i>British Journal of Health Psychology</i> , 3(2), 137–146. https://doi.org/10.1111/j.2044-8287.1998.tb00562.x	-	-	-	-	-	-	-
	Garner, E., Goldstein, D. P., Berkowitz, R. S., & Wenzel, L. (2003). Psychosocial and reproductive outcomes of gestational trophoblastic diseases. <i>Bailliere's Best Practice and Research in Clinical Obstetrics and Gynaecology</i> , 17(6), 959–968. https://doi.org/10.1016/S1521-6934(03)00093-2	-	-	-	-	-	-	-
	DANA S. DUNN, KRTSTEN R. CUNTON GOLDBACH', LORI J. TOEDTER, EXPI..AINING PREGNANCY LOSS: PARENTS' AND PIISYCIANS' ATTRIBUTIONS, <i>OMEGA</i> , Vol. 23(1) 13-23' 1991	-	-	-	-	-	-	-

Johansson, A., Nga, N. T., Huy, T. Q., Dat, D. Du, & Holmgren, K. (1998). Husbands' Involvement in Abortion in Vietnam. <i>Studies in Family Planning</i> , 29(4), 400. https://doi.org/10.2307/172252	-	-	-	-	-	-	-
Aoki, K., Furukawa, T., Ogasawara, M., Hori, S., & Kitamura, T. (1998). Psychosocial factors in recurrent miscarriages. <i>Acta Obstetrica et Gynecologica Scandinavica</i> , 77(5), 572–573. https://doi.org/10.1080/j.1600-0412.1998.770518.x	-	-	-	-	-	-	-
Franche, R. L. (2001). Psychologic and obstetric predictors of couples' grief during pregnancy after miscarriage or perinatal death. <i>Obstetrics and Gynecology</i> , 97(4), 597–602. https://doi.org/10.1016/S0029-7844(00)01199-6	-	-	-	-	-	-	-
Kero, A, Lalos, U., Högberg, L. & Jacobsson. 1999. The male partner involved in legal abortion. <i>Human Reproduction</i> , 14(10), pp. 2669–2675.	-	-	-	-	-	-	-
Miller, E., Temple-SMITH, M., & Bilardi, J. (2018). "she's gone through it..that's all we care about..you're just the dad": Male partner's experience of miscarriage and support needs. <i>Australian and New Zealand Journal of Obstetrics and Gynaecology</i> , 58(supplement1), 67. http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=emed19&NEWS=N&AN=624371881	-	-	-	-	-	-	-
Meaney, S., Corcoran, P., Spillane, N., & O'Donoghue, K. (2017). Experience of miscarriage: An interpretative phenomenological analysis. <i>BMJ Open</i> , 7(3), 1–7. https://doi.org/10.1136/bmjopen-2016-011382	-	-	-	-	-	-	-
Miller J. E, Meredith J., Temple S., Jade E,B. (2019). "There Was No One There To Acknowledge Thst It Happened To Me As Well" : A Qualitative Study of Male Partner's Experience of Misscarriage.PLoS One, 14(5): E0217395	-	-	-	-	-	-	-
Puddifoot, J. E., & Johnson, M. P. (1997) ^[44] . The legitimacy of grieving: The partner's experience at miscarriage. <i>Social Science and Medicine</i> , 45(6), 837–845. https://doi.org/10.1016/S0277-9536(96)00424-8	-	-	-	-	-	-	-
Koert, E., Malling, G. M. H., Sylvest, R., Krog, M. C., Kolte, A. M., Schmidt, L., & Nielsen, H. S. (2019). Recurrent pregnancy loss: couples' perspectives on their need for treatment, support and follow up. <i>Human Reproduction</i> , 34(2), 291–296. https://doi.org/10.1093/humrep/dey362	-	-	-	-	-	-	-
Becker S, Eva S. Bazant, Carole Meyers, Raquel Samson, Couples Counseling at an Abortion Clinic: A Pilot Study	-	-	-	-	-	-	-
Sperry, P., & Sperry, L. (2004). The Family Experience of Loss Associated with Miscarriage and Ectopic Pregnancy. <i>The Family Journal</i> , 12(4), 401–404. https://doi.org/10.1177/1066480704267547	-	-	-	-	-	-	-
William H E., Topping A., Coomarasamy A., Jones L L., (2020). Men and Misscarriage : A Systematic Review and Thematic Sysynthesis. <i>Qualitative Health Research</i> . Vol.30(1)pp 133-145.	-	-	-	-	-	-	-
Nguyen V, Temple-Smith M, Bilardi J, (2019). Men's experiences of perinatal loss: A review of the literature. <i>Australia and New Zealand Journal of Obstetrics and Gynaecology</i> .59:757-766	-	-	-	-	-	-	-
Horstman, H. K. & Holman, A. 2018. Communicated sense-making after miscarriage: A dyadic analysis of spousal communicated perspective-taking, well-being, and parenting role salience. <i>Health Communication</i> . Routledge, 33(10), pp. 1317–1326.	-	-	-	-	-	-	-
Abboud, L. & Liamputtong, P. 2005. When pregnancy fails: Coping strategies, support networks and experiences with health care of ethnic women and their partners. <i>Journal of Reproductive and Infant Psychology</i> , 23(1), pp. 3–18.	-	-	-	-	-	-	-

References

1. Abboud L, Liamputtong P. When pregnancy fails: Coping strategies, support networks and experiences with health care of ethnic women and their partners. *Journal of Reproductive and Infant Psychology* 2005;23(1):3-18. <https://doi.org/10.1080/02646830512331330974>
2. Abboud LN, Liamputtong P. Social work in health care pregnancy loss : What it means to women who miscarry and their partners. *Social Work in Health Care* 2003;36(3):37-62. <https://doi.org/10.1300/J010v36n03>
3. Aoki K, Furukawa T, Ogasawara M, Hori S, Kitamura T. Psychosocial factors in recurrent miscarriages. *Acta Obstetrica et Gynecologica Scandinavica* 1998;77(5):572-573. <https://doi.org/10.1080/j.1600-0412.1998.770518.x>
4. Avalos L, Galindo C, Li DK. A Systematic Review to Calculate Background Miscarriage Rates using Life Table Analysis. *Birth Defects Research. Part A, Clinical and Molecular Teratology* 2012;94:417-423. <https://doi.org/10.1002/bdra.23014>
5. Becker S, Bazant ES, Meyers C. Couples counseling at an abortion clinic: a pilot study. *Contraception* 2008;78(5):424-431. <https://doi.org/10.1016/j.contraception.2008.06.011>
6. Beutel M, Willner H, Deckardt R, Von Rad M, Weiner H. Similarities and differences in couples' grief reactions following a miscarriage: Results from a longitudinal study. *Journal of Psychosomatic Research* 1996;40(3):245-253. [https://doi.org/https://doi.org/10.1016/0022-3999\(95\)00520-X](https://doi.org/https://doi.org/10.1016/0022-3999(95)00520-X)
7. Conway K, Russell G. Couples' grief and experience of support in the aftermath of miscarriage. *British Journal of Medical Psychology* 2000;73(4):531-545. <https://doi.org/https://doi.org/10.1348/000711200160714>
8. Daly SF, Harte L, O'beirne E, McGee H, Turner MJ. Does miscarriage affect the father? *Journal of Obstetrics and Gynaecology*, 1996;16(4):260-261. <https://doi.org/10.3109/01443619609020727>
9. Due C, Chiarolli S, Riggs DW. The impact of pregnancy loss on men's health and well-being: a systematic review. *BMC Pregnancy and Childbirth* 2017;17(1):380. <https://doi.org/10.1186/s12884-017-1560-9>
10. Dunn DS, Goldbach KRC, Lasker JN, Toedter LJ. Explaining Pregnancy Loss: Parents' and Physicians' Attributions. *OMEGA - Journal of Death and Dying* 1991;23(1):13-23. <https://doi.org/10.2190/a27n-vdk5-pnr7-mfaq>
11. Duwadi N, Shrestha PS. Safe abortion services in Nepal: some insights. *Nepal Medical College Journal: NMCJ* 2007;9(1):27-31.
12. Eriksen MB, Frandsen TF. The impact of PICO as a search strategy tool on literature search quality: A systematic review. *Journal of the Medical Library Association*, 2018;106(4):420-431. <https://jmla.pitt.edu/ojs/jmla/article/view/345/726>
13. Franche RL. Psychologic and obstetric predictors of couples' grief during pregnancy after miscarriage or perinatal death. *Obstetrics and Gynecology* 2001;97(4):597-602. [https://doi.org/10.1016/S0029-7844\(00\)01199-6](https://doi.org/10.1016/S0029-7844(00)01199-6)
14. Garner E, Goldstein DP, Berkowitz RS, Wenzel L. Psychosocial and reproductive outcomes of gestational trophoblastic diseases. *Bailliere's Best Practice and Research in Clinical Obstetrics and Gynaecology* 2003;17(6):959-968. [https://doi.org/10.1016/S1521-6934\(03\)00093-2](https://doi.org/10.1016/S1521-6934(03)00093-2)
15. National Health Service Pregnancy Loss Guidelines Clinical Practice Guidelines: Pregnancy Care 2018. https://www.health.gov.au/sites/default/files/pregnancy-care-guidelines_0.pdf
16. Hirz AE, Avila JL, Gipson JD. The role of men in induced abortion decision making in an urban area of the Philippines. *International Journal of Gynecology and Obstetrics* 2017;138(3):267-271. <https://doi.org/10.1002/ijgo.12211>
17. Horstman HK, Holman A. Communicated sense-making after miscarriage: A dyadic analysis of spousal communicated perspective-taking, well-being, and parenting role salience. *Health Communication* 2018;33(10):1317-1326. <https://doi.org/10.1080/10410236.2017.1351852>
18. Horstman HK, Holman A, McBride MC. Men's Use of Metaphors to Make Sense of Their Spouse's Miscarriage: Expanding the Communicated Sense-Making Model. *Health Communication*, 2020;35(5):538-547. <https://doi.org/10.1080/10410236.2019.1570430>
19. Hutti MH. Parents' perceptions of the miscarriage experience. *Death Studies* 1992;16(5):401-415. <https://doi.org/10.1080/07481189208252588>
20. Jansson C, Volgsten H, Huffman C, Skoog Svanberg A, Swanson KM, Stavreus-Evers A. Validation of the Revised Impact of Miscarriage Scale for Swedish conditions and comparison between Swedish and American couples' experiences after miscarriage. *The European Journal of Contraception & Reproductive Health Care* 2017;22(6):412-417. <https://doi.org/10.1080/13625187.2017.1409346>
21. Johansson A, Nga NT, Huy TQ, Dat D Du, Holmgren K. Husbands' Involvement in Abortion in Vietnam. *Studies in Family Planning* 1998;29(4):400. <https://doi.org/10.2307/172252>
22. Johnson MP, Puddifoot JE. Miscarriage: Is vividness of visual imagery a factor in the grief reaction of the partner? *British Journal of Health Psychology* 1998;3(2):137-146. <https://doi.org/https://doi.org/10.1111/j.2044-8287.1998.tb00562.x>
23. Johnson MP, Puddifoot JE. The grief response in the partners of women who miscarry. *British Journal of Medical Psychology* 1996;69(4):313-327. <https://doi.org/https://doi.org/10.1111/j.2044-8341.1996.tb01875.x>
24. Kelly K, Gochanour AA. Men and 'post abortion syndrome': claims versus evidence. *European Journal of Contraception and Reproductive Health Care*, 2019;24(1):13-17. <https://doi.org/10.1080/13625187.2018.1563066>
25. Kero A, Lalos U, Högberg L, Jacobsson. The male partner involved in legal abortion. *Human Reproduction* 1999;14(10):2669-2675. <https://doi.org/10.1093/humrep/14.10.2669>
26. Kero A, Lalos A, Wulff M. Home abortion - Experiences of male involvement. *European Journal of Contraception and Reproductive Health Care*, 2010;15(4):264-270. <https://doi.org/10.3109/13625187.2010.485257>
27. Koert E, Malling GMH, Sylvest R, Krog MC, Kolte AM, Schmidt L *et al.* Recurrent pregnancy loss: couples' perspectives on their need for treatment, support and follow up. *Human Reproduction* 2019;34(2):291-296. <https://doi.org/10.1093/humrep/dey362>
28. Kong GWS, Chung TKH, Lai BPY, Lok IH. Gender comparison of psychological reaction after miscarriage—a

- 1-year longitudinal study. *BJOG: An International Journal of Obstetrics & Gynaecology*, 2010;117(10):1211-1219. <https://doi.org/https://doi.org/10.1111/j.1471-0528.2010.02653.x>
29. Leichtentritt RD, Weinberg-Kurnik G. No one sees the fathers: Israeli fathers' experience of feticide. *Social Science and Medicine* 2016;168:159-166. <https://doi.org/10.1016/j.socscimed.2016.09.002>
 30. Lieh-Mak F, Tam YK, Ng S. Husbands of abortion applicants: A comparison with husbands of women who complete their pregnancies. *Social Psychiatry* 1979;14(2):59-64. <https://doi.org/10.1007/BF00582084>
 31. Meaney S, Corcoran P, Spillane N, O'Donoghue K. Experience of miscarriage: An interpretative phenomenological analysis. *BMJ Open* 2017;7(3):1-7. <https://doi.org/10.1136/bmjopen-2016-011382>
 32. Miller E, Temple-Smith M, Bilardi J. "she's gone through it..that's all we care about. You're just the dad": Male partner's experience of miscarriage and support needs. *Australian and New Zealand Journal of Obstetrics and Gynaecology* 2018;58(1):67. <http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=emed19&NEWS=N&AN=624371881>
 33. Miller EJ, Temple-Smith MJ, Bilardi JE. X "There was just no-one there to acknowledge that it happened to me as well": A qualitative study of male partner's experience of miscarriage. *PLoS ONE*, 2018;14(5):1-20. <https://doi.org/10.1371/journal.pone.0217395>
 34. Miron J, Chapman JS. Supporting: men's experiences with the event of their partners' miscarriage. In *The Canadian journal of nursing research = Revue canadienne de recherché en sciences infirmières* 1994;26(2):61-72.
 35. Murphy FA, Hunt SC. Early pregnancy loss: men have feelings too. *British Journal of Midwifery* 1997;5(2):87-90. <https://doi.org/10.12968/bjom.1997.5.2.87>
 36. Nagy B, Rigó A. The Psychosocial Aspects of Induced Abortion: Men in the Focus. *Men and Masculinities* 2019, 1-19. <https://doi.org/10.1177/1097184X19856399>
 37. National Institute for Health and Care Excellence. (2018). Ectopic pregnancy and miscarriage. In *Medicolegal Issues in Obstetrics and Gynaecology* 2020. https://doi.org/10.1007/978-3-319-78683-4_40
 38. Naziri D. Man's involvement in the experience of abortion and the dynamics of the couple's relationship: A clinical study. *European Journal of Contraception and Reproductive Health Care* 2007;12(2):168-174. <https://doi.org/10.1080/136251807012011178>
 39. Nguyen BT, Hebert LE, Newton SL, Gilliam ML. Supporting Women at the Time of Abortion: A Mixed-Methods Study of Male Partner Experiences and Perspectives. *Perspectives on Sexual and Reproductive Health* 2018;50(2):75-83. <https://doi.org/10.1363/psrh.12059>
 40. Nguyen V, Temple-Smith M, Bilardi J. Men's lived experiences of perinatal loss: A review of the literature. *Australian and New Zealand Journal of Obstetrics and Gynaecology* 2019;59(6):757-766. <https://doi.org/https://doi.org/10.1111/ajo.13041>
 41. Obst KL, Due C. Australian men's experiences of support following pregnancy loss: A qualitative study. *Midwifery*, 2019;70:1-6. <https://doi.org/10.1016/j.midw.2018.11.013>
 42. Obst KL, Due C, Oxlad M, Middleton P. Men's grief following pregnancy loss and neonatal loss: A systematic review and emerging theoretical model. *BMC Pregnancy and Childbirth* 2020;20(1):1-17. <https://doi.org/10.1186/s12884-019-2677-9>
 43. Puddifoot JE, Johnson MP. Active grief, despair and difficulty coping: Some measured characteristics of male response following their partner's miscarriage. *Journal of Reproductive and Infant Psychology* 1999;17(1):89-93. <https://doi.org/10.1080/02646839908404587>
 44. Puddifoot JE, Johnson MP. The legitimacy of grieving: The partner's experience at miscarriage. *Social Science & Medicine* 1997;45(6):837-845. [https://doi.org/https://doi.org/10.1016/S0277-9536\(96\)00424-8](https://doi.org/https://doi.org/10.1016/S0277-9536(96)00424-8)
 45. Quinlivan JA, Ung KA, Petersen RW. The impact of molar pregnancy on the male partner. *Psycho-Oncology* 2012;21(9):970-976. <https://doi.org/10.1002/pon.1992>
 46. Rinehart MS, Kiselica MS. Helping men with the trauma of miscarriage. *Psychotherapy* 2010;47(3):288-295. <https://doi.org/10.1037/a0021160>
 47. Sperry P, Sperry L. The Family Experience of Loss Associated with Miscarriage and Ectopic Pregnancy. *The Family Journal* 2004;12(4):401-404. <https://doi.org/10.1177/1066480704267547>
 48. Sun JC, Rei W, Chang MY, Sheu SJ. The experiences of fathers whose spouses are hospitalised for pregnancy termination due to fetal chromosome abnormality in Taiwan. *Journal of Nursing Research* 2018;26(4):297-305. <https://doi.org/10.1097/jnr.0000000000000246>
 49. Swanson KM, Chen HT, Graham JC, Wojnar DM, Petras A. Resolution of Depression and Grief during the First Year after Miscarriage: A Randomized Controlled Clinical Trial of Couples-Focused Interventions. 2009;18(8). <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2825726/pdf/jwh.2008.1202.pdf>
 50. Tseng YF, Cheng HR, Chen YP, Yang SF, Cheng PT. Grief reactions of couples to perinatal loss: A one-year prospective follow-up. *Journal of Clinical Nursing*, 2017;26(23), 24):5133-5142. <https://doi.org/https://doi.org/10.1111/jocn.14059>
 51. Volgsten H, Jansson C, Svanberg AS, Darj E, Stavreus-Evers A. Longitudinal study of emotional experiences, grief and depressive symptoms in women and men after miscarriage. *Midwifery* 2018;64:23-28. <https://doi.org/10.1016/j.midw.2018.05.003>
 52. Williams HM, Topping A, Coomarasamy A, Jones LL. Men and Miscarriage: A Systematic Review and Thematic Synthesis. *Qualitative Health Research* 2020;30(1):133-145. <https://doi.org/10.1177/1049732319870270>