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Search for meaning, finding meaning and adjustment in women following miscarriage: A longitudinal study

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Objective: The purpose of this study was to explore the associations between meaning making and psychological adjustment in 127 women who experienced a miscarriage.

Design: A longitudinal and controlled study design was employed.

Main outcome measures: Meaning-making variables and distress outcomes were examined at four, seven and 16 weeks after miscarriage, in two groups of women, one who had medical investigations of the cause of their loss, and a control group receiving standard care.

Results: Search for meaning was very common and it declined with time after miscarriage. By seven weeks post-loss, more than half the women reported that they had found meaning/understood why the miscarriage happened. Providing information about the cause of the loss was associated with finding meaning. A decline in the search for meaning and finding meaning at seven weeks post-miscarriage, predicted levels of distress at 16 weeks, whilst controlling for the initial distress and for significant background factors.

Conclusions: This study provides support for the notion that search for meaning is very common following negative life events, such as miscarriage, and that finding meaning is important in many peoples' process of adjustment. Providing information about the cause of the loss facilitates finding meaning.

Keywords: adjustment; finding meaning; meaning making; miscarriage

1. Introduction

Miscarriage, or the loss of pregnancy before 18 weeks, is the commonest pregnancy complication, with 15–20% of clinically recognised pregnancies ending spontaneously (Kline et al., 1995). It is often experienced as very stressful both physically and psychologically (Lee & Slade, 1996; Lok & Neugebauer, 2007). Elevated levels of anxiety, depression and grief are typically reported by women in the immediate aftermath of miscarriage, with psychological symptoms persisting for six months to one year after miscarriage (Beutel, Deckardt, von Rad, & Weiner, 1995; Lok & Neugebauer, 2007). There is inconsistency in the literature with regard to the relevance of socio-demographic, obstetric and pregnancy-related variables in predicting the psychological

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outcomes following miscarriage (Brier, 2008; Slade, 1994). This has led researchers to examine cognitive processes that may play a role in adjustment following early pregnancy loss.

According to cognitive processing theories, adjustment to stressful experiences is influenced by one's ability to search for meaning and make existential sense of events. The occurrence of negative life events challenges core beliefs about the self, the world and other people, and is likely to precipitate the *process* of search for meaning and concern with the question 'why it happened' in order to restore the order, security and predictability in one's life (Gillies & Neimeyer, 2006; Janoff-Bulman, 1992; Taylor, 1983). This process can be both automatic and effortful, and focussed on information related to the stressful event, as well as on emotional processing (Park, 2010). The *end product* of searching for meaning is referred to as finding meaning, or meanings made (Park, 2010). Many different conceptualisations of meanings made have been reported in the literature to mention only a few: a sense of having 'made sense' of the event (often described in terms of acceptance, new goals, predictability), achieving understanding of the cause of an event, perceptions of growth or positive life change, restoration of one's sense of meaning in life and change in global beliefs and goals (Park, 2010; Park & Folkman, 1997). It is often assumed that finding meaning is critical for successful adjustment following negative life experiences. For example, in the context of loss and bereavement, it has been suggested that following bereavement, one of the key tasks in recovery from loss is to accept the loss intellectually, to have the loss somehow explained, so that the 'why?' question is settled (Parkes & Weiss, 1983). This process of intellectual resolution of the loss or finding meaning in the experience is not a sufficient but may be a necessary element in recovery that will facilitate the process of adjustment (Parkes & Weiss, 1983). In the empirical literature, finding meaning is commonly assessed by asking the participants whether they have made any sense or found any meaning in the event (e.g. 'Can you make any sense or find any meaning in your baby's death?' in Davis, Wortman, Lehman, and Silver (2000)), whether an understanding of why the event happened has been reached (e.g. 'I have been able to find a reason or explanation for why my child got sick?' in Wu et al. (2008)) and what its implications may be (e.g. 'Have you found anything positive in this experience?', in Michael and Snyder (2005), with some studies emphasising meaning/understanding, others emphasising positive explanations or both.

The reported estimates concerning how frequently search for meaning is initiated following negative life events vary (Park, 2010), with some studies reporting that it is a near-universal experience (Lehman, Wortman, & Williams, 1987; Silver, Boon, & Stones, 1983) and other studies reporting that meaning-making attempts may not be as universal as commonly assumed (Coleman & Neimeyer, 2010; Downey, Silver, & Wortman, 1990). Similarly, whilst some studies have reported that meaning-making attempts may persist long after the negative event (Silver et al., 1983), others have found that such search significantly decreases with time (Bonnano, Wortman, & Nesse, 2004). The relationship between search for meaning and adjustment is also controversial, with some studies indicating that search for meaning is associated with higher levels of distress (e.g. Coleman & Neimeyer, 2010; Wu et al., 2008) and others reporting associations with lower distress levels (e.g. McIntosh, Silver, & Wortman, 1993). Furthermore, findings regarding how often meanings are made and whether such finding meaning is related to adjustment have also been inconsistent. Some studies have

reported that individuals who search for meaning from the death of a loved one may be more distressed than those who do not or who have found meaning (Davis et al., 2000). This distress may be indicative of cognitive and emotional processing, which takes time for some individuals, and which may abate once the individual is able to find meaning from the loss experienced. For example, in a study by Wu et al. (2008), pre-bereavement search for meaning in a child's illness was associated with greater post-bereavement distress whilst finding meaning was associated with less post-bereavement distress. In another study of individuals coping with the loss of a family member, Davis, Nolen-Hoeksema, and Larson (1998) reported that making sense of death was associated with lower levels of distress in the first year post-loss. However, lack of association between finding meaning and distress following spousal loss has also been reported (Coleman & Neimeyer, 2010).

In the context of early pregnancy loss, there is evidence indicating that search for meaning is common and important (e.g. Maker & Ogden, 2003; Simmons, Singh, Maconochie, Doyle, & Green, 2006) and that this most often entails an attributional search (Simmons et al., 2006). For example, Nikčević, Tunkel, and Nicolaidis (1998) reported that 87% of the 204 miscarrying women in their study expressed that it was very important to them to have an explanation as to why the miscarriage happened. Having some explanation for the loss is important as it provides women with information and reassurance regarding whether miscarriage was due to something they have done, and on how to avoid miscarriage in the future, and may aid understanding and hence, adjustment to the event (Tunaley, Slade, & Duncan, 1993). When the cause of the loss is identified, women report reduction in feelings of anxiety, self-blame and responsibility for the loss (Nikčević, Kuczmierczyk, & Nicolaidis, 2007; Nikčević, Tunkel, Kuczmierczyk, & Nicolaidis, 1999). However, even in the absence of provision of an explanation for the loss, the majority of women appear to spontaneously arrive at an explanation for their miscarriage; such meanings made were associated with lower levels of intrusive thoughts about miscarriage, but not related to the overall distress, in a study by Tunaley et al. (1993). In a study of parents who experienced various types of perinatal loss including miscarriage, Jind (2003) found that searching for meaning in the baby's death (asking oneself 'why me?') at 1–14 weeks post-loss was frequently experienced by 61% of the parents but that the majority did not have any answers nor they found any meaning in the death experienced. Searching for meaning in the baby's death was correlated positively with measures of distress and having found answers to the question 'why me?' correlated negatively with several trauma symptom measures at 1–14 weeks post-loss. However, no longitudinal relationships between meaning-making variables and adjustment were reported in this study.

The process of searching for and finding meaning is a dynamic one and longitudinal studies are most suited to capture their unfolding over time. However, the studies in the area of miscarriage, as well as much research in the meaning-making literature, have utilised cross-sectional designs. This is likely to have contributed to some of the inconsistency in the reported findings concerning meaning-making variables and adjustment. In the present longitudinal study, we examined processes pertinent to cognitive theories of adjustment in a sample of women who experienced early pregnancy loss.

Specifically, we aimed to establish:

- (1) How common and important is search for meaning following miscarriage. We predicted that search for meaning would be common shortly after the loss, and that it would decrease over time.
- (2) Whether provision of information about the cause of the loss would facilitate finding meaning. We predicted that the provision of information regarding the reasons as to why the miscarriage happened would facilitate finding meaning.
- (3) Whether searching for and finding meaning are associated with psychological adjustment. We hypothesised that, controlling for initial distress levels and background factors, searching for and finding meaning early in the aftermath of miscarriage would predict psychological outcomes at four months post-loss.

2. Method

2.1. Participants

Data for the current study come from a larger research project investigating the impact of medical and psychological counselling (MPC) on women's distress after miscarriage (Nikčević et al., 2007). The women participating in the study were recruited across three different hospital sites in the wider London area. They were all a consecutive sample of women attending for a routine scan at 10–14 weeks of pregnancy and found to have a missed miscarriage. They all had surgical evacuation of the retained products of conception shortly after the diagnosis of miscarriage. Women in the intervention group (IG) ($N=66$) had medical investigations to ascertain the cause of their miscarriage, and they all attended a medical consultation at five weeks post-loss to discuss the results of the investigations. Following the medical consultation, the women were randomly allocated into a group who received further psychological counselling i.e. 'MPC' group ($n=33$) and those that did not, i.e. 'medical counselling' only group (MC) ($n=33$). For the purposes of the current study, these two groups were collapsed into a single group, the IG ($N=66$), as no significant differences between the MC and the MPC groups were identified across the socio-demographic, obstetric or the meaning-making variables, or the main distress outcomes of anxiety and depression across any of the assessment points. The women in the IG were compared to a control group (CG) ($N=61$), who received no specific post-miscarriage counselling. Assessment of psychological outcomes was carried out by postal questionnaire at four, seven and 16 weeks after the diagnosis of miscarriage. Women with a history of recurrent miscarriage, perinatal death, elective termination for foetal abnormality, inability to speak and read English fluently, and those under current psychological or psychiatric care were excluded from the study.

Out of 98 women in the IG who were approached to take part in the study, 18 women either refused to participate or did not return their questionnaires at the appropriate times. No significant differences in socio-demographic and obstetric variables were identified between women who accepted taking part ($n=80$) and those that refused/did not return questionnaires. Out of 80 women who agreed to participate in the study, only 66 completed all three sets of questionnaires and were included in the IG.

In the CG, 111 women were approached, 69 returned the first questionnaire and met the study inclusion criteria; of these, 61 women completed all three questionnaires and constituted the CG. No significant differences in socio-demographic and obstetric variables were identified between those that took part in the study ($n=69$) and those that did not take up the offer.

2.2. Procedure

Participants in the IG were recruited from a large teaching hospital in London, where women with a diagnosis of missed miscarriage were offered investigations of the cause of their loss. These included foetal karyotyping and blood testing for lupus anticoagulant. After the diagnosis of miscarriage was made during the routine ultrasound examination at 10–14 weeks of pregnancy, women were informed about the study and invited to attend the miscarriage follow-up clinic, at five weeks after loss. Women who agreed to participate were sent a study information sheet, consent form, copy of the first questionnaire and a stamped addressed envelope, and were asked to return their completed questionnaire prior to their attendance at the miscarriage follow-up clinic. The follow-up appointment at the miscarriage clinic involved a 20 min consultation with an obstetrician who discussed the results and the implications of the medical investigations of the miscarriage, as well as aspects of the women's general health and planning of future pregnancies. Half of the women also received psychological counselling (Nikčević et al., 2007). Two weeks after the follow-up and at 16 weeks post-loss, the second and the third questionnaires respectively were mailed to the women.

The CG was derived from the consecutive samples of women diagnosed with missed miscarriage across several antenatal clinics in London hospitals. No follow-up care after miscarriage was offered in these hospitals. Following the diagnosis of miscarriage, women were invited to take part in the study, and those who expressed interest and met the study inclusion and the matching criteria, were sent a study information pack. Once the consent form and the completed four week post-miscarriage questionnaire were returned, further questionnaires were mailed to women at seven and 16 weeks post-loss. Ethical approval for the study was granted by all the participating hospitals.

2.3. Measures

2.3.1. Demographic and obstetric variables

These variables were assessed at four weeks after the loss for both the IG and the CG (Table 1).

2.3.2. Distress

Distress was measured using a composite of anxiety and depression scores as assessed by the Hospital Anxiety and Depression Scale (HADS, Zigmond & Snaith, 1983), a 14-item screening instrument, with seven items assessing anxiety and a further seven assessing depression, each being scored from 0 to 3 so that the total scores range from 0 to 21 for each subscale. Higher scores indicate higher levels of anxiety and depression or when combined like in the present study, higher distress levels. In the present study, the HADS distress score was calculated by using the mean of the total scores for the anxiety and depression subscales. Numerous studies examining the impact of

Table 1. Demographic and obstetric variables for the IG and the CG group. Numbers and percentages (in brackets) are given for each variable.

Variable	IG group ($N=66$)	CG ($N=61$)
Age (mean, SD)	35.3 (4.6)	34.3 (4.1)
Caucasian	63 (95)	57 (93)
University level education	26 (40)	28 (46)
Married/cohabiting	66 (100)	59 (97)
Employed	42 (64)	45 (74)
History of psychological difficulties	21 (32)	18 (30)
With children	53 (80)	34 (56)
Previous miscarriage	24 (36)	13 (21)
Assisted conception	3 (5)	4 (7)
Pregnancy planned	27 (82)	48 (79)

miscarriage on women have used the HADS. The scale possesses good psychometric properties (Herrmann, 1977; Moorey et al., 1991).

2.3.3. Search for meaning and finding meaning

At four weeks after miscarriage, search for meaning was assessed using a study-designed face-valid measure consisting of three single items to measure the extent to which the women placed the importance on having an explanation as to why the miscarriage happened, the frequency of wondering about the cause and asking themselves ‘Why me?’

- (1) ‘How important was it for you to have an explanation as to why the miscarriage happened?’ with categories of responses ranging from ‘not at all important’ (0) to ‘extremely important’ (4).
- (2) ‘In the past week, how often have you wondered about the reasons/causes of the miscarriage?’ with categories of responses ranging from ‘never’ (0) to ‘all the time’ (4).
- (3) ‘When women find themselves in your situation, they sometimes report asking the question: “Why me?” Have you ever asked yourself a question: ‘Why me?’ with categories of responses ranging from ‘never’ (0) to ‘all the time’ (4). Finding meaning was assessed by a single item asking women to state whether they have reached an understanding as to why the miscarriage happened with categories of responses: ‘yes’ and ‘no’.
- (4) ‘Have you reached in your mind an understanding as to why the miscarriage happened?’

At seven weeks and at four months after loss, only questions (2) and (4) were administered. The above items were deemed valid for the study as they sought to directly evaluate the extent to which the women searched for and found meaning in their miscarriage experience. Similar methodology was employed by others (e.g. Wu et al., 2008), especially in cases where data was collected as part of a larger study (and hence easier interpretation and reduction of burden on participants were important goals).

2.4. Analyses

To establish baseline differences between the IG and the CG across the socio-demographic and obstetric variables, chi-square (χ^2) analyses were computed, except for age and baseline distress levels at four weeks where an independent sample t-test was used. The continuous variables were examined for skewness and kurtosis; all had acceptable variation, except for the meaning-making question (1), about the importance of having an explanation for the miscarriage (skewness: -2.15 ; kurtosis = 4.32). The differences between two groups of women across meaning-making variables were examined using Mann–Whitney and *t*-test analyses. Changes in distress and search for meaning variables were examined using mixed 3×2 mixed ANOVAs with one within subjects factor (time: at four, seven and 16 weeks after loss) and one between-subjects factor (group: IG vs. CG). The associations of the search for meaning and distress outcomes were examined using bivariate correlations, and hierarchical regression analyses were carried out in order to examine predictors of distress at four months.

3. Results

No significant baseline differences were identified between the IG and the CG across the socio-demographic and distress outcomes, suggesting that a good match between the two groups was achieved (Table 1). Descriptive statistics for all study variables were computed and are presented in Table 2. An examination of the mean scores for distress variables revealed moderately high levels of distress at four weeks post-loss. There was a significant decrease in distress levels in both the IG and the CG with time since loss (main effect of time: $F(1.74, 217.02) = 30.87, p < .001$; no other significant effects were identified).

3.1. Search for meaning over time

As evident from Table 2, the mean scores for the importance of having an explanation as to why the miscarriage happened were high for both groups of women, with women

Table 2. Descriptive statistics of variables included in the analyses presented separately for the IG and the CG at four and seven weeks, and at four months after miscarriage.

Variable (scale range)	IG ($N = 66$)	CG ($N = 61$)
<i>Four weeks</i>		
Distress (0–21): <i>M</i> (SD)	10.86 (5.72)	10.89 (6.56)
Importance of having an explanation (0–4): <i>M</i> (SD)	3.76 (.61)	3.38 (1.05)*
Asking ‘why me?’ (0–4): <i>M</i> (SD)	2.48 (1.14)	2.25 (1.29)
Wondering about cause (0–4): <i>M</i> (SD)	2.77 (.94)	2.30 (1.15)*
Found meaning: yes/no	32/34	35/26
<i>Seven weeks</i>		
Distress (0–21): <i>M</i> (SD)	8.83 (5.99)	8.61 (5.77)
Wondering about cause (0–4): <i>M</i> (SD)	1.77 (1.06)	1.72 (1.24)
Found meaning: yes/no	55/11	35/26**
<i>Four months</i>		
Distress (0–21): <i>M</i> (SD)	7.92 (6.10)	7.82 (5.85)
Wondering about cause (0–4): <i>M</i> (SD)	1.5 (.97)	1.64 (1.20)
Found meaning: yes/no	53/13	38/23*

Notes: * $p < .05$; ** $p < .01$.

in the IG rating the importance of having an explanation more strongly compared to the women in the CG (Mann–Whitney z score = -2.38 , $p < .05$), and reporting wondering about the reasons for the miscarriage more often ($t(125) = 2.58$, $p < .05$). Women's responses to the question concerning how often they asked themselves the question 'why me?' revealed no significant differences between the two groups; about half of the women (50% in the IG and 49% in the CG) asked themselves this question 'frequently' and 'all the time', with a further 35% (IG) and 20% (CG) asking that question at least 'sometimes'; 16% of women in the IG and 32% of women in the CG 'never' or 'rarely' asked themselves this question. A significant decline in women's preoccupation and thinking about the reason/cause of their miscarriage over time was identified ($F(2,250) = 63.99$, $p < .001$). There was also a significant interaction effect of group by time ($F(2,250) = 6.06$, $p < .01$); this was followed by the planned comparisons which revealed a greater reduction in the search for meaning in the IG compared to the CG from four to seven weeks since loss ($F(1,125) = 5.58$, $p < .05$), and from four weeks to four months ($F(1,125) = 10.113$, $p < .01$).

3.2. Information about the cause of the loss and finding meaning

Women's answer to the question whether they have reached an understanding as to why the miscarriage happened revealed that at four weeks post-loss about half the sample in both groups reported having reached an understanding of the reasons for their miscarriage with no significant differences between the groups (Figure 1). All women in the IG had investigations to ascertain the cause of their miscarriages. The cause was established in 46 out of 66 women (a foetal chromosomal abnormality was the cause of the loss for 45 women and in one abnormal antibodies were identified). In 20/66 women, no obvious cause was found. The results were communicated to the women at the miscarriage follow-up in week five post-loss. By week seven, significantly more women in the IG reported having reached an understanding of the cause of their loss ($\chi^2 = 10.345$, $df = 1$, $p < .01$) compared to women in the CG. At four months this difference in the reported understanding of the cause of miscarriage between the two groups remained

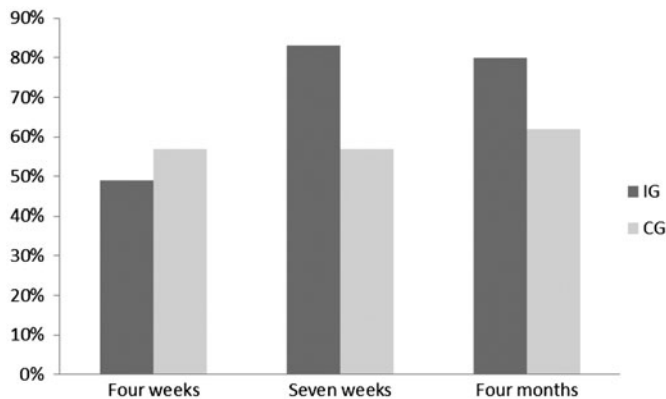


Figure 1. Percentage of women in the IG and in the CG who reported finding meaning at four weeks, seven weeks and at four months after loss.

significant ($\chi^2=5.061$, $df=1$, $p<.05$); in both groups of women the proportion of women who have reached an understanding of the cause of their loss was largely unchanged from seven weeks to four months post-loss (Figure 1).

3.3. Meaning-making variables and psychological adjustment

The more women were searching for meaning at four weeks post loss, the more distressed they were (wondering about the cause and distress: $r=.57$, $p<.001$; and asking themselves the question ‘why me?’ and distress: $r=.55$, $p<.001$). Women who reported that they asked themselves the ‘why me?’ question rarely or never (23% of the sample) had lower levels of distress at four weeks compared to women who reported that they asked themselves this question at least sometimes ($t(125)=-4.52$, $p<.001$). Women who reported having reached an understanding of the cause of their loss at four weeks after miscarriage (53% of women) thought about the cause of their loss less frequently ($t(125)=5.89$, $p<.001$) and were less likely to ask themselves the question ‘why me?’ ($t(125)=4.91$, $p<.001$), compared to women who did not reach an understanding of their loss. The same pattern of findings was evident at seven weeks ($t(125)=4.44$, $p<.001$, 71% of women) and at four months ($t(125)=4.48$, $p<.001$, 72% of women). At four months post-loss, wondering about the cause was positively associated with distress ($r=.45$, $p<.001$).

In order to establish the predictors of distress at four months after loss, we first run a free entry regression analysis entering socio-demographic and pregnancy-related variables as predictors of distress. Only history of psychological difficulties ($\beta=.18$, $p<.05$) and whether the pregnancy was conceived naturally or via assisted conception

Table 3. Hierarchical regression analyses on four month distress scores ($N=127$).

Variables entered	<i>B</i>	SE <i>B</i>	β	Adjusted R^2	<i>F</i> change
<i>Step 1</i>					
History of psychological difficulties (0=no, 1=yes)	2.37	1.11	.18*	.06*	5.20**
Conception (0=spontaneous, 1=assisted)	5.12	2.25	.20*		
<i>Step 2</i>					
History of psychological difficulties (0=no, 1=yes)	.50	.94	.04	.37***	30.77**
Conception (0=spontaneous, 1=assisted)	2.05	1.89	.08		
Group status (0=IG, 1=CG)	-.15	.84	-.01		
Distress at four weeks	.57	.07	.59***		
<i>Step 3</i>					
History of psychological difficulties (0=no, 1=yes)	.66	.89	.05	.44***	9.50**
Conception (0=spontaneous, 1=assisted)	.97	1.79	.04		
Group status (0=IG, 1=CG)	-1.35	.84	-.11		
Distress at four weeks	.52	.07	.54***		
Decrease in search for meaning from 4 to 7 weeks	.99	.40	-.17**		
Found meaning at 7 weeks (0=no; 1=yes)	-3.12	.94	-.24***		

Notes: * $p<.05$; ** $p<.01$; *** $p<.001$.

($\beta = .20$, $p < .05$) were significant predictors of the four-month distress scores. Next, a hierarchical regression analysis with four-month post-loss distress scores as an outcome variable was performed. History of psychological difficulties and conception means were entered in step 1 and four-week distress outcomes and group membership (IG vs. CG) in step 2. Meaning-making variables, i.e. a decrease in the search for meaning from four to seven weeks post-loss (computed by deducting the seven weeks from the four weeks scores), and whether understanding of the loss was achieved at seven weeks were entered in step 3. Finding meaning at seven weeks was chosen as this is when the scores stabilised in the entire sample. The results are displayed in Table 3. All variables controlled for in steps 1 and 2, explained 37% of variance in distress outcomes at four months, with the two cognitive variables adding an additional 7% of variance in the prediction of distress at four months.

4. Discussion

The results of the present study demonstrated the significance of the meaning-making variables in adjustment following early pregnancy loss. At four weeks after miscarriage, the majority of women reported being concerned with the search for meaning: they stated being preoccupied with the question ‘why me?’ wondering about the cause of their loss and reported that it was important to them to have an explanation for their miscarriage. They were more distressed compared to the minority of women (23%) who reported little concern with the question ‘why me?’ At four weeks after loss, the women in the IG reported wondering about the cause more frequently and it was more important to them to have an explanation for their loss, compared to women in the CG. The women in the IG were awaiting the results of their medical investigations of the cause of the miscarriage and hence it is not surprising that they were preoccupied with explanations of the loss more than women in the CG. This search for meaning decreased significantly with time since loss, and so did the distress scores. The results suggested that about half the women in the sample spontaneously arrived at an explanation of their loss i.e. they appeared to have found meaning for their miscarriage, a finding similar to that of Tunaley et al. (1993). In the CG of women, this occurred by four weeks post miscarriage, as there was little change in women’s reported understanding of the cause after four weeks. Among the women in the IG, there was a significant change in the proportion of women who reported finding meaning from four weeks to seven weeks, confirming our hypothesis that finding meaning is facilitated by the provision of medical information about the reasons for the miscarriage or an answer that settles the question ‘why’, at least for some of the women, i.e. those in whom the cause was found. Predictive analyses revealed that controlling for socio-demographic and obstetric history factors, as well as distress outcomes at four weeks, the distress at four months was predicted by a reduction in the search for meaning from four to seven weeks after loss and by women’s ability to find meaning for their miscarriage. Based on these findings, it appears that women who continue to search for meaning and are unable to find an explanation for their loss beyond seven weeks after miscarriage are more likely to experience continued distress several months afterwards.

The results of the present study provide further empirical support to those views suggesting that trajectories following negative life events such as bereavement and loss are varied (Davis et al., 2000). In some women, possibly those with resilient

personalities or those who did not invest significantly in the pregnancy, miscarriage will not trigger significant search for meaning. However, for many others, pregnancy loss will trigger the process of meaning making and concern with the question 'why?' when meaning-making attempts result in finding understanding for the loss experienced, this can result in better adjustment, a finding similar to that reported by Wu et al. (2008). The continued meaning making may be related to poorer adjustment for a longer term (Davis et al., 2000), presumably because the continued wondering about the cause and the meaning of miscarriage may become akin to rumination, a cognitive process associated with depression (Nolen-Hoeksema, 1991).

The results of this study are similar to the results of other studies in the area of miscarriage which have reported that, following miscarriage, the search for meaning is common (Simmons et al., 2006; Tunaley et al., 1993), and that having an explanation for the miscarriage is associated with better psychological outcomes (Nikčević et al., 1999; Tunaley et al., 1993). In the study by Tunaley et al. (1993), having arrived at one's own explanation for why the miscarriage occurred, together with this leading to a general reappraisal of values in life, was associated with lower levels of intrusive thoughts about miscarriage. The lack of avoidance and intrusion as identified in their study and lower distress levels, as found in our study, are considered to be important indicators of the development and completion of the adaptation process through which a loss experience becomes fully incorporated into a person's sense of self. This is in line with the suggestions of the bereavement theorists according to whom one of the necessary tasks in the process of recovery following bereavement is to achieve a state of intellectual resolution after loss (or to have the loss somehow explained), which in turn may facilitate emotional resolution of the loss (Parkes & Weiss, 1983). Our findings confirm this as those women who have reached a state of intellectual resolution of their loss, through having an explanation for their miscarriage, reported lower distress levels in the aftermath of miscarriage compared to those who did not.

There are a number of implications of the study findings. They clearly suggest that emotional trajectories following miscarriage are varied and for those distressed by this event, the emotional impact will lessen over the first four months. Providing women with information about the possible causes of miscarriage will facilitate development of meaning making and hence adjustment to the event. The need for follow-up care which will incorporate discussions concerning the causes of the loss, and its impact on future pregnancies has already been highlighted (Nikčević et al., 1998). Such information is likely to facilitate meaning making and women's adaptation following the loss. Continued search for meaning and explanations for the loss beyond a few months after the miscarriage are indicative of continued distress and such women may need both discussions with the medical professionals to clarify any lack of understanding or misconceptions concerning the causes of miscarriage as well as psychological input to facilitate finding meaning and making a recovery after loss.

The present study has a number of limitations, which will reflect on the possible generalisation of the obtained results. First of all, our study sample consisted of Caucasian women of somewhat older reproductive age, of higher socio-economic status, in stable relationships and who planned their pregnancies. Thus, the study findings cannot be generalised to other populations. Furthermore, all data was collected through the use of questionnaires, and cognitive variables were assessed through the use of study-designed questions and rating scales. The obtained findings may differ from those based

on studies using interviews. In addition, our search for meaning and meaning-making variables was assessed using a limited number of questions. This raises the issue of the validity of the findings. In this respect, however, our study is no different from many studies in the area, as no questionnaires of meaning making exist. Additionally, the focus of the study was on meaning, construed in terms of women aiming to understand what caused their miscarriage. Attributional search is an important one especially early in the aftermath of loss (Davis et al., 1998) and appears to be very important to women who experience miscarriage (Simmons et al., 2006). We do acknowledge that this is not the only way in which search for meaning and meaning-making can be conceptualised. The differences in the operationalisation of the concept of meaning making (e.g. be it as sense making vs. cause understanding vs. benefit finding) are likely to lead to different findings. Furthermore, time since loss may also play an important role in the form of meaning making which is taking place, as with the passage of time, meaning making may move from attributions of responsibility or understanding of the cause for the loss to benefit finding, and these may be differentially related to adjustment (Davis et al., 1998; Park, 2010). Notwithstanding these limitations, we believe that the present study offers valuable empirical evidence, based on longitudinal data, to support the notion that meaning making following miscarriage is important to women, that such meaning making can be facilitated through the provision of information about the cause of the loss and that inability to find meaning is associated with greater levels of distress.

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