Partners in adversity

III. Mood status after the event

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Summary. This paper presents further results from a longitudinal study of three groups of married women undertaken in Edinburgh. Each group shared a common stressful experience. In the first group the marital partner had recently died; in the second the marital partner had recently experienced a myocardial infarction (MI) and the third group consisted of women recently entering a Women's Aid refuge. Interviews were completed shortly following the adverse experiences and where possible again about 3 months later. This report presents details of the (self-reported) mood status of the respondents at both assessment occasions in terms of the degree, form and change in symptomatic distress over what were equivalent time periods for the three groups. Mood status was determined on the basis of the conventionally scored 30-item GHQ (General Health Questionnaire) and according to a criterion-based scoring procedure. On this basis at initial interview almost 8 out of 10 of the widows were above the advised GHQ cut-point, almost 6 out of 10 of the refuge seekers and over 4 out of 10 of the coronary wives. At follow-up these proportions had almost halved for the widows and coronary wives but had changed very little for those few refuge-seekers successfully re-interviewed. According to a criterion-based measure at initial interview, the recent widows had an anxiety rate 5.2 times and a depression rate ten times that of a general population sample of women. Details of the changes in mood status amongst the groups over the follow-up are presented.

Key words: Female – Life event – Bereavement – Longitudinal – Depression – Anxiety

Introduction

Recent research attempting to examine the resilience and vulnerability of individuals to adverse experience has undertaken the investigations in the context of widely differing measurement and design strategies. Within public

health psychiatry, understanding of adversity-illness relationships has been enhanced through the adoption of standardised approaches to the assessment of mental state and of interviewer-based techniques to assess the (relative) magnitude and form of social adversity. The use of the two measurement strategies in the same studies, undertaken in a variety of research settings, has advanced understanding of the nature of the response of individuals to adversity and permitted the development of models of the process of responsiveness to and mastery of these situations (e.g. Andrews and Brown 1988; Brown et al. 1990 a–d). Such research has also provided estimates of population based risks of the onset of the more common psychiatric disorders (e.g. Surtees et al. 1986; Miller et al. 1987). In general terms though, this body of research, in pursuit of diagnostic convention, has laid less emphasis upon individuals' own reports of their mental health; perhaps in part because of the failure of traditional self-report measures of symptomatic state to attach an unambiguous meaning to their responses.

The adoption of the diagnostic model in general population settings yields onset groups that can be further classified according to their fulfilment of anxiety, depression or indeed comorbid diagnostic criteria; it has then been a small step to attempt the search for specific stressor precursors to those particular conditions (e.g. Finlay-Jones et al. 1980; Finlay-Jones and Brown 1981; Ingham et al. 1987; Brown et al. 1992).

However, these study designs present special difficulties for achieving their objective as they were not constructed around particular adversity exposures that unified the samples studied. Evidence for specificity of response was sought from the immense diversity of stressful incidents recorded (including for many in general population samples with no significant recent adverse experience).

To address these and other issues a study was undertaken in Edinburgh amongst three groups of married women where the members of each group had been exposed to a recent similar adverse experience. The three groups were; 1. A recently bereaved sample of married women (the bereaved group), 2. A group of women whose husbands had recently suffered a myocardial infarction

which required admission to hospital (the coronary group), 3. A group of women who had recently entered a Women's Aid refuge (the refuge group). This paper therefore has the following primary objective; to document the mental health status of the three groups of women, according to their own reports, after the elapse of broadly equivalent time periods following their adverse experiences. Subsidiary aims include 1. assessing their mental status according to the conventional scoring of the General Health Questionnaire (GHQ; Goldberg 1978; Goldberg and Williams 1988) and according to a scoring scheme that endows ratings with putative diagnostic significance; 2. examining the specificity of mood response (in anxiety and depression terms) to the differing adverse exposures over the few weeks following their experience; 3. examing the change in mood status over the short post-event period studied. This work then provides the background to an examination of the relationship between coping resources and mood status examined in a further paper (Surtees and Miller 1994).

Design and methods

The design and methods of this study have been described in detail in two earlier papers (Surtees and Miller 1993; Miller and Surtees 1993). In brief, three groups of women were recruited to the study based upon their common exposure to recent adversity. The bereaved group of married women was obtained through contacts with general practitioner (GP) practices within Lothian region over a period of approximately 1 year. This enabled the identification of those married men of working age (i.e. under 65 years) who had died during the preceding fortnight. About 3 weeks following each death, the GP was asked to approach the widow to obtain her agreement for a research interview to be undertaken. The coronary sample was recruited by approaching all married male patients (of working age) who had been admitted either to the Royal Infirmary or to the Western General Hospital in Edinburgh following their experience of a myocardial infarction. Contact with the patient and their GP facilitated the arrangement of a research interview with their spouse about 1 month after their husband had experienced his MI. Those few wives who would have been interviewed because of their husband's MI but whose husbands had died before leaving hospital were included within the bereavement groups. The refuge sample were recruited from local Women's Aid group. Staff in each of these groups approached new residents, on our behalf, to enable our interviews to be completed about 4 weeks following refuge entry.

Assessments

A team of interviewers were trained to collect routine demographic information, details of available crisis social support (associated with event occurrence), details of the coping styles adopted by the women and of other life stress experienced [according to the Life Events and Difficulties Schedule (LEDS); Brown and Harris 1989] and to complete an assessment of their mood status using the 30-item version of the General Health Questionnaire (GHQ) and of their psychiatric status using an adaptation of the Longitudinal Interval Follow-up Evaluation (LIFE; Keller et al. 1987). The initial interview was undertaken on average about 6–7 weeks following the study events and was designed to assess the life stress and psychiatric status of each respondent over the period from 6 months prior to study event occurrence up to the time of interview. A follow-up assessment was completed between 3 and 4 months after the first and covered the time period between interviews. The principal parts of the initial assessment were repeated at follow-up.

Further details are provided in earlier papers (Surtees and Miller 1993; Miller and Surtees 1993). This paper is concerned only with the measures of mood state of the groups at both initial and follow-up interviews as determined by both conventional and modified scoring of the GHQ.

Scoring of the GHQ-30

In a previous paper (Surtees and Miller 1990), a measure and procedure were described for documenting the presence and course over time of brief spells of anxiety and depression (and associated) symptoms.

The measure, the Interval General Health Questionnaire (I-GHQ), was based upon 12 items selected from the 30-item GHQ and the procedure derived from the principles applied in the LIFE. This previous work describes how the individual items were selected and the diagnostic considerations underpinning the choice of items. Subjects for the initial study were 175 Edinburgh University medical students.

A further paper examined the relationship between the conventinally scored GHQ-30 (reduced to a binary measure based on the most usually applied cut-point), measures derived from the subset of GHQ items (as used in the study of medical students) and clinical psychiatric status in general practice and general population samples (Surtees and Tansella 1990). Results based on sensitivity, specificity and Y (Yule's' coefficient of colligation) underpinned the scoring approach. With this research background the following scores were determined on the basis of the same selected sub-set of 12 items of the GHQ-30 as used in the earlier work. The scores were constructed as follows:

(a) An 'all item score' was determined by summing all 12 items after conventional binary (GHQ) scoring. For some purposes a cut-off (at the ≥ 2 level) was imposed to create a binary score.

(b) Two further scores were produced with each determined on the basis of standard GHQ scoring. The first was created from six designated 'anxiety items' and the second from six 'depression' items. To retain equivalence with the earlier work cut-off scores were then imposed, ≥ 2 for the anxiety items and > 0 for the depression items.

(c) Criterion-based scoring of the items was also undertaken in an identical way to that found useful in the earlier cited analyses. The scoring placed enhanced importance on two particular symptoms, one from each of the two symptom sub-sets. From the anxiety set the item 'been feeling nervous and strung-up all the time' was the chosen key item, whilst from the depression set 'been feeling unhappy and depressed' was the key item. Criterion scores were established for the anxiety items alone, for the depression items alone and for a combined measure. Four levels of symptomatic distress were established based upon combinations of the anxiety items and upon combinations of the depression items. The least severe level (level 0) indicated that the key criterion symptom was not reported, level 1 indicated that the key symptom was reported together with no or one additional symptoms (of the five possible), level 2 required two or three additional symptoms and level 3 four or five of the subsidiary symptoms in addition to the key symptom. The criterion scoring strategy was extended to embrace the presence of either or both of the key symptoms, with or without any additional symptoms of the ten remaining (all rated according to the conventional GHQ binary scoring). This procedure provided for six criterion levels of symptomatic distress. Severity levels were constructed to range from 0 to 5. Level 0 (the least severe) criterion indicated that neither of the key symptoms had been reported. Levels 1–5 all required one or both of the key symptoms together with 0 or 1 of the additional symptoms (level 1) to level 5 where eight or more of the additional symptoms (of the ten possible) were required. The criterion scoring was designed therefore to provide a measure determined according to similar principles to those applied in commonly used research diagnostic schemes but based upon a widely used and readily applied measure of symptomatic distress.

Table 1. GHQ and I-GHQ scores at initial interview (**A**), by group and at follow-up interview (**B**), by group

A	Coronary (n = 143)	Bereaved (n = 63)	Refuge (n = 32)
Scale scores: mean (SD)			
GHQ	5.64 (5.83)	12.38 (8.23)	8.38 (7.73)
I-GHQ:			
All items	2.72 (2.72)	5.35 (3.87)	3.78 (3.72)
Anxiety set	2.17 (1.91)	3.27 (2.22)	2.38 (2.17)
Depression set	0.55 (1.12)	2.08 (1.99)	1.41 (1.81)
Percentage scoring at or above cut-off point			
GHO: % scoring ≥ 5	44.8	79.4	56.3
I-GHQ:			
All items: % scoring ≥ 2	58.7	82.5	62.5
Anxiety set: % scoring ≥ 2	56.6	71.4	59.4
Depression set: % scoring > 0	28.0	76.2	50.0
"Sensitivity"[a]	98.4	98.0	83.3
"Specificity"[a]	73.4	76.9	64.3

B	Coronary (n = 126)	Bereaved (n = 58)	Refuge (n = 19)
Scale scores: mean (SD)			
GHQ	3.66 (6.15)	7.41 (8.86)	6.58 (7.49)
I-GHQ:			
All items	1.67 (2.87)	3.14 (3.90)	2.95 (3.50)
Anxiety set	1.11 (1.75)	1.55 (2.05)	1.84 (2.09)
Depression set	0.56 (1.29)	1.59 (2.04)	1.11 (1.56)
Percentage scoring at or above cut-off point			
GHO: % scoring ≥ 5	24.6	44.8	47.4
I-GHQ:			
All items: % scoring ≥ 2	31.0	46.6	47.4
Anxiety set: % scoring ≥ 2	27.8	39.7	47.4
Depression set: % scoring > 0	20.6	51.7	36.8
"Sensitivity"[a]	93.6	100.0	88.9
"Specificity"[a]	89.5	96.9	90.0

[a] Relationship between I-GHQ (all items, cut-off point ≥ 2) and GHQ (usual cut-off ≥ 5) as criterion

Therefore these scoring procedures can be easily reproduced by others who have employed the GHQ but wish to derive a 'putative' index of diagnostic status. The creation of a mixed category, including either or both key criterion symptoms of anxiety or depression may be seen as a proxy for those presentations of relatively mild or limited ranges of symptoms, perhaps reflected in the need in some diagnostic schemes for a separate classification of mixed anxiety and depressive disorder (e.g F41.2 in ICD-10, WHO, 1992).

Results

Response, refusal rates and demographic characteristics of the three study groups are provided in the earlier publications (e.g. see Surtees and Miller 1993).

Initial interviews were completed on 143 coronary wives, 64 widows and 32 refuge seekers. A follow-up interview was successfully completed with 126 coronary wives, 58 widows but only 19 refuge seekers.

Initial interviews were completed on average 6.5 weeks following event occurrence (for the coronary group 6.3; bereaved 6.8; refuge 7.0) whilst follow-up interviews were completed on average 15.8 weeks following event occurrence (for the coronary group 15.6; bereaved 15.7; refuge 17.3).

In general, therefore, estimates of mood status were determined after the elapse of equivalent time periods amongst the three very different stressor exposed groups.

Mood status

Scores were determined for the three groups, as outlined above, on the basis of the GHQ-30 completed at both interviews.

Table 1 (A & B) shows the mean scores and the percentage of each group scoring above the defined cut-points at the time of the first and follow-up interviews.

At initial interview the three groups can be ranked by their mean scores and by the percentages scoring above given cut-points; the recently bereaved reporting the highest level of distress, followed by the refuge group with the coronary group reporting the least symptomatic distress.

At follow-up this relationship is less clear, perhaps because the number of women interviewed from the refuge sample was considerably reduced. All mean scores were lower at follow-up than those initially assessed as might reasonably be expected, illustrating the progressive adaptation by the women over time to the initial impact of the stressors. One-way analysis of variance, (using, if appropriate, log-transformed scores, followed by a Duncan's multiple range test) indicated the degree of difference in group means. For all initial interview comparisons, the bereaved group had mean symptom levels significantly greater than both the coronary and refuge groups; but only for the depression item set was the mean scores for the refuge sample significantly greater than that of the coronary group. However, these analyses fail to control for factors that may confound the relationship between group status and symptom scores. As the refuge group were much younger than the other two groups, and as age and measures of mental status are commonly related, a further analysis of variance (with age as a covariate) was completed. This confirmed the robustness of the results described above and obtained without allowance for age. The relationship between social and demographic factors and measures of mental state will be explored more fully in a future paper.

Use of the conventionally applied GHQ cut-point, based upon these initial interview scores, indicated that almost 8 out of 10 of the widows were above the advised cut-point, almost 6 out of 10 of the refuge seekers and over 4 out of 10 of the coronary wives. At follow-up (Table 1 B) these proportions had almost halved for the bereaved and coronary groups but had changed very little for those few refuge seekers successfully re-interviewed. In some contrast, in a general population sample of women in Edinburgh, about 20% scored above the same cut-point (Surtees 1987).

Also shown in Table 1 are the mean scores and percentages of women scoring above specified cut-points on scales constructed to represent the syndromes of anxiety and of depression. Only amongst the coronary wives was a pronounced difference identified at initial interview; where a two-fold variation in rates was observed with the higher rates being found for the anxiety syndromes. Table 1 also indicates sensitivity and specificity estimates of the extent to which applying the I-GHQ cut-point identifies the same sub-sample of each group as through the use of the conventional GHQ cut-point (used in this instance as the 'true' criterion). As in the previous work cited, the results show considerable similarity, particularly so at follow-up.

The percentage of each sample satisfying the criterion scoring requirements at each interview is shown in Table 2. The adoption of this method of scoring, allied to the I-

Table 2. Percentage of women meeting various I-GHQ criterion levels at initial interview (A), at follow-up interview (B)

A	Coronary (n = 143)	Bereaved (n = 63)	Refuge (n = 32)
Anxiety criterion levels[a]:			
3	13.3	34.9	21.9
2	9.8	9.5	12.5
1	0.7	0.0	0.0
0	76.2	55.6	65.6
Depression criterion levels[a]:			
3	1.4	19.1	6.3
2	7.0	12.7	15.6
1	16.1	36.5	9.4
0	75.5	31.7	68.8
Combined anx./dep. criterion levels[a]:			
5	2.1	20.6	9.4
4	5.6 (21.0)	12.7 (46.0)	12.5 (37.5)
3	13.3	12.7	15.6
2	10.5	17.5	6.3
1	1.4 (79.0)	9.5 (54.0)	0.0 (62.6)
0	67.1	27.0	56.3

B	Coronary (n = 126)	Bereaved (n = 58)	Refuge (n = 19)
Anxiety criterion levels[a]:			
3	8.7	13.8	10.5
2	4.0	10.3	0.0
1	1.6	3.4	0.0
0	85.7	72.4	89.5
Depression criterion levels[a]:			
3	3.2	13.8	0.0
2	5.6	13.8	21.1
1	7.1	22.4	5.3
0	84.1	50.0	73.7
Combined anx./dep. criterion levels[a]:			
5	4.0	10.3	5.3
4	4.0 (14.3)	12.1 (25.9)	15.7 (26.3)
3	6.3	3.5	5.3
2	0.8	13.8	0.0
1	3.2 (85.7)	12.1 (74.2)	0.0 (73.7)
0	81.7	48.3	73.7

[a] See text details

GHQ items, reveals the point prevalence in each group (at each interview) who report the key symptom of either anxiety or depression in association with the presence of additional symptoms. The groups can be ranked therefore at both interview assessments (with the recent widows having the highest rates and the coronary wives the least) according to the percentage satisfying the most demanding criteria on each scale (level-3 depression, level-3 anxiety and level-5 'combined').

These rates therefore provide a common basis for assessing the variation and form of the self-reported symp-

tomatic distress of the groups since they were exposed to their adverse experiences. Whilst at initial interview the groups differed significantly from each other in terms of all three morbidity measures ($P < 0.01$), at follow-up the difference was restricted to the measure of depression ($P < 0.01$). At initial interview the most demanding anxiety criterion was met by 34.9% of the recently widowed, representing 2.6 times that of the coronary wives and 1.6 times the refuge seekers. Similarly the widows had a level-3 depression rate that was 13.6 times that of the coronary wives (and 3.0 times that of the refuge group). Notably, there was a predominance for groups to have a higher (maximum level) rate for anxiety than for depression at both initial and follow-up assessments.

An indication of the extent to which the criterion-based estimates differ from those in a general population sample of women is provided by reference to earlier work (Surtees and Tansella 1990).

The previously reported results suggested that 6.7% of a sample of 313 women satisfied level-3 anxiety, 1.9% level-3 depression and 8% the combined criterion (equivalent to the aggregation of levels 3 to 5 shown in Table 2).

At initial interview therefore, the recent widows had an anxiety rate (in these terms) 5.2 times and a depression rate 10 times that of the general population sample. At follow-up these differences had dropped to about 2 times and 7 times respectively.

For the coronary wives, the changes in absolute rates were more subtle, the anxiety rate (at the highest level) dropped by about 35% between interviews whilst the depression rate remained broadly unaltered.

Change in mood status

To examine changes in morbidity levels between the two assessment occasions, (paired-sample) t-tests were initially completed on overall scores. Only 19 women were available from the refuge seekers, insufficient to undertake any meaningful analysis. They were excluded therefore from this section of the analysis.

Indications of the magnitude and form of change in overall mood status has already been provided in the preceding tables. The t-tests confirmed that for the bereaved and coronary groups the change (a net reduction) in overall mean scores (whether determined either by the entire GHQ or overall I-GHQ subset of items) was significant ($P < 0.001$).

Analysis of the item subsets of the I-GHQ showed that significant reductions in mean anxiety scores were found for both groups ($P < 0.001$) but for the coronary wives no difference in mean depression scores was detected. The bereaved group reported a significant reduction in their depression scores ($P = 0.022$) over the follow-up. An indication of the change in overall GHQ scores for these two groups is shown in Fig. 1.

The upper part of the figure (A) displays the cumulative percentage, in each of the bereaved and coronary groups, by the (ranked) degree of absolute change in their GHQ scores between follow-up and initial assessment. For the coronary group, almost 60% registered a net reduction in scores, indicating that for every three women
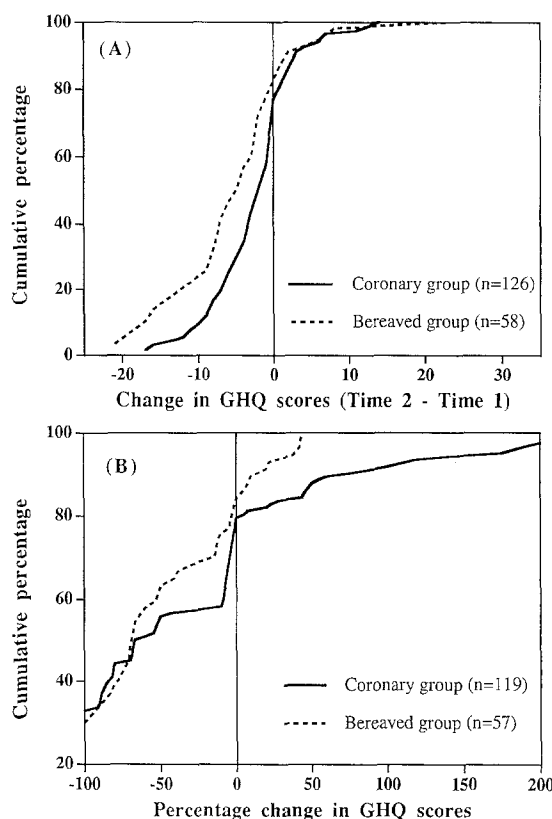

Fig. 1. Cumulative distribution of coronary wives and widows (A) by their absolute change in total GHQ scores between interviews and (B) by percentage change in total GHQ scores

whose scores fell, two increased. For the bereaved group, just over 77% reduced their scores, (giving a reduction ratio of about 7:2) with 22.4% reducing scores by at least 10 points; whilst only 9.5% of the coronary group recorded a similar degree of change.

Fig. 1 (A) takes no account of the different initial score levels of the two groups. Fig. 1 (B) replaces the absolute change in scores with the percentage change between the two assessments. Those few women (four coronary wives and one widow) with initial GHQ scores of zero are excluded from the analysis as are three coronary wives, 'outliers', with percentage increases in scores exceeding 200%. The display reveals that 36 (63.1%) of the bereaved and 68 (55.7%) of the coronary wives registered a reduction from their initial score level of 50% or over during the follow-up interval reflecting their rate of adaptation to the adversity exposure.

McNemar tests were now completed on those women classified by the criterion scoring procedures (and by the conventionally scored GHQ) amongst the coronary and bereaved groups. The results are shown in Table 3 and reveal considerable differences in the degree of change and of continuing morbidity according to whether either the conventionally scored GHQ was used or the criterion-based scoring approach.

For the coronary wives, the results based upon the criterion scoring show nonsignificant changes in contrast to those using the GHQ. However, the differences are due to the less specific focus of the aggregate scoring approach

Table 3. Percentage with criterion-based and GHQ scores at both interviews for the recently bereaved and the coronary wives groups

Group	Morbidity measure			
	Anxiety criterion (3/< 3) %	Depression criterion (≥ 2/< 2) %	Combined criterion (≥ 3/< 3) %	GHQ ≥ 5 %
Coronary group (n = 126)				
Continuing cases	4.8	4.8	9.5	19.1
New cases	4.0	4.0	4.8	5.6
Improved	8.7	3.2	12.7	29.4
Never cases	82.5	88.1	73.0	46.0
McNemar test *(P)*	*(ns)*	*(ns)*	(0.053)	(0.0000)
Bereaved group (n = 58)				
Continuing cases	12.1	19.0	20.7	43.1
New cases	1.7	8.6	5.2	1.7
Improved	24.1	13.8	27.6	36.2
Never cases	62.1	58.6	46.6	19.0
McNemar test *(P)*	(0.001)	*(ns)*	(0.0044)	(0.0000)

Table 4. Comorbidity of criterion-based scores at each assessment for the recently bereaved and the coronary wives groups

Group		Morbidity measure		
		Anxiety criterion only (3/< 3)	Anxiety and depression criterion	Depression criterion only (≥ 2/< 2)
Coronary group				
At initial interview	Rate (%)	7.0	6.3	2.1
	(Relative %)	(45.5)	(40.9)	(13.6)
At follow-up	Rate (%)	3.2	5.6	3.2
	(Relative %)	(26.7)	(46.7)	(26.7)
Bereaved group				
At inital interview	Rate (%)	11.1	23.8	7.9
	(Relative %)	(25.9)	(55.6)	(18.5)
At follow-up	Rate (%)	0	13.8	13.8
	(Relative %)	(0)	(50.0)	(50.0)

inherent in conventional use of the GHQ. For the bereaved sample, significant changes were found for both the anxiety and combined criterion measures. It would appear that over the follow-up interval there was a significant improvement in the anxiety component of the distress experienced by this sample and that this may have preceded that for depression. However, 19.0% of the bereaved sample reported themselves depressed on both occassions, the latter some 4 months following the loss that recruited them to the study; a level four times that of the equivalent coronary wives group. The individual anxiety and depression criterion-based measures enabled a brief examination of the 'syndrome-mix' at each interview and

thereby provided some indication of the specificity of response to the adverse experiences amongst the two primary study groups. The results are shown in Table 4.

Of the coronary wives who satisfied the criterion scoring, over 85% did so for anxiety (alone or jointly with depression) and over 40% were comorbid for the two mood states. At follow-up, overall rates had declined and there was no longer any predominance in favour of either anxiety or depression. For the recent widows, over 55% of those that satisfied the criterion scoring at initial interview were comorbid for anxiety and depression, with a slight predominance for anxiety overall. At follow-up the (relative) comorbidity rate amongst the sample was largely unchanged but the profile of distress had changed from one involving a sizeable proportion meeting anxiety criteria alone to one where no widow satisfied that requirement. Whilst anxiety criteria were met by some at follow-up, it was always in the context of the depressive syndrome, the initial period of adaptation to their loss appeared to have resulted in the earlier amelioration of the anxiety symptoms but still leaving a raised rate of depressive distress.

Discussion

This paper has examined the mood status of three groups of women with each unified by their experience of adversity. The assessments of mood, based upon a widely used measure and completed after the elapse of broadly equivalent time periods, were subject both to conventional scoring and to a procedure designed to improve the clarity of the nature and severity of the mood status experienced. The criterion-based scoring used is readily applicable to other data sets in which self-report symptom ratings were obtained.

As with the earlier work cited, so the results of this study showed that the I-GHQ item subset yielded results broadly comparable with those obtained using the full GHQ scale. Proportions of each sample exceeding conventionally applied cut-points could be ranked, with the recent widows reporting the most distress, followed by the refuge seekers and then the coronary wives. This ranking essentially reflects the relative levels of threat associated with the adversity experienced (see Surtees and Miller 1993). For the coronary wives, over 40% scored above the conventionally applied GHQ cut-point some 6 weeks after their husbands' MI, only dropping to about 25% after four months had elapsed. The criterion-based approach revealed that the greater proportion of this morbidity involved either anxiety alone or a 'syndrome-mix' of anxiety and depression; depression alone was uncommon. At follow-up this pattern was broadly unaltered, save that the proportion of women with anxiety alone had more than halved. The overall level of reported morbidity in this group declined with the passage of time.

A few other studies have examined the impact on wives' mental health of husbands experiencing an MI, usually in the context of evaluating counselling procedures and influence on patient readjustment. Mayou et al. (1978) assessed 82 wives of men experiencing a first MI; immediately following the MI, 2 months later and again at 1 year.

Their findings revealed that at 2 months, 34% of the wives reported moderate or severe tension and 19% moderate depression; at 1 year these levels had dropped to 25% and 15% respectively. Mayou and colleagues concluded that the psychosocial disability of the wives was comparable to that of the patients, that the wives had a major role in the readjustment of the patients to their MI and that their mental health was a determinant of recovery. Their finding that the level of anxiety morbidity exceeded that of depression was confirmed by this study. A further study (Thompson and Meddis 1990), provided details on the mental adjustment of 60 wives of first-time MI patients.

This work was undertaken to evaluate routine care versus routine care enhanced by the provision of a program of education and psychological support. Mental state was assessed through self-report using the Hospital Anxiety and Depression scale (HAD; Zigmond and Snaith 1983) on five occasions over a 6-month period.

As with the study by Mayou and colleagues (1978), so this work revealed that the wives' anxiety levels exceeded that for the patients both before and after treatment. However, the study revealed no difference in depression scores between the routine and treatment groups over the follow-up and concluded that depression was probably not a significant issue. This is in contrast to the findings of the present study where the results suggested (Table 4) that at follow-up, depressive and anxiety syndromes were equally common.

The experience of marital bereavement in this study was associated with a morbidity pattern involving heightened levels of both anxiety and depressive syndromes and the progressive amelioration of that symptomatic distress over the approximate 3 month interval between assessments. The level of distress exceeded that experienced by the MI sample and was in accord with expectations given the differences in associated ratings of event threat (see Surtees and Miller 1993). By follow-up, over 60% of the bereaved had registered a reduction of 50% or over in their initial scores.

The study revealed that the nature of their reported distress, whilst initially dominated by those comorbid for depression and anxiety syndromes, and by those who only fulfilled the anxiety syndrome, had changed at follow-up to one where depression was the dominant mood state. The results suggested that the anxiety component of the distress had resolved before improvement in depression.

The appropriateness or not of imposing formal psychiatric diagnostic criteria to the recently bereaved remains unresolved. Whilst the Diagnostic and Statistical Manual of Mental Disorders, Third Edition, Revised (DSM-III-R; American Psychiatric Association 1987) clearly excludes those experiencing "uncomplicated bereavement" from a diagnosis of clinical depression, no clear basis is yet available to distinguish normal from abnormal bereavement reactions. The work of Clayton and associates (Clayton et al. 1972; Bornstein et al. 1973) revealed the impact of bereavement in terms of depressive symptom clusters over the year following the loss and revealed the diverse range of symptoms reported. However, it was concluded, (Clayton 1974) that the psychological symptoms reported over the first year of widowhood should be accepted as "normal and natural" as there was no increase in seeking medical care. This paper does not resolve the issue, but through imposing putative diagnostic criteria, adds meaning to the changing psychological status of the sample over those first few critical weeks following the loss.

Other work has revealed the impact of marital bereavement on the subsequent risk of death of the surviving spouse (Jagger and Sutton 1991) and work undertaken by MacMahon and Pugh (1965) has indicated a raised suicide rate in the first 6 months after bereavement (2.5 times higher) suggesting that marital bereavement was implicated in death by suicide. A particular problem in undertaking studies examining the psychological and social effects of bereavement is maximising the participation rate. In this study a response rate of 76% was obtained for the recently bereaved in contrast to about 58% in two other studies examining similar issues (Clayton 1974; Jacobs et al. 1990). Interpretation of results may be hazardous where significant proportions of target samples are noncompliant. The study of Zisook and Shuchter (1991) where 2466 widows and widowers were initially contacted, but only 350 (14.2%) provided initial information on depressive symptoms, provides at best an uncertain and selective picture of mood states following loss. However, using the Zung Depression Scale (Zung 1975) these authors found that 30% of the bereaved were severely depressed at 2 months; this being in close accord with the 31.8% found in the present study for those scoring at or above an applied depression criterion.

This study has therefore revealed a little of the immediate impact on (self-reported) mood of three very different adversity exposures. The refuge seekers, driven to flee as they were from marital relationships where violence was a common feature, provided an indication of the consequences on their mood status. Whilst the follow-up of this sample was limited by unavoidable circumstances, the results suggest that this group continued to experience high levels of symptomatic distress. This result, broadly equivalent to that reported by the recent widows, suggests that whilst the strategy of escape to the protective 'sanctuary' environment of a refuge enabled them to avoid the mutually damaging marital relationship, the impact on mental health remained unresolved. This is perhaps best represented for one refuge seeker who died shortly after study completion following marital violence. Not all women responded in similar ways to their experiences and a further paper examines the relationship between outcome in the groups and the coping styles they adopted to face their new circumstances.

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