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## Male partners' expected response, coping mechanisms, social and health institutions expectations after early pregnancy loss: A systematic review

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### Abstract

**Introduction:** Parents with early pregnancy loss uses various coping models, men cope with the loss differently, with immediate and long-term psychiatric consequences. As men's emotional coping mechanisms are heavily affected by societal dilemmas, they hide their emotions. This study aims to determine how different types of early pregnancy loss affect male partners responses, coping strategies and expectations.

**Method:** The study used the PICO approach and searched for relevant articles from June 15th, 2020, to December 15th, 2020. Forty-eight (48) articles were selected based on pre-determined inclusion and exclusion criteria from Ovid MEDLINE® without Revisions and Embase database.

**Summary of evidence:** Male partners are equally psychologically involved as women but are often overlooked. There is a lack of a strong support system from society and professional caregivers to help these men. They are generally seen as the family's source of strength. Men feel uncomfortable when emotionally affected by the event as they cannot channel their emotions out due to societal pressures and expectations. Men need to be supported by providing the necessary grief management.

**Conclusion:** Male partners responses, their coping strategies and what they expect from society and healthcare providers require an in-depth investigation to determine the support they need.

**Keywords:** Male partners, early pregnancy loss, coping strategies, expectations from society and health professionals

### 1. Introduction

Despite pregnancy loss common occurrence, it is mostly researched from expectant mothers' perspectives. Nevertheless, Naziri (2007) <sup>[42]</sup> and Obst and Due (2019) <sup>[45]</sup> opined that the psychological impact of pregnancy loss such as abortion, miscarriage, ectopic or molar pregnancy is equally a painful experience for the male partners.

According to Fernández-Basanta *et al.* (2021), losing an expected child is normally followed by bereavement with various coping models. The impact on male partners is often overlooked due to the lack of socially prescribed norms regarding bereavement for an unborn child. Due *et al.* (2017) <sup>[10]</sup> believed that men cope with the loss differently from women as they are more inclined to indulge in compensatory behaviours, such as alcohol consumption. Nynas *et al.* (2015) <sup>[37]</sup> reported that recent reviews uncover immediate and long-term psychiatric consequences that may include psychometric measures of acute stress disorders (ASD) and post-traumatic stress disorders (PTSD).

In recent research, it was revealed that men face some diverse difficulties dealing with early pregnancy loss. Obst *et al.* (2020) <sup>[46]</sup> found out that men's emotional coping mechanisms with miscarriage were heavily affected by societal dilemmas such as expectations to support their female partners as well as low recognition awarded to their emotions of grief. They definitely find it difficult to express their emotions of grief and overcome them without the existence of sufficient support provided for them. Similarly, it was also found out that men tend to hide their emotions such as anxiety when experiencing a pregnancy loss due to the expectation of psychologically protecting their partners as well as adhering to the societal pressures and beliefs such as "staying strong" and "men don't share". Researchers such as Quinlivan *et al.* (2012) <sup>[49]</sup>, Leichtentritt and Weinberg-Kurnik (2016) <sup>[32]</sup> and Nguyen *et al.* (2018) <sup>[43]</sup> and stressed the importance of administrative and emotional support; provision of counselling is growing and is viewed as an important tool in coping with emotions post a pregnancy loss.

This systematic review aims to explore what was expected from the men and how they cope with the loss to understand male partners' psychological wellbeing after experiencing early pregnancy loss. Furthermore, reviewing the related literature will help highlight male partners' expectations from the community and health providers after the early pregnancy loss experience. The findings hope to bring to attention how male partners would respond, cope, and expect after experiencing different types of early pregnancy loss. This study seeks to answer the following question: How do different types of early pregnancy loss affect male partners responses, coping strategies

and expectations after early pregnancy loss?

## 2. Materials and Method

We adopted the patient, intervention, comparison, outcome (PICO) approach to structure the study. PICO is selected as when used in a clinical-based study, it allows us to i) explore patient beliefs as issues and results; ii) use digital selection based on keywords; and iii) Cover problems, intervention, and outcomes of patients' current management (Eriksen & Frandsen, 2018) [13]. 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	Explore how male partners would respond, cope, and what they expect after different types of early pregnancy loss
Content	
Outcome	Recognise male partner journey through early pregnancy loss experience

The search for relevant literature was carried out from June 15<sup>th</sup>, 2020, to December 15<sup>th</sup>, 2020. The peer-reviewed literature selected was Ovid MEDLINE® without Revisions and Embase database.

Articles selected from the Medline database were published from 1946 to the current publication, whereas the EmBase database searched for articles 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 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's 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/).

"Psychological impact" was excluded from the list of keywords due to the diversity of male partners' responses (e.g., depression, anxiety etc.). As their responses are unpredictable, papers discussing male partners' responses, coping strategies and expectations after experiencing different types of early pregnancy loss are selected for in-depth review. As the review process required full articles, we emailed the authors of several inaccessible papers requesting the articles. Some of the authors responded by providing us with the full articles, while several

responded by sending abstracts of their publications.

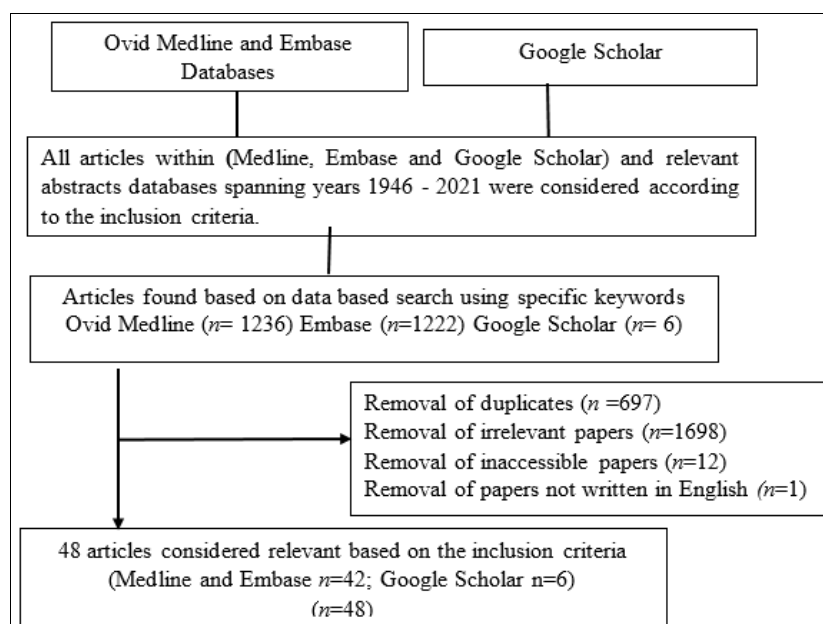
### 2.3 Results and Findings

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 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. 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

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

**Table 4:** Summary of Selected Literature

#### i. Miscarriage

	Author	Database	Research Design	Population/Sampling	Data Collection Method	Country
1	Puddifoot and Johnson (1999) <sup>[47]</sup>	EmBase	Qualitative	323 male partners of women who suffered from a miscarriage	Perinatal Grief Scale (PGS)	United Kingdom
2	Obst and Due (2018) <sup>[53]</sup>	EmBase Ovid Medline (R) without Revisions	Qualitative	8 men who have experienced support after experiencing pregnancy loss	Clinical Interviews	Australia
3	Conway and Russell (2000) <sup>[7]</sup>	EmBase Ovid Medline (R) without Revisions	Qualitative	39 women and 32 partners	Perinatal Grief Scale (PGS)	Australia
4	Daly <i>et al.</i> (1996) <sup>[9]</sup>	EmBase	Qualitative	25 partners of women who experienced a spontaneous miscarriage in the previous 6 weeks	Structured Interview	Ireland
5	Kong <i>et al.</i> (2010) <sup>[31]</sup>	EmBase Ovid Medline (R) without Revisions	Quantitative	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) <sup>[55]</sup>	EmBase	Quantitative	30 couples whose babies were either miscarried or stillborn.	Questionnaire	Taiwan
7	Rinehart and Kiselica (2010) <sup>[50]</sup>	EmBase	Review Paper			United States of America
8	Volgsten <i>et al.</i> (2018) <sup>[56]</sup>	EmBase Ovid Medline (R) without Revisions	Quantitative	103 women who suffered a miscarriage and 78 male partners were selected	Multi-step questionnaire	Sweden
9	Horstman <i>et al.</i> (2020) <sup>[20]</sup>	EmBase	Qualitative	45 cis-gender men between the ages of 26–55 years old	Structured Interview	United States of America
10	Hutti (1992) <sup>[21]</sup>	EmBase	Qualitative	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) <sup>[11]</sup>	EmBase Ovid Medline (R) without Revisions	Qualitative	6 women who miscarried and their partners	Multi-step questionnaire Structured Interview	Australia
12	Franché (2001) <sup>[14]</sup>	EmBase Ovid Medline (R)	Quantitative	60 pregnant women with a history of miscarriages or perinatal deaths, and	Questionnaires	Canada

		without Revisions		50 of their partners.		
13	Koert <i>et al.</i> (2019) <sup>[30]</sup>	EmBase Ovid Medline (R) without Revisions	Qualitative	13 couples with a history of 3 pregnancy losses before 12 weeks gestation	Interviews	Denmark
14	Swanson <i>et al.</i> (2009) <sup>[54]</sup>	EmBase	Quantitative	341 couples with pregnancy loss history	Clinical trials	United States of America
15	Miller <i>et al.</i> (2019) <sup>[36]</sup>	EmBase	Qualitative	10 Australian men, whose partners miscarried between 3 months and 10 years ago	Interviews Thematic Analysis	Australia
16	Beutel <i>et al.</i> , (1996) <sup>[6]</sup>	EmBase Ovid Medline (R) without Revisions	Quantitative	56 couples with a history of miscarriage	Questionnaire	Germany
17	Miron and Chapman (1994) <sup>[36]</sup>	EmBase Ovid Medline (R) without Revisions	Qualitative	8 men whose partners had experienced miscarriages	Structured interviews	Canada
18	Murphy and Hunt (1997) <sup>[39]</sup>	EmBase Ovid Medline (R) without Revisions	Qualitative	5 male partners of women with a history of miscarriage	Structured interviews	United Kingdom
19	Johnson and Puddifoot (1996) <sup>[26]</sup>	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) <sup>[48]</sup>	EmBase Ovid Medline (R) without Revisions	Qualitative	20 partners of women with a history of miscarriage	Interviews	United Kingdom
21	Jansson <i>et al.</i> (2017) <sup>[23]</sup>	EmBase Ovid Medline (R) without Revisions	Quantitative	140 couples	Revised Impact of Miscarriage Scale (RIMS)	Sweden
22	Williams <i>et al.</i> (2020) <sup>[57]</sup>	EmBase	Qualitative	27 studies on men and miscarriages	Systematic Literature Review	United Kingdom
23	Nguyen <i>et al.</i> (2019) <sup>[44]</sup>	EmBase	Qualitative	15 articles focusing on men and their experience with miscarriages	Systematic Literature Review	Australia
24	Miller <i>et al.</i> (2018) <sup>[35]</sup>	EmBase	Qualitative	10 Australian men, whose partners miscarried between 3 months and 10 years ago	Semi-structured interviews	Australia
25	Horstman and Holman (2018) <sup>[19]</sup>	EmBase	Quantitative	183 couples with a history of miscarriage	Questionnaires	United States of America
26	Meaney <i>et al.</i> (2017) <sup>[34]</sup>	EmBase Ovid Medline (R) without Revisions	Qualitative	Purposive sampling of 10 women and 6 men	Semi-structured interviews Thematic analysis	Ireland
27	Abboud and Liamputtong (2003) <sup>[2]</sup>	EmBase	Qualitative	6 women with miscarriage history and their partners	In-depth interview	Australia
28	Johnson and Puddifoot (1998) <sup>[25]</sup>	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) <sup>[3]</sup>	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) <sup>[29]</sup>	EmBase Ovid Medline (R) without Revisions	Qualitative	23 couples whose male partners were present during the home abortion process	Interview	Sweden
3	Lieh-Mak <i>et al.</i> (1979) <sup>[33]</sup>	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) <sup>[24]</sup>	EmBase Ovid Medline (R) without Revisions	Qualitative	Husbands of 20 women who had undergone an abortion at the clinic	Interview	Vietnam
5	Naziri (2007) <sup>[42]</sup>	EmBase Ovid Medline (R) without Revisions	Qualitative	16 men from Belgium and 14 men from Greece	In-depth semi-structured interviews	Belgium
6	Leichtentritt and Weinberg-Kurnik (2016) <sup>[32]</sup>	EmBase Ovid Medline (R) without Revisions	Qualitative	17 men who experienced feticide	In-depth semi-structured interviews	Israel
7	Duwadi and Shrestha (2007) <sup>[12]</sup>	EmBase Ovid Medline (R) without Revisions		Review paper		Nepal

8	Nguyen <i>et al.</i> (2018) [43]	EmBase Ovid Medline (R) without Revisions	Mixed method	29 men for interview 210 men completed the survey	In-depth interview Survey	United States of America
9	Sun <i>et al.</i> , (2018) [53]	EmBase Ovid Medline (R) without Revisions	Qualitative	20 fathers whose partners had undergone a medical abortion	In-depth interviews	Taiwan
10	Kero <i>et al.</i> (1999) [28]	EmBase Ovid Medline (R) without Revisions	Qualitative	75 men who were part of legal abortion processes	In-depth interviews	Sweden
11	Hirz <i>et al.</i> (2017) [18]	EmBase Ovid Medline (R) without Revisions	Qualitative	15 men living in urban areas in the Philippines	In-depth interviews Focus group interviews	Philippines
12	Kelly and Gochanour (2019) [27]	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) [40]	Google Scholar	Review Paper			Hungary

### iii. Molar Pregnancy

	Author	Database	Research	Population/Sampling	Data Collection Method	Country
1	Quinlivan <i>et al.</i> (2012) [49]	EmBase Ovid Medline (R) without Revisions	Quantitative	66 male partners of women who experienced a molar pregnancy	Questionnaire/ Survey Focus group	Australia
2	Garner <i>et al.</i> (2003) [15]	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) [10]	EmBase Ovid Medline (R) without Revisions	Qualitative	29 studies investigating the impact of pregnancy loss on men	Systematic Literature Review	Australia
2	Dunn <i>et al.</i> (1991) [11]	Google Scholar	Quantitative	138 females 56 males (spouses/partners)	Questionnaire	United States of America
3	Sperry and Sperry (2004) [52]	Google Scholar	Review Paper			United States of America

### 2.4 Assessment of bias across studies

A chart was created to assess the risk of bias, including reporting, evidence selection, risk of bias in the primary study, detection, performance, attrition, and outcome reporting bias. No bias was detected in all articles used (appendix).

### 3. Summary of evidence

Literature suggests that the male partners' psychological aspects are often overlooked as they are perceived as their partners' supporters (Nguyen *et al.*, 2018) [43]. Therefore, underestimating the loss impact on men has caused a vague understanding and ignorance relating to how they would react to such losses and

what they go through emotionally. More commonly, men are looked upon as the strong family entity and are expected not to show any signs of weakness, especially mentally. Subsequently, this has attached a sense of discomfort around men when exposed to such emotions that they cannot channel out due to societal pressures and expectations. However, the above literature review highlights those men are equally psychologically involved when experiencing pregnancy loss and there is lack of a strong support system by society and professional caregivers. Therefore, male partners going through a pregnancy loss must be paid enough attention to provide them with the necessary grief management support.

**Table 5:** Emotions Experienced by Male partners

Types of Emotions Experienced by Male partners	Types of Pregnancy Loss		
	Miscarriage	Abortion	Molar Pregnancy
What was expected of me? The perceived role of support	<ul style="list-style-type: none"> <li>Main concern for wife, not self</li> <li>Staying strong and not showing signs of weakness despite own negative feelings</li> <li>Help/talk to wife only</li> <li>Men did not undergo the physical loss; thus, grief is not recognized the wife's emotion (lack of recognition of male's grief)</li> </ul>	<ul style="list-style-type: none"> <li>Provide transport/financial support</li> <li>Concern for wife</li> <li>Support and ease her through the process despite their negative feelings</li> <li>Left out as they are not experiencing physical symptoms</li> <li>No one suggested that they should receive help</li> </ul>	
What I did to cope: Coping strategies	<ul style="list-style-type: none"> <li>Keeping themselves busy and use work/family as distractions</li> <li>Looking for a scientific explanation/Rationale</li> <li>Remembrance through mementoes/anniversaries</li> </ul>	<ul style="list-style-type: none"> <li>Engage in impulsive behaviours such as drinking</li> <li>Keeping busy and distracted to avoid the issue</li> </ul>	

What I think the future holds after the loss: a) Thoughts on the future b) ii. Concerns about future pregnancies	<ul style="list-style-type: none"> <li>• Fear that it may happen again, that they may not have a child</li> <li>• May still get a normal pregnancy</li> <li>• Focusing on other ways to have children e.g. IVF, adoption</li> <li>• Not ready for another baby yet</li> </ul>		<ul style="list-style-type: none"> <li>• Lost hope</li> <li>• Residual fears about having children</li> </ul>	
What I expect from you: i. Society ii. Healthcare providers/hospital	<b>Expectations from society</b> <ul style="list-style-type: none"> <li>• Acknowledgement, understanding, sensitivity for their loss</li> <li>• Counselling and support resources for fathers</li> <li>• Support and recognition of loss from wife</li> </ul> <b>Expectations from hospital</b> <ul style="list-style-type: none"> <li>• Explanation for why it happened</li> <li>• Information on what to expect after the miscarriage, how to support the partner</li> <li>• Adopt language that is more inclusive of men</li> </ul>	<b>Expectations from hospital</b> <ul style="list-style-type: none"> <li>• Desire for knowledge/</li> <li>• Involvement</li> <li>• Wants to know more about the abortion process and possible complications</li> <li>• Wants to be involved in the decision-making process</li> </ul>		<b>Expectations from hospital</b> <ul style="list-style-type: none"> <li>• Explanation</li> </ul>

#### 4. Discussion

Literature about miscarriage and abortions are much more evident than those described ectopic pregnancies and molar pregnancies. For that reason, more themes and details are found concerned with miscarriage and abortions, which could be because early pregnancy loss such as miscarriages is more prevalent than other losses such as ectopic pregnancy. The Imperial College of London in 2020 [22] reported that 250,000 miscarriages occurred compared to merely 11,000 ectopic pregnancies admissions in the United Kingdom (UK). Therefore, more prominently, research subjects about miscarriages have been more widely researched than other pregnancy loss instances. However, it has also been observed that the perspective of men is often overlooked when it comes to evaluating the emotional and psychological impacts of a miscarriage, as a majority of studies have widely focused on the female partners' experiences. On the other hand, the research on miscarriage reveals that it is taboo to discuss abortion and consequently distresses and adversely impacts the grieving parents' healing process. It is reported that a big number of cases of miscarriage are unreported, undiscussed, and silenced due to the feared embarrassment that is associated with miscarriage (Hazen, 2006; Rowlands & Lee, 2010; Wojnar *et al.*, 2011; Miller, 2015; Imperial College of London, 2020) [16, 51, 58, 37, 22].

In many cases, Obst *et al.* (2020) [46] suggested that men have been deprived of sufficient support when experiencing pregnancy loss. It was observed that the lack of acknowledgement of the men's grief by society adversely impacted their grief management and led to distress and feelings of isolation. Moreover, the concept of masculinity associated with strength in such situations have led to me perceiving a high level of expectations to expressing strength and staying strong to hide their inner grief, and this has adversely impacted their emotional states leading to actual hiding emotions (Obst & Due, 2019; Obst *et al.* 2020) [45, 46]. Therefore, men are expected to hide their emotional states when experiencing a pregnancy loss due to the societal pressures that they must adhere to, which has led to suppression of their emotional states, consequently making it difficult for men to overcome the emotional burdens that are attached with early pregnancy loss.

#### 4.1 Miscarriage

Men were expected to support their partner in addition to coping with their feelings (Murphy & Hunt, 1997) [39]. Men who have suffered from a miscarriage rely on their female partners' support to overcome the negative emotions post a miscarriage. However, a positive support system from the healthcare professionals also greatly affects a couple coping with the loss

(Abboud & Liamputtong, 2005; Horstman & Holman, 2018) [1, 19]. Administrative and emotional support, provision of counselling is an important tool in coping with emotions post a pregnancy loss (Quinlivan *et al.* 2012; Leichtentritt & Weinberg-Kurnik, 2016; Nguyen *et al.*, 2018) [49, 32, 43]. Horstman *et al.* (2020) [20] stated that male partners are inclined to use metaphors to cope with their partner's miscarriage, such as lost gift, cataclysm, death of a loved one, emptiness and a rock, guard, and repairman. They also described themselves as secondary characters in their roles as husbands throughout the process of a miscarriage. Researchers like Garner *et al.* (2003) [15], Rinehart and Kiselica (2010) [50], Meaney *et al.*, (2017) [34], Miller *et al.* (2019) [36] focused on the importance of emotional, educational support for couples coping with pregnancy loss and Swanson *et al.* (2009) [54] opined that men's grief could be relieved through counselling such as Combined Caring.

#### 4.2 Abortion

Male partner's involvement in the entire process, particularly the decision-making process, contraceptive counselling, and dissemination of contraceptive knowledge, can potentially reduce the rate of abortions. Women prefer the presence of their male partners during contraceptive counselling and the actual procedure, which may bring positive changes to the couple and help curb the overall abortion rates.

Men are more affected by societal factors when experiencing such a pregnancy loss. Israeli men were unable to display their emotions post-late-termination pregnancy there is lack of socially constructed terminologies, ambiguous understanding of a feticide experience, the male partner's sense of obligations to safeguard themselves and their partners from the procedure and its consequences, as well as the exclusion of men and suppressing their emotions (Leichtentritt & Weinberg-Kurnik, 2016) [32]. Similarly, Sun *et al.*, (2018) [53] reported that Taiwanese males were exposed to feelings of vulnerability but must conceal their emotional states to provide the necessary support to their partners and family. Previous childhood experiences, psychiatric factors, socio-economic factors in addition to social responsibilities (as in Vietnam 2-child policy) results in adverse results of psychiatric morbidity among families for husbands may have led to their decision to abort (Lieh-Mak *et al.*, 1979; Johansson *et al.*, 1998) [33, 24].

Men were profoundly involved in the decision-making process of having a home abortion. Although they did feel hints of stress and anxiety on the day of expulsion, their involvement may positively affect their sense of responsibility and contraceptive use knowledge (Kero *et al.*, 1999) [28]. Men who desire to validate a decision related to an induced abortion were clouded

by their societal expectations as men and fathers in a family and avoid any "sin" associated with carrying out such an occurrence. It was also found out that women partners of males seeking an induced abortion led to men experiencing complications in their relationships such as physical and emotional separations because these men prefer to avoid committing the "sin" associated with induced abortion (Hirz *et al.*, 2017) <sup>[18]</sup>. Men tend to experience both positive and painful feelings four months after the loss. However, positive emotions such as relief, responsibility, maturity, and release were discovered after 12 months, and their initial attitude towards pregnancy has changed forever (Nguyen *et al.*, 2018) <sup>[43]</sup>.

### 4.3 Ectopic pregnancy

Men tend to experience less intense emotions than women after a pregnancy loss, such as ectopic pregnancy. Subsequently, they do resort to compensatory behaviours such as alcohol consumption (Due *et al.*, 2017) <sup>[10]</sup>.

### 4.4 Molar pregnancy

Emotional difficulties faced by men during a pregnancy loss stem from the lack of contraceptive knowledge and practices, which lead to them portraying negative emotional characteristics (Naziri, 2007) <sup>[42]</sup> and dispersion of contraceptive knowledge among the couples (in Nepal) not just helps in avoiding unwanted pregnancies but also the involvement of men in it has found out to have pleasant impacts on the female partner's overall health (Duwadi & Shrestha, 2007) <sup>[12]</sup>.

Thoughts on the future were explored in miscarriages and molar pregnancies where they lost hope, were concerned about future pregnancies if it could recur or not have another child or normal pregnancy and were not ready for a new experience soon. According to Cumming *et al.* (2007) <sup>[8]</sup>, the emotional impact of an early pregnancy loss such as a miscarriage lasts for at least 13 months post-loss. Furthermore, the findings also suggested that miscarriage affects a woman's interpersonal and sexual relationship one-year post-loss. In terms of interpersonal relationships, Swanson *et al.* (2009) <sup>[54]</sup> found out that women struggle to communicate with their partners and have difficulty sharing the loss due to the lack of support provided to them by their partners. Furthermore, in a year, it was also observed that women were sexually distant, avoided intercourse, experienced less sexual drive, and only perceived sex as a functional necessity and a source of negative emotions, including stress. On the other hand, it was stated that the passage of time significantly reduced the feelings of isolation, guilt, loss, and devastation among parents suffering from a miscarriage, especially women. For men, however, time seemed to play not a significant role in the reduction of the same feelings except for devastation that decreased over time. Men complained of the lack of recognition of their emotions when experiencing a miscarriage instead of the mothers. It was seen as a societal issue that needs amendments, fathers. However, the desire to share feelings is often expected to portray strong emotional capabilities by society, which leads to suppressing their emotions to provide emotional support for their grieving wives or female partners. The biggest barrier men face from receiving necessary support is the societal pressure expected always to be "the strong one". They also highlighted the importance of family healthcare providers recognising the father's inclusion in the pregnancy care, where very few follow-ups are performed, lack of parental leaves and policies associated with paternity leaves must be re-evaluated. Insufficient recognition and support provided to the grieving couples post an early pregnancy loss, particularly for men. Therefore, it can be argued that society and

the healthcare providers, together with the practitioners, must pay attention to the lack of support given post-loss, especially towards the male partners.

Consequently, this has led to less attention been given to relief programs for a certain amount of time after a pregnancy loss. Guidelines and steps need to be taken that indicate the gravity of the matter, that is, men's inclusion and the validation of their emotional states when experiencing an early pregnancy loss (Imperial College of London, 2020) <sup>[22]</sup>. Managing a male partner's psychological state during a pregnancy loss can be viewed through the lens of Combined Caring, Support Groups, Contraceptive Counselling (Swanson *et al.*, 2009; Nguyen *et al.*, 2018) <sup>[54, 43]</sup>, and even their presence during the medical procedures have said to have positive impacts on the psychological wellbeing of the male partners.

### 5. Conclusion

To conclude, male partners' expectations and coping strategies in the events of miscarriages and abortions were explored in this paper. The male partners are viewed as the family's pillar of support as they prioritise their wives' wellbeing, provide emotional support, and put in the effort to help ease matters for them. For partners of women undergoing abortions, they are responsible for providing transport and financial support. These roles undermine the men's psychological state as despite being emotionally affected by the loss, these men are expected to put up a brave front and remain strong. To cope with the loss, some men distract themselves by keeping busy with work and family. Those who lost their fetuses by miscarriages looked for scientific explanations or rationale to help them understand their loss. They incline to hold on to memory through mementoes or anniversaries. Some men, however, resorted to impulsive behaviour such as drinking as a coping mechanism. These men hoped for society and health care providers to have more empathy towards them as they grieve and acknowledge their pain, while those undergoing abortions hoped they would be involved in the decision-making process.

### 6. Limitations

This study only reviewed publications written or translated into English sourced from two databases. The review also excluded grey data and studies published at the time of review.

### 7. Conflict of interest

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

### 8. Funding

This research did not receive any specific grant or funding from agencies, the public, commercial, or not-for-profit sectors.

### 9. Ethical approval

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

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**11. 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. <a href="https://doi.org/10.1080/02646839908404587">https://doi.org/10.1080/02646839908404587</a>	-	-	-	-	-	-	-
	Obst, K. L., & Due, C. (2019). Australian men's experiences of support following pregnancy loss: A qualitative study. <i>Midwifery</i> , 70, 1–6. <a href="https://doi.org/10.1016/j.midw.2018.11.013">https://doi.org/10.1016/j.midw.2018.11.013</a>	-	-	-	-	-	-	-
	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. <a href="https://doi.org/10.3109/01443619609020727">https://doi.org/10.3109/01443619609020727</a>	-	-	-	-	-	-	-
	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. <a href="https://doi.org/10.1111/j.1471-0528.2010.02653.x">https://doi.org/10.1111/j.1471-0528.2010.02653.x</a>	-	-	-	-	-	-	-
	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. <a href="https://doi.org/10.1016/j.midw.2018.05.003">https://doi.org/10.1016/j.midw.2018.05.003</a>	-	-	-	-	-	-	-
	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. <a href="https://doi.org/10.1111/jocn.14059">https://doi.org/10.1111/jocn.14059</a>	-	-	-	-	-	-	-
	Rinehart, M. S., & Kiselica, M. S. (2010). Helping men with the trauma of miscarriage. <i>Psychotherapy</i> , 47(3), 288–295. <a href="https://doi.org/10.1037/a0021160">https://doi.org/10.1037/a0021160</a>	-	-	-	-	-	-	-
	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. <a href="https://doi.org/10.1080/10410236.2019.1570430">https://doi.org/10.1080/10410236.2019.1570430</a>	-	-	-	-	-	-	-
	Hutti, M. H. (1992). Parents' perceptions of the miscarriage experience. <i>Death Studies</i> , 16(5), 401–415. <a href="https://doi.org/10.1080/07481189208252588">https://doi.org/10.1080/07481189208252588</a>	-	-	-	-	-	-	-
	Abboud, 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. <a href="https://doi.org/10.1300/J010v36n03_03">https://doi.org/10.1300/J010v36n03_03</a>	-	-	-	-	-	-	-
	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. <a href="https://doi.org/10.1089/jwh.2008.1202">https://doi.org/10.1089/jwh.2008.1202</a>	-	-	-	-	-	-	-
	Beutel, M., Willner, H., Deckardt, R., Von Rad, M., & Weiner, H. (1996). 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. <a href="https://doi.org/10.1016/0022-3999(95)00520-X">https://doi.org/10.1016/0022-3999(95)00520-X</a>	-	-	-	-	-	-	-
	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. <a href="https://doi.org/10.3109/13625187.2010.485257">https://doi.org/10.3109/13625187.2010.485257</a>	-	-	-	-	-	-	-
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. <a href="https://doi.org/10.1007/BF00582084">https://doi.org/10.1007/BF00582084</a>	-	-	-	-	-	-	-
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. <a href="https://doi.org/10.1080/13625180701201178">https://doi.org/10.1080/13625180701201178</a>	-	-	-	-	-	-	-
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