

Depressive Symptoms in Men Post-Miscarriage

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Abstract

Background: Experiencing a miscarriage can be a traumatic life event for men whose partner has miscarried; for some it might even trigger depression. However, men have received much less attention than women in the literature. In fact, no review of the literature was found to focus on the prevalence of depressive symptoms in men post- miscarriage.

Objective: This paper reviewed the literature on the prevalence of depressive symptoms in men post-miscarriage.

Method: Using relevant keywords and inclusion/exclusion criteria (detailed in the method section), we retrieved published empirical studies on the prevalence of depressive symptoms in men post-miscarriage from MEDLINE and PsycINFO databases, as well as from the grey literature (between 1946 and Sept 3, 2014).

Result: The 4 empirical studies retained for this literature review presented the prevalence of depression caseness and the mean or median (where applicable) depression scores. The prevalence of depression caseness, which was greatest within the first month post-miscarriage (5–17%), decreased until 6 months post-miscarriage (7% and 1–4% at 3 and 6 months post-miscarriage, respectively). A slight increase (2–8%) was noted from the 6-month post-miscarriage assessment to the 12- and 13-month post-miscarriage assessments. The mean/median depression scores showed a similar decreasing pattern until 6 months post-miscarriage, but they seemed to remain stable from 6 months to 12 and 13 months post-miscarriage (see Table 1).

Conclusion: This review was limited by the small amount of literature available. Although there was a decrease initially, depressive symptoms might not resolve easily in men post-miscarriage. However, it is challenging to understand whether depressive symptoms were truly related to miscarriage. The findings were discussed in their specific clinical and environmental contexts. In future studies, assessment of depressive symptoms with male-specific scales may yield a higher prevalence of depression in men post-miscarriage.

Keywords: prostate cancer-clinical, oncology, primary care

This article has been peer reviewed.

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Introduction

This paper reviewed the empirical literature to examine the prevalence of depressive symptoms in men post-miscarriage. Miscarriage (medically known as spontaneous abortion) is an early, unintended pregnancy loss. Approximately 10–20% of confirmed pregnancies result in miscarriages.¹ Most miscarriages occur during the first trimester and are likely due to chromosomal abnormalities.² Regardless of miscarriages, depression affects 350 million individuals globally at some point in their lives, from which 50% will not receive treatment.³ Depression often places a burden on people with depression, on their families, as well as on the health care system.^{3–5} Although men are twice less likely to be diagnosed with depression, compared to women,^{3,6–8} it remains a significant mental health problem in men.

The prevalence of depression in men in general might have been systematically under-estimated, as suggested by an increasing amount of literature on depression in men.^{9–18} Indeed, studies on depression are based on a smaller number of men, compared to women,^{19–22} and one must keep in mind that men and women experience depression in different psychosocial contexts, leading to differences in the prevalence of depression.²³ For instance, in a co-twin control study, personality traits and deficiencies in caring relationships and interpersonal loss played a more significant role in the development of major depression for women than for men. In contrast, failure to achieve expected goals; externalizing problems, such as drug abuse and conduct disorder; prior major depressive episode; and proximal stressors were more significant in the development of major depression for men. Also, women are generally more likely to seek medical help.²² When the knowledge on sex differences in depression is applied to understanding men's reactions to miscarriage, it becomes clear that early pregnancy loss could be perceived by men as a failure to achieve the goal of having a child and, to some extent, as an anxiety-generating emotional burden that can have a complex course of resolution.²⁴ Furthermore, from the literature on affective disorders in women post-miscarriage,²⁵ we might conclude that any person (men and women alike) with a history of major depression prior to miscarriage may be at increased risk for a clinical depressive episode post-miscarriage.

In dealing with the failed pregnancy (failed life goal), men might suppress their sorrow. In turn, and paradoxically, suppressing

emotional expression may be associated with male depression post-miscarriage. Independent of the latter, we now know it is possible that emotional suppression can be a consequence of depressive symptoms, when men feel unable to “handle it like a man.”²⁶ This may be particularly true if they feel the need to “stay strong” for their spouse. Despite their deep sense of loss, and due to biology, men cannot experience miscarriages in their guts (women's hormonal “volcano” accompanying miscarriage can amplify grief), and the lack of biological connection might play a role in emotional suppression post-miscarriage. Alternatively, men might also resort to emotional distancing as a coping strategy (e.g., immersing themselves in work or in another project) to avoid dealing with depressive symptoms).²⁷

Finally, one may wonder whether there are possible differences in the nature of men's depression post-miscarriage, relative to other psychosocial stressors, such as job strain, unemployment, or marital conflict. Although the precise answer to this question remains to be investigated, studies on couples' healing after miscarriage suggest that men (as well as women) desire validation of their loss as a meaningful experience and specific coping strategies to deal with this particular kind of early loss.²⁸

Method

We performed searches of abstracts in MEDLINE and PsycINFO databases, as well as in the grey literature (i.e. Dissertation Abstracts International), using the following keywords: miscarriage, spontaneous abortion, men, male partner, depression, depressive disorder, major depressive disorder, major depression, dysthymia, depressive symptoms. We selected relevant articles according to the following inclusion criteria: empirical studies, English language, and published between 1946 to September 3, 2014. The exclusion criteria were as follows: (1) treatment of depression post-miscarriage and (2) a sample of participants whose partners experienced recurrent miscarriage only (3 consecutively or more). The 2 review co-authors double-screened the abstracts. No disagreement was observed between both screeners. Fifteen were initially identified. Of these, 11 articles were excluded for the following reasons: 1 was on treatment of depression after miscarriage; 2 were on recurrent miscarriage; 1 was on complicated grief (not depression or depressive symptoms); 3 were not empirical studies (in addition to their focus on women); 3 were on women; and 1 was written in German. As a result, we retained 4 articles^{24,27,29,30} for this literature review.

Result

Table 1 describes the articles included in this review. In these studies, depression was assessed by self-report symptom scales (i.e. the Beck Depression Inventory [BDI],^{29,30} the Hospital Anxiety and Depression Scale [HADS],²⁴ and the Von Zerssen Depression Scale [DS]²⁷). Cumming et al.²⁴ also measured depression with a semi-structured interview in a sub-sample of participants. The reviewed studies reported the prevalence of caseness of depression^{24,30} and the mean and/or median depression score.^{24,27,29,30} Prevalence of depression referred to the percentage of participants with depressive symptom scale scores at or above the clinical cut-off of the instrument (i.e. BDI ≥ 12 and HADS ≥ 11 in the reviewed studies). In men, it was found to be highest immediately post-miscarriage and to have decreased until 6 months (17% immediately post-miscarriage, 7% at 3 months post-miscarriage, 4% at 6 months post-miscarriage;³⁰ 5% at 1 month post-miscarriage, and 1% at 6 months post-miscarriage²⁴). However, it seemed to have slightly increased onwards in the time period of the studies (from 4% at 6 months post-miscarriage to 8% at 12 months post-miscarriage;³⁰ from 1% at 6 months post-miscarriage to 2% at 13 months post-miscarriage²⁴). The mean/median (where applicable) scores of depression denoted a similar decreasing pattern initially but, instead of a slight increase, the scores seemed to remain stable after 6 months post-miscarriage^{24,27,29,30} (see Table 1). Johnson and Baker²⁹ was the only study conducted with men; the others^{24,27,30} were conducted with couples. In Cumming and colleagues,²⁴ the prevalence of depression was above the HADS normative data³¹ (except at 6 months post-miscarriage, where the opposite was noted). In Johnson and Baker's study,²⁹ depressive symptoms in men 1 year post-miscarriage were slightly higher than in their group of newly fathers. In contrast, in Beutel et al.'s study²⁷ the prevalence of men with depression post-miscarriage was not significantly higher than an aged- and sex-matched community comparison group.

Although the focus of this review was on men, unlike men, the prevalence of depression in women decreased across almost every time-point assessment (25% immediately post-miscarriage, 12% at 3 months post-miscarriage, 17% at 6 months post-miscarriage, and 10% at 12 months post-miscarriage;³⁰ 11% immediately post-miscarriage, 3% at 6 months post-miscarriage, 2% at 13 months post-miscarriage²⁴). The mean/median scores of depression in women seemed to show a similar decreasing pattern over the time period of the studies.^{24,27,29,30}

Table 1. Articles Retained for the Literature Review

Study	Design	Sample	Assessments	Reported results	Strengths	Limitations
Kong et al. (2010) China	Longitudinal observational prospective study	83 couples recruited from a university-affiliated tertiary referral hospital in Hong Kong	Self-report: Chinese translation of BDI Time points: Immediately (n = 83 men) 3 months (n = 57 men) 6 months (n = 52 men) 12 months (n = 39 men)	Prevalence of caseness (BDI ≥ 12) in men: 17% immediately 7% at 3 months 4% at 6 months 8% at 12 months Median BDI score (IQR) in men: 5 (1-9) immediately 0 (0-3) at 3 months 0 (0-3) at 6 months 0 (0-3) at 12 months	No known bias: Demographic and clinical characteristics are not significantly different between completer and non-completers Potential confounders controlled for: Age, duration of marriage, education, employment, obstetric history (parity, duration of infertility, number of previous miscarriages and previous terminations of pregnancy), planned/ unplanned pregnancy, gestational age at miscarriage, previous ultrasound-evident fetal viability and management of miscarriage, as well as marital relationship	Small sample size: n = 83 at recruitment Loss to follow-up: 53% of missing data at the last assessment for men Possible bias: Less marital discord in completers than non-completers Potential confounders not controlled for: Depression and anxiety before miscarriage, psychological treatment during the study and infertility treatment before the pregnancy No comparison group

Study	Design	Sample	Assessments	Reported results	Strengths	Limitations
Cumming et al. (2007) UK	Longitudinal observational prospective study	254 men (and 432 women) recruited from 3 Scottish Early Pregnancy Assessment Units	Self-report and interview: HADS and semi-structured interview Time points: 1 month (n = 226 men) 6 months (n = 156 men) 13 months (n = 135 men) Completers (n = 133 men)	Prevalence of caseness (HADS ≥ 11) in men: 5% at 1 month 1% at 6 months 2% at 13 months Median HADS depression score (IQR) in men: 2 (0-4) at 1 month 1 (0-2) at 6 months 1 (0-3) at 13 months	Confounders controlled for: Duration of the relationship, employment, obstetric history (parity, number of previous miscarriage and previous termination), planned/unplanned wanted/unplanned unwanted, duration to conceive, infertility treatment, gestational age at miscarriage, and history of depression and anxiety Validation of the HADS: A subset of participants were assessed with a semi-structured interview across all time-point assessments Comparison group: The prevalence depression caseness was compared to normative data of the HADS in a non-clinical sample of adults from the UK population (Crawford et al., 2001)	Loss to follow-up: 47% of recruited men did not complete the final assessment Possible bias: Completers (n = 406) were significantly more likely to be older and to have experienced fewer miscarriage than non-completers (n = 220) Confounder not controlled for: Psychotherapy during the study period
Johnson & Baker (2004) UK	Longitudinal observational prospective study	332 men recruited during the pregnancy of their partner from several large general practice surgeries in the Midlands and the North East of England At pregnancy outcome, 68 men were included in the miscarriage group*	Self-report: BDI Time points: 3 weeks (n = 68) 12 months (n = 68)	Mean BDI score (SD): 8.66 (4.26) at 3 weeks 6.82 (4.59) at 12 months	Follow-up rate: 100% Comparison group: The study included a birth comparison group (participants who did not experience a miscarriage during the pregnancy)*	Small sample size: n = 68 at pregnancy outcome Potential confounders not controlled for: History of depression and anxiety; psychological treatment during the study; and infertility treatment before the pregnancy No comparison group: Results were not compared to an age-matched community sample
Beutel et al. (1996) Germany	Longitudinal observational prospective study	82 couples recruited from a gynecological department in Munich	Self-report: D-S Time points: 1 week (n = 56 men) 6 months (n = 47 men) 12 months (n = 45 men)	Mean DS score (SD) in men: 4.1 (4.9) at 1 week 2.6 at 6 months** 3.4 at 12 months***	No known bias: Socio-demographic variables and the emotional reactions to the miscarriage as analysed by the measures of depression (D-S), bodily complaint (C-L), anxiety (STAI) and grief (MGS) were comparable between participants and non-participants Confounders controlled for: Attitude towards the pregnancy, attachment to the fetus, and quality of the spousal relationship and others. Comparison group: An age- and sex-matched community sample was included	Sample size is small: n = 82 at recruitment Loss to follow-up: 45% of recruited men did not complete the final assessment Possible bias: Participants were all in the middle socioeconomic group, employed, and had a stable relationship

BDI = Beck Depression Inventory; HADS = Hospital Anxiety and Depression Scale; D-S = Von Zerssen Depression Scale; (SD) = standard deviation and (IQR) = Interquartile range

*Of 332 men recruited during the pregnancy of their partner, 68 men were included in the miscarriage group and 216 men were included in the birth group. Some men were excluded because their partner's pregnancies ended after 24 weeks (n = 17) or because their partner experienced complications during their pregnancy (n = 31)

**No standard deviation available

Discussion

The prevalence of depressive symptoms in men seemed to eventually increase or remain stable. Although it appears possible that depressive symptoms might resolve less readily in men (when compared to women, as discussed below), it is challenging to understand whether depressive symptoms were truly related to miscarriage.^{24,30} First, the prevalence of men's depressive symptoms might have been systematically underestimated, since none of the reviewed articles used a male-specific depression scale. Traditional (not male-specific) rating scales of depression might not have fully captured the way in which men with depression externalized their symptoms. Examples of evidence-based male-specific depressive symptoms might include the following: anger, aggression, distraction and avoidance, emotional suppression, hostility, isolation and relational discord, irritability, numbing by alcohol or drugs, risk-taking behaviors, sleep disturbance, and somatic symptoms.^{15,17,18} These symptoms have inspired the development of several male-specific depression scales, such as the Male Depression Risk Scale,¹⁸ Male Symptoms Scale (MSS), Gender Inclusive Depression Scale (GIDS),¹⁷ and Masculine Depression Scale (MDS).¹⁵ Second, none of the articles included in this review were conducted in the US and Canada. Thus, the prevalence of depressive symptoms in North American men post-miscarriage remains open for investigation. Finally, 2 of the studies^{24,29} also examined comorbid anxiety. According to Cumming et al.,²⁴ anxiety could have an even greater clinical impact than depression. However, Johnson and Baker²⁹ found that depression (but not anxiety) was significantly higher at 12-month post-miscarriage, compared with depression measured before the miscarriage (during pregnancy of their partners).

In sum, the prevalence of depression in men post-miscarriage is still largely under-explored. Indeed, only 4 articles were retrieved on this subject. Studies conducted with both men and women showed the prevalence of depressive symptoms is lower in men than women at each time-point assessment. Nevertheless, depression post-miscarriage remains a clinical concern in men. Although it has been suggested that men may be distressed by miscarriage to a lesser extent than women,³² and although our review seemed to corroborate this suggestion, one must take this finding with a grain of salt for

the following reasons: (1) The literature on depression post-miscarriage is limited by small sample sizes and (2) There is a lack of longitudinal comparisons of men and women.³² Keeping this in mind, and regardless of any possible difference in the nature of men's depression post-miscarriage relative to other psychosocial stressors, it is well-known that depression is often comorbid with anxiety symptoms.³ Depression (and anxiety) can become chronic or recurrent and can have devastating effects on health, family, and work. It can even lead to suicide.³

This review was limited by the small amount of literature available. Table 1 describes the strengths and limitations of the reviewed studies. As strengths, the studies controlled for several potential confounders, and there were variables for which there was no known bias. However, the studies were limited by the following: (1) small sample sizes, which is not surprising, given that men generally seem to be less inclined than women to participate in studies;^{19,21} (2) loss to follow-up; (3) possible bias between completers and non-completers; (4) potential confounders not controlled for (e.g., anxiety³⁰, history of depression and anxiety,²⁹ and psychological therapy^{24,29,30}); and (5) sometimes an absence of comparison groups.

Future studies should examine depressive symptoms in men post-miscarriage in their clinical and environmental contexts to better understand their severity, progress, and resolution over time. For instance, Kong et al. (2010)³⁰ found that a planned pregnancy that ends in a miscarriage is a risk factor for depressive symptoms in men, because this loss disrupts men's plan (of a child). To this one must also add the couple's possibly different reactions to loss (e.g., degree of their expressed distress), which may be a potential risk factor for marital conflict.³⁰ The latter needs to be acknowledged to better promote sharing, understanding, and resolution of men's (and women's) depressive symptoms.

This literature review highlights the need for further research using male-specific rating scales of depression. The latter may be more suitable to fully capture the manner in which men express their depressive symptoms. More importantly, not only do we need to rely more on male-specific screening tools for depression, but also, when depression is diagnosed,

we should aim for personalized treatment, perhaps based on biomarkers, as these may be less elusive than psychosocial risk factors.²²

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