Title: Perinatal grief following a termination of pregnancy for fetal abnormality: the impact of coping strategies

Running head: The impact of coping on perinatal grief following TFA

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Bulleted statement:

What's already known about this topic:

- TFA can have long-lasting psychological consequences
- Little is known about the coping strategies used to deal with TFA

What this study adds:

- Despite using adaptive strategies, levels of grief are high
- Coping strategies predict perinatal grief in the context of TFA
- Acceptance and positive reframing lead to better adjustment

- Using Cognitive Behavioural Therapy or ACT may benefit women

ABSTRACT

Objective: Pregnancy termination for fetal abnormality (TFA) can have significant psychological repercussions, but little is known about the coping strategies involved in dealing with TFA. This study examined the relationships between women's coping strategies and perinatal grief.

Method: 166 women completed a survey online. Coping and perinatal grief were measured using the Brief COPE and Short Perinatal Grief scales. Data were analysed through multiple regression analyses.

Results: Despite using mostly adaptive coping strategies, women's levels of grief were high and varied according to obstetric and termination variables. Grief was predicted by: behavioural disengagement, venting, planning, religion, self-blame, being recently bereaved, being childless at the time of TFA, not having had children/being pregnant since TFA, and uncertainty about the decision to terminate the pregnancy. Acceptance and positive reframing negatively predicted grief.

Conclusion: Identifying women vulnerable to poor psychological adjustment and promoting coping strategies associated with lower levels of grief may be beneficial. This could be addressed through information provision and interventions such as CBT or Acceptance and Commitment Therapy.

INTRODUCTION

Pregnancy termination for fetal abnormality (TFA) is a major life event that can have long-term psychological consequences for women and their families.[1-4] Although the prevalence of TFA is low (e.g. 1% of all terminations in England and Wales in 2011[5]), it is likely to increase with the introduction of non-invasive prenatal testing[6] (e.g. cell-free DNA) and the delay in child bearing age resulting in higher risks of obstetric complications.[7] Women may experience a range of negative emotions post-TFA[1-4] and, although distress usually subsides over time, grief reactions can be observed years after the termination.[8,9]

The importance of coping strategies in psychological adaptation to adverse events is evident in many health conditions where individuals facing similar events adjust differently.[10,11] Coping can be defined as "cognitive and behavioural efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person."[12, p141] It involves a series of processes that occur when one faces a stressful event, with some focusing on appraising the event (perception and evaluation), and others on coping *per se* (resources involved in dealing with it). So far, most research on TFA has focused on how women adapt psychologically[1-4] and the emotions they (and their partners) experience when grieving.[13]There is little understanding of the actual coping strategies involved in dealing withTFA and the role these play in women's psychological adaptation.

As a major life event, with potential complex and long-lasting consequences, it is important for clinicians to understand women's coping strategies when dealing with TFA to promote optimum care to women and their families in both the immediate and longer-term. In this study, we examined women's coping strategies when dealing with TFA and their levels of perinatal grief. In particular, we assessed whether coping strategies predict

levels of perinatal grief and identified the coping strategies most associated with positive psychological adaptation.

METHODS

A cross-sectional survey was conducted with 166 members of a British support group, which offers support to parents facing a diagnosis of fetal abnormality. Participants were recruited through the group e-mail network and forum and completed the survey online between April 2011 and July 2012. All participants were female, over 18 years old, and had undergone TFA. Participants completed two standardised scales, the Brief COPE[14] and the Short Perinatal Grief Scale (Short PGS).[15] The Brief COPE is a short version of the COPE Inventory.[16] It comprises 28 items measuring 14 different coping strategies (self-distraction, active coping, denial, substance use, use of emotional support, use of instrumental support, humour, behavioural disengagement, venting, positive reframing, planning, acceptance, religion and self-blame) and uses a 4-point Likert scale (*I haven't been doing this at all* to *I've been doing this a lot*). Carver[14] recommends tailoring the number of subscales to the research question, given that the subscales are assessed independently from each other and there is no overall coping measure. On this basis, the subscale 'humour' was removed because it was deemed insensitive, and the wording of the instructions and some of the statements were adapted to fit the subject of the study.. The Brief COPE has been used in different health[10,11] and trauma settings[17]. Its validity and reliability are well established with Cronbach's alpha values ranging from 0.50 to 0.90.[14] Participants were allocated a score between 2 and 8 on each subscale, 8 representing highest usage of that coping strategy.

The Short PGS derives from the Perinatal Grief Scale.[18] It comprises 33 items scored on a 5-point Likert scale (*Strongly agree* to *Strongly disagree*). Items are grouped into three 11-item subscales (active grief, difficulty coping and despair) illustrating progressive pathological levels of grief. Active grief represents 'uncomplicated grief' and covers items such as crying for and missing the baby, whereas difficulty coping and despair characterise 'complicated grief.' Difficulty coping illustrates withdrawal and difficulties in dealing with grief and daily functioning, while despair encompasses constructs such as guilt, emptiness and worthlessness. The three subscales are aggregated into a general grief scale. Higher scores reflect higher levels of grief. Scores range from 11 to 55 for the subscales and from 33 to 165 for the general grief scale. The short PGS has been used to measure grief following different types of perinatal loss (miscarriage, stillbirth, neonatal death, induced abortion, and TFA).[19,20] Its validity and reliability are well established with Cronbach's alpha values varying between 0.86 and 0.92.[15]

Questions related to the terminated pregnancy were also included, e.g. gestational age, termination method, fetal abnormality prognosis (lethal/non-lethal), whether women had living children at the time of TFA, whether this was their first pregnancy, feeling about the decision to terminate (would/would not make the same decision again), time elapsed since TFA. Demographic data (e.g. age, education level, ethnicity) were also collected. Twenty seven participants also responded to open-ended questions on the coping strategies used at the time of the termination and afterwards; this qualitative analysis is reported elsewhere.[21]

The online survey was hosted by a secure website (SurveyMonkey). Participants could leave and re-enter the survey, enabling them to complete it at their own pace. The questionnaire was piloted on three participants; no changes were made as a result. Ethical

91 approval was obtained from a University Ethics Committee in South-East England.
92 Participants were given information about the study and consent was obtained for all of
93 them. Participants could not start the survey unless they had indicated their agreement to
94 the statements eliciting their consent. Participants were given the telephone number of the
95 group helpline and had access to the group's volunteer network in case they wanted to
96 speak to anyone following questionnaire completion. The first author's membership of the
97 group's volunteer network raised possible ethical issues of duality of roles and
98 confidentiality. Thus, the first author's name was removed from the list of volunteers
99 available to participants.

100 Interim analysis based on 119 participants indicated that 12 predictors would be
101 used in regression analyses. Using a power calculation tool (GPower, version 3.1), the
102 sample size required was set at 127[1]. More participants were therefore needed, which
103 would also ensure that the analysis could be conducted should the number of predictors
104 increase. To recruit additional participants, a second message was posted on the forum.
105 When no more questionnaires had been completed for over 14 days, the decision was made
106 to stop collecting data.

107 Data were analysed using SPSS (version 21, SPSS Inc, Chicago). To examine the
108 relationship between women's coping strategies and their perinatal grief, the 13 Brief COPE
109 subscales were used as predictors and the four Short PGS scales as outcomes. Grief levels
110 were compared across obstetric and demographic groups using a one-way analysis of
111 variance (ANOVA) test, followed by Bonferroni *post hoc* test (equal variances) and *t*-tests.
112 Variables exhibiting significant correlations with the grief variables were included in the
113 regression analyses. Multiple hierarchical regressions were run for each of the grief scales

[1] Calculation based on: effect size (0.15), alpha value (0.05) and power (0.80)

114 individually. Coping strategies were entered first and TFA variables second. For all tests, *p*-
115 values < 0.05 were considered statistically significant.

116 **RESULTS**

117 In total 215 participants took part in the study. Of those 38 did not complete the survey in
118 full, and a further 11 were identified as duplicates. Thus, the total number of completed
119 questionnaires is 166. Table 1 shows the participants' demographic and obstetric profile.
120 Participants were aged between 22 and 46 years old (mean: 34.5, SD: 4.9), the majority
121 (70.5%, n = 117) were University-level educated. All but one participant were married or in a
122 relationship, and 97.0% (n = 130[2]) were White. Pregnancies were terminated between 12
123 and 35 weeks of gestation (mean: 18.5, SD: 4.9). For approximately half the participants
124 (53.0%, n = 88), termination had occurred less than 6 months before participating in the
125 study. Most terminations were medical (77.7%, n = 129). For 70 participants (42.2%), this
126 represented their first pregnancy.
127
128 *Insert Table 1 here*
129
130 Use of coping strategies and levels of perinatal grief
131 Use of coping strategies and levels of perinatal grief are shown in Table 2. Both
132 scales displayed satisfactory levels of internal reliability with Cronbach's alpha values for the
133 Short PGS of 0.83 for active grief and despair, 0.86 for difficulty coping and 0.93 for the
134 general grief subscale. For the Brief COPE, Cronbach's alpha values ranged from 0.56 for

[2] Data on ethnicity are based on 134 responses.

behavioural disengagement to 0.96 for substance use. The subscale denial did not satisfy the minimum requirement of 0.5[22] with a value of 0.48, and thus was excluded from further analysis. Overall, women used mainly adaptive coping strategies when dealing with TFA including acceptance, emotional support, active coping, planning and instrumental support. The scores for these variables were above the midpoint value of 5. The mean score for self-distraction, often considered a maladaptive strategy, was also above the midpoint. By contrast, behavioural disengagement or substance use registered the lowest usage (2.8 and 2.9 respectively). Despite using mostly adaptive coping strategies, levels of grief were high. The mean scores for the three subscales decreased progressively indicating incremental levels of pathological grief, so that the highest scores were recorded for active grief and the lowest for despair. Mean scores for active grief (41.5) and general grief (104.1) were above the midpoint (33 and 99 respectively), whereas scores for difficulty coping (33.1) and despair (29.5) were on or below the midpoint.

Insert Table 2 here

Levels of grief related to the terminated pregnancy

Levels of grief differed according to variables related to the terminated pregnancy (Table 3). Significantly higher levels of grief were observed among women who were childless at the time of TFA (all grief variables), for whom it was the first pregnancy (all grief variables), who were not pregnant/had not had children since TFA (all grief variables), who would not/were unsure they would make the same decision to terminate again (difficulty coping, despair and general grief) and who were more recently bereaved, i.e. in the previous 6 months (active grief and general grief). Differences between age groups were noticeable, with

159 women under 35 displaying higher levels of active grief. No significant differences were
160 observed across groups for termination method, gestational age, abnormality prognosis, or
161 education level.
162
163 *Insert Table 3 here*
164
165 Relationship between coping strategies and perinatal grief
166 Scores on the grief subscales were highly inter-correlated (*r* ranging from 0.70 to 0.93).
167 Adaptive coping strategies were positively correlated with each other (e.g. positive re-
168 framing and acceptance $r = 0.43$, $p < 0.01$) and negatively correlated with grief scales (e.g.
169 acceptance and general grief $r = -0.47$, $p < 0.01$). Maladaptive strategies were also
170 correlated with each other (e.g. behavioural disengagement and self-blame, $r = 0.22$, $p <$
171 0.01) and positively correlated with grief (e.g. behavioural disengagement and general grief
172 $r = 0.44$, $p < 0.01$). Correlations between demographic and grief variables were not
173 significant, except for age, which exhibited a weak negative correlation with active grief ($r =$
174 -0.19, $p < 0.05$) and general grief ($r = -0.17$, $p < 0.05$). Point-biserial correlations between
175 dichotomous TFA variables and grief variables were significant for: having living children at
176 the time of TFA, being pregnant/having had children since TFA, and whether they
177 would/would not make the same decision again. Statistically significant correlations are
178 shown in tables 4 and 5.
179
180 *Insert Tables 4 and 5 here*
181

Variables showing a significant correlation with grief variables were used as predictors in the multiple regression analyses. Individual models were run for each grief variable based on its own set of predictors.[3] The resulting hierarchical regression models are shown in Table 6. Active grief was positively predicted by self-blame, religion, planning and behavioural disengagement, and negatively predicted by acceptance and time elapsed since termination (highest scores among those who underwent TFA 6 months prior). Difficulty coping was positively predicted by self-blame, behavioural disengagement, venting and feeling about the decision (highest scores among those who would not/were unsure they would make the same decision again); difficulty coping was negatively predicted by acceptance, positive reframing, time elapsed since termination, having living children at the time of TFA (highest scores among those who were childless) and by being pregnant/having had children since TFA (highest scores among those who were not pregnant/did not have children). Despair was positively predicted by self-blame, behavioural disengagement, and feeling about the decision, and negatively predicted by acceptance, having living children at the time of TFA and being pregnant/having had children since TFA. General grief was positively predicted by self-blame, behavioural disengagement, venting, planning, religion, feeling about the decision, and negatively predicted by acceptance, positive reframing, time since termination, having living children at the time of TFA and being pregnant/having had children since TFA.

[3] Although the 'first pregnancy' variable was significantly correlated with all grief subscales, it was excluded from the analysis because it was highly correlated with the 'having living children at the time of TFA' variable ($r = 0.81$, $p < 0.001$) and found to be statistically less useful. Furthermore, the variable 'having living children at the time of TFA' reflects women's obstetric history more accurately as number of pregnancies does not necessarily equate to number of living children. Similarly, although 'age' was significantly negatively correlated with active grief and general grief, its predictive value was weak and thus, was removed from the analysis.

The total amount of variance explained by the models was high: 50.5% for active grief, 59.7% for difficulty coping, 53.3% for despair and 64.6% for general grief. TFA variables accounted for 8.6% (difficulty coping, despair), 10.8% (general grief) and 13.1% (active grief) of the variance.

Insert Table 6 here

DISCUSSION

The findings show that women facing TFA relied more on adaptive than maladaptive coping strategies. This is consistent with a qualitative investigation of women's coping strategies at the time of TFA and afterwards.[21] The scores for the coping strategies in this study were comparable to other studies using the Brief COPE.[23] The mean scores for the three Short PGS subscales decreased progressively indicating incremental levels of pathological grief, in line with other studies using the Short PGS in the context of perinatal.[20] This study also indicates that a relationship exists between the coping strategies used by women when dealing with TFA and their levels of grief. When controlling for obstetric and termination variables, women who reported using strategies such as acceptance and positive reframing fared better psychologically than those who used more maladaptive strategies such as self-blame, or behavioural disengagement. These findings support the hypothesis that the use of maladaptive strategies may lead to poorer psychological outcome.

However, it is also remarkable that despite the use of adaptive coping strategies, women's levels of grief were higher than in other studies using the Short PGS[19,20] and that a significant proportion of participants displayed pathological grief levels that may meet criteria for complicated grief. In their review of studies using the PGS, Toedter and

224 colleagues suggested that scores above 34 for active grief, 30 for difficulty coping, 27 for
225 despair and 91 for general grief indicated complicated grief.[20] In our study, 79.5% (n = 132)
226 of the women scored above 34 for active grief, 59.6% (n = 99) above 30 for difficulty coping,
227 56.6% (n = 94) above 27 for despair, and 69.9 (n= 116) above 91 for general grief. Similarly,
228 in a study of emotional responses to TFA, mean scores for the general grief scale ranged
229 between 76 and 85, well below the levels observed in our study (104.1).[24]

230 This finding is clinically relevant given that complicated grief is to be included in the
231 Diagnostic and Statistical Manual of Mental Disorders (DSM-5). This inclusion has generated
232 debate with some arguing that it is necessary to ensure that those suffering receive help,[25]
233 while others raise issues of false-positive diagnosis and medicalisation of normal human
234 emotions.[26] The high levels of grief in the presence of adaptive coping strategies also leads
235 us to question the validity of classifying coping strategies into distinct categories such as
236 adaptive/maladaptive. In the past 20 years, researchers have promoted a more granular and
237 multidimensional approach to coping, which they believe reflects more accurately the
238 complexity of coping processes.[14] In this study, when traditionally labelled maladaptive
239 strategies were used (e.g. behavioural disengagement) they might have served an adaptive
240 function. Although possibly maladaptive in the long-term, these strategies may have
241 contributed to protecting women from emotional distress in the short-term.[21] Similarly, the
242 use of self-blame may reflect characteristics unique to TFA. In a recent study about trauma
243 following TFA, guilt, a construct close to self-blame, was shown to influence grief
244 symptomatology.[27] Indeed, it may be unsurprising that some women experience a degree of
245 self-blame given that they, and their partners, bear the responsibility for terminating their
246 pregnancy. In the context of TFA self-blame may reflect a feeling inherent to the nature of
247 the loss rather than a coping strategy *per se*.

The levels of grief in this study varied based on obstetric and termination variables, with higher levels of grief recorded among women more recently bereaved, those who were childless at the time of TFA, who were not pregnant/had not had children since TFA and who would not/were unsure they would make the same decision again. Similar findings have been reported in the TFA literature.[28-30]

The high levels of grief may be explained by a number of factors. First, over half the participants had experienced their loss 6 months or less prior to participating in the study and evidence has shown that emotional distress peaks in the first year following TFA.[31] Our study supports this finding as levels of grief were lower as time elapsed. Second, the use of a support group may also be related to levels of grief as all participants were, to some degree, active on the support group e-mail network or forum. It is plausible that women who experience high levels of emotional distress may be more likely to use an online support group. However, it is also plausible that women who do not seek online support may experience even higher levels of grief. To our knowledge, there is currently no evidence to indicate the direction of the relationship, if any..

A third, and not inconsistent explanation, may be that the way people use an online support group may influence their emotional well-being. The health benefits of self-disclosure, a central component of using online support groups, have been well documented.[32,33] However, direct evidence of the psychological benefits of engagement with online-support groups is inconclusive.[34] Some studies suggest that using an online support group may provide a forum for self-expression, social support and a sense of empowerment, which collectively act as a buffer against distress.[35,36] However, another line of evidence suggests a more complex relationship: a study of peer-to-peer interactions in an online support group for women with breast cancer, indicates that members who

concentrate on their own story tend to experience more psychological distress than those open to the story of other members.[37] Although the causal direction of this relationship is difficult to determine, this may support our study's finding linking venting to poorer psychological adjustment.

Other studies have also underlined (among the many benefits of online communities) the potential for the use of online support groups to lead to rumination.[38] Thus, the nature of interactions and the depth of involvement in the support group may influence women's psychological adjustment. In line with this hypothesis, research has shown that women who do not seek professional help following TFA and do not engage in bereavement ritual adjust better than those who do.[9] Further research would be needed to ascertain the impact of online support groups on psychological adjustment in the context of TFA, and the direction of any relationships. Finally, it is also likely that dispositional characteristics[35] may influence the extent of women's self-disclosure. Research on personality factors and self-disclosure in the context of TFA would therefore be welcome.

The study also indicates that there is some value in identifying women vulnerable to poor psychological adaptation following TFA, and suggests a number of risk factors, mostly outside women's control (time since termination, having children at the time/since TFA, feeling about the decision). The study also underlines a number of protective factors which may enhance women's psychological adjustment, including coping strategies such as acceptance and positive reframing. Therefore, it may be beneficial to promote such strategies through information provision or talking therapies. For example, interventions based on CBT may be appropriate. Similarly, Acceptance and Commitment Therapy (ACT), which blends 'acceptance and mindfulness strategies with commitment and behaviour change strategies'[39] may be helpful. ACT consists of embracing experiences, acknowledging

296 the feelings and cognitions that accompany these and devising a course of action in
297 accordance with the individual's values.[40] It may also be beneficial to minimise the use of
298 less helpful coping strategies such as behavioural disengagement, and address issues of self-
299 blame. Finally, it may be helpful to highlight the range of emotions women may experience
300 post-termination, including relational tensions,[41] feeling of inadequacy[42] but also a sense of
301 renewed strength and personal growth.[43]

302 In light of these considerations, it is important that the care provided to women is
303 sensitive and adapted to individual needs. A core component of providing appropriate care
304 may lie in understanding the nature of the loss. Bereavement following TFA has been
305 compared to bereavement after stillbirth.[44] However, although the unexpected nature of
306 stillbirth may impact the grieving process, elements specific to TFA (e.g. possible doubt or
307 guilt over the decision, concern about being judged by others) may also complicate the
308 grieving process. The way women adjust to TFA is important to their quality of life as a
309 whole. It may also significantly impact the way they manage subsequent pregnancies, as
310 women who have experienced pregnancy loss may display higher levels of anxiety and
311 depression during subsequent pregnancy than those who have not.[45]

312 To our knowledge, this study is among the first to examine the direct relationship
313 between coping strategies and perinatal grief within the context of TFA. Thus, it provides
314 valuable insights into the way coping strategies impact psychological adjustment to TFA. It
315 also complements the emergent qualitative literature about women's coping strategies
316 during TFA.[21] The amount of variance explained by the regression models was high (50.5 to
317 64.6%), which alongside the statistically significant reports of analysis of variance (ANOVA)
318 in the models, indicates that coping strategies are strong predictors of grief. The study also
319 highlights important intervention implications.

This study also had limitations, which warrant further research. Longitudinal research is needed to establish directional causality between women's coping strategies and their grief levels, and to identify the role of moderating and mediating variables. A longitudinal design would also facilitate cross-validation of self-reports to address possible *post hoc* rationalisation or social desirability bias in women's responses. In this study some participants may have under-reported their use of less adaptive strategies (e.g. substance use) or grief levels. Our participant profile was also predominantly White, well-educated and in a relationship. Many TFA studies report similar sampling issues.[31,46] Although this profile is a valid reflection of the support group's membership we sampled from, it is not fully representative of women experiencing TFA. Researchers need to address the coping strategies of women who do not participate in support groups either through choice or inability to access a group. Finally, it would also be beneficial to examine the role of online support group participation on psychological adaptation to TFA, particularly, the importance of different levels and styles of user involvement e.g. posters vs. lurkers. Evidence from these new directions will provide a more comprehensive account of what coping with TFA involves.

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Table 1 – Participants' demographic and obstetric profile. Data are presented as number and percentage or as mean, SD, and range

	N	%	Mean	SD	Range
DEMOGRAPHIC PROFILE					
Age	166		34.5	4.9	22-46
Education					
Secondary	49	29.5			
Graduate	67	40.4			
Postgraduate	50	30.1			
Ethnicity - White	130	97.0			
OBSTETRIC PROFILE					
Time since termination					
Up to 6 months	88	53.0			
7-12 months	35	21.1			
12-24 months	28	16.9			
24 months+	15	9.0			
Gestational age at TFA	166		18.5	4.9	12-35
Method of termination					
Medical	129	77.7			
Surgical	36	21.7			
Abnormality prognosis – Lethal	68	41.0			
Children at time of TFA - Yes	77	46.3			
First pregnancy – Yes	70	42.2			
Would make the same decision again - Yes	122	73.5			
Children since TFA - Yes/pregnant	49	29.6			

Table 2 – Mean scores and standard deviation for the Brief COPE and Short PGS subscales

Brief COPE	**Mean**	**SD**	**Brief COPE**	**Mean**	**SD**
Self-distraction	**5.22**	1.71	Venting	4.77	1.75
Active coping	**5.35**	1.69	Positive reframing	4.34	1.86
Denial	3.04	1.20	Planning	**5.28**	1.78
Substance use	2.88	1.52	Acceptance	**5.96**	1.56
Emotional support	**5.93**	1.70	Religion	3.14	1.70
Instrumental support	**5.21**	1.68	Self-blame	4.81	1.90
Behavioural disengagement	2.82	1.18			
Short PGS			**Short PGS**		
Active grief (11-55)	**41.53**	7.08	Despair (11-55)	29.49	7.99
Difficulty coping (11-55)	**33.11**	8.62	General grief (33-165)	**104.14**	21.58

Values above the mid-point are highlighted in bold – Brief COPE: > 5, Active grief, Difficulty coping and Despair: > 33 and General grief: >99

Table 3 – Significant group differences on Short PGS subscale by obstetric and demographic variables

	Yes	No	t-value	
Children at time of TFA	**N= 77 (46.3%)**	**N= 89 (53.6 %)**		
Active grief	40.14 (SD: 7.44)	42.73 (SD: 6.56)	2.38	p = 0.018
Difficulty coping	31.22 (SD: 8.71)	34.75 (SD: 8.24)	2.68	p = 0.008
Despair	27.36 (SD: 7.49)	31.34 (SD: 7.99)	3.29	p = 0.001
General grief	98.72 (SD: 21.58)	108.82 (SD: 20.58)	3.08	p = 0.002
First Pregnancy	**N= 70 (42.2%)**	**N = 96 (57.8%)**		
Active grief	43.33 (SD: 6.11)	40.22 (7.47)	2.86	p = 0.005
Difficulty coping	34.86 (SD: 7.93)	31.84 (8.92)	2.25	p = 0.026
Despair	31.50 (SD: 7.85)	28.03 (SD: 7.81)	2.82	p = 0.005
General grief	109.69 (SD: 19.69)	100.09 (SD: 22.10)	2.89	p = 0.004
Children post-TFA	**N = 49**	**N = 117**		
Active grief	38.55 (SD: 7.60)	42.78 (SD: 6.48)	3.64	p = 0.000
Difficulty coping	29.88 (SD: 8.57)	34.47 (SD: 8.31)	3.22	p = 0.002
Despair	27.45 (SD: 7.93)	30.35 (SD: 7.89)	2.16	p = 0.032
General grief	95.88 (SD: 22.14)	107.60 (20.47)	3.29	p = 0.001
Same decision again	**N = 122 (73.5)**	**N = 44 (26.5)***		
Active grief	*41.10 (SD: 7.02)*	*42.73 (SD: 7.18)*	*-1.31*	*p = 0.191*
Difficulty coping	32.05 (8.39)	36.07 (SD: 8.67)	-2.70	p = 0.008
Despair	27.98 (7.58)	33.68 (7.66)	-4.26	p = 0.000
General grief	101.13 (20.73)	112.48 (21.95)	-3.06	p = 0.003
	Up to 35 years old	**35 +**		
Age	N= 88 (53%)	78 (47%)		
Active grief	42.58 (SD: 6.52)	40.35 (SD: 7.53)	2.05	p = 0.042
Difficulty coping	*34.06 (SD: 8.25)*	*32.05 (SD: 8.96)*	*1.50*	*p = 0.135*
Despair	*30.22 (SD: 8.42)*	*28.68 (SD: 7.44)*	*1.24*	*p = 0.22*
General grief	*106.85 (SD:20.89)*	*101.08 (SD: 22.07)*	*1.73*	*p = 0.09*
Time since termination	**Up to 6 months**	**6-12 months**	**12-24 months**	**24+**
Active grief	43.80 (6.13)	40.29 (6.58)	38.64 (6.61)**	36.53 (9.36)**
Difficulty coping[+]	34.72 (8.56)	33.00 (8.25)	30.14 (8.24)	29.53 (8.78)
Despair	30.15 (7.74)	29.71 (9.07)	27.61 (7.20)	28.67 (8.33)
General grief	108.66 (20.41)	103.00 (22.09)	96.39 (19.76)*	94.73 (24.83)

Comparison between each group was by t-tests for all variables except for the 'Time since termination' variable, for which a one-way analysis of variance (ANOVA) with *post-hoc* Bonferroni test was used. Groups were compared against the most recently bereaved group (up to 6 months), * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

[+] There was a main effect of 'time since termination' on 'difficulty coping'; $F(3\text{-}162) = 3.10$, $p < 0.028$, but Bonferroni tests did not reveal any significant pair-wise differences

Table 4 – Overview of statistically significant correlations between Brief COPE and Short PGS scales

	Self-distraction	Active Coping	Emotional Support	Instrumental Support	Behavioural Disengagement	Venting	Positive Reframing	Planning	Acceptance	Religion	Self-blame	Active Grief	Difficulty Coping	Despair
Self-distraction														
Active Coping	.169*													
Substance Use														
Emotional Support		.397**												
Instrumental Support		.401**	.610**											
Behavioural Disengagement														
Venting		.324**	.438**	.391**	.155*									
Positive Reframing		.352**	.276**	.228**										
Planning	.172*	.474**	.274**	.361**	.156*	.305**								
Acceptance	.235**	.386**	.358**	.181*	-.201**		.425**							
Religion							.180*							
Self-blame					.217**			.210**	-.186*	.222**				
Active Grief					.344**	.246**	-.211**	.267**	-.383**	.199*	.404**			
Difficulty Coping					.466**	.272**	-.330**	.242**	-.438**		.477**	.755**		
Despair			-.187*		.372**		-.244**	.182*	-.446**		.540**	.704**	.769**	
General Grief					.437**	.238**	-.291**	.252**	-.466**	.170*	.523**	.890**	.931**	.908**

*. Correlation is significant at the 0.05 level; **. Correlation is significant at the 0.01 level

Table 5 – Overview of statistically significant correlations between Short PGS scales and obstetric and demographic variables

	Active Grief	Difficulty Coping	Despair	General grief
Age	-.194*			-.171*
First pregnancy†	-.218**	-.173*	-.215**	-.220**
Children at time of TFA†	-.183*	-.205**	-.249**	-.234**
Children since TFA†	-.273**	-.244**	-.166*	-.248**
Feeling about decision†	.102	.206**	.316**	.233**

*. Correlation is significant at the 0.05 level; **. Correlation is significant at the 0.01 level
† Point-biserial correlations

Table 6 – Results of multiple regression analysis for active grief, difficulty coping, despair and general grief scale.

Variable	Active grief	Difficulty coping	Despair	General grief
Step 1 - predictors	*β*	*β*	*β*	*β*
Behavioural disengagement	0.13*	0.24***	0.17**	0.20***
Venting	0.09	0.16**	n/a	0.12*
Planning	0.13*	0.10	0.09	0.12*
Religion	0.17**	n/a	n/a	0.11*
Self-blame	0.27***	0.30***	0.37***	0.33***
Positive reframing	-0.11	-0.18**	-0.06	-0.14**
Acceptance	-0.28***	-0.25***	-0.29***	-0.30***
Emotional support	n/a	n/a	-0.02	n/a
F model	15.33***	30.50***	23.73***	28.91***
R_2 on step 1	0.38	0.52	0.45	0.54
Step 2: predictors				
Time since TFA	-0.33***	-0.17**	n/a	-0.22***
Children at TFA	-0.11	-0.12*	-0.18***	-0.15**
Children since TFA	-0.07	-0.14*	-0.20***	-0.13*
Feeling about TFA	n/a	0.15**	0.18**	0.16**
F model	17.86***	25.41***	21.92***	28.36***
R_2 on step 2	0.51	0.60	0.53	0.65
[a]Change in R_2	0.13***	0.09***	0.09***	0.11***

$* p < 0.05$; $** p < 0.01$; $*** p < 0.001$;

[a] difference in R_2 on steps 1 and 2, and the significance of F-change.