Partners in Adversity: I. Study Design and Context

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Summary. This paper presents results from a longitudinal study of three groups of married women undertaken in Edinburgh. Each study group was identified through their common experience of a particular stressful situation. Recruitment to the two principal study groups required that a marital partner had either recently died or had recently experienced a myocardial infarction (MI). The third group consisted of those women recently entering a Women's Aid refuge. Interviews were completed with 64 bereaved women, 143 women shortly following their partner's MI and 32 women entering a refuge. Where possible, follow-up interviews were undertaken about three months following the first interview. Detailed assessments were made of the 'target' stressful experiences, of any others that had occurred, and of the course and nature of the respondent's mental health during the study period. Additional assessments included measures of style of coping and of the support resources available and ultilised. This report presents details of the design and methodology of the study and of the respondents' experiences of the specific stressors that recruited them to the study. It also provides the background to an examination and analysis of the sequencing of adverse experiences reported in the companion paper.

Key words: Female – Life event – Bereavement – Longitudinal

Introduction

This paper reports upon a short-term follow-up study of three groups of married women, each group identified because of their common experience of a recent specific adverse experience; namely death of a husband, a husband's life-threatening illness (myocardial infarction, MI) and having endured such difficult domestic circumstances that they had found it necessary to enter a Women's Aid refuge.

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During the last 15–20 years, the study of life stress has typically focused on establishing the nature of the relationship between the occurrence of multiple random event experiences and the development of specific physical or psychiatric conditions. Within psychiatry, most attention has been given to affective disorders, anxiety states and schizophrenia. A principle concern within this research has been, quite correctly, the attention to issues of measurement. Over this time period, life event studies have progressively become more systematic in the methods applied. However, the dominant approach has been to pursue studies focused around a specific or very narrow range of adverse health outcomes and to employ analytic procedures to evaluate the impact of the immense diversity of event experiences preceding or co-occurring with the changes in health.

One goal of this approach has been to determine whether stressors which have certain attributes in common, are more commonly associated with the development of one type of disorder than with another. For example, the probability of onset of a depressive condition may be found to be more likely following an event with a particular characteristic or set of attributes than an anxiety condition. Whilst event exposure can be reliably assessed on a scale of severity, as in the Life Events and Difficulties Schedule (the LEDS), developed by George Brown and colleagues (Brown and Harris 1989), it will always be the case that the particular nature of the events, though equally rated on severity, will differ in many other ways. Of course, a founding principle of the LEDS approach is to evaluate particular event experiences in their context and to develop measures which directly reflect their attributes and emotional significance. However, a large scale general population study of women in Edinburgh has shown the complexity of the difficulty of rigorously evaluating the significance of particular individual life stress attributes.

Life events and long-term difficulties in that study were rated on a number of dimensions including antisocial act, choice of action, the hopelessness of the situation, personal loss, threat, and the uncertainty of outcome attached to each stressful incident. Pursuit of this

approach on over 2000 rated stress experiences of the general population sample revealed the diversity of the life stressors experienced by the Edinburgh women, with respect to those particular individual characteristics or combinations of characteristics (Miller et al. 1986). In seeking to clarify the nature of the relationship between diverse stress experience and health change based upon such a stressor typology, analytic strategies are severely constrained by the extreme rarity of many of the combinations of stressor types. In consequence, techniques have to be employed which combine different classes of event experience; an approach that tends to reduce the potential offered by this rating strategy, at least in the context of a general population sample.

In part to limit this problem and to facilitate the achievement of other aims, a study was undertaken in Edinburgh designed around the occurrence of three distinct and potentially stressful experiences; the Target Events (TE's). The two principal study groups required that a marital partner had recently died (this sample being the Bereavement Group) or had recently experienced a myocardial infarction (the Coronary Group). The third group consisted of those women recently entering a Women's Aid Refuge (the Refuge Group). The design of this study rests upon an attempt to study three groups of women unified by their experience of particular and highly specific stressful events. The primary aim of this paper is to reveal the extent to which these groups experienced diversity in their stress experience, according to conventional measures of life stress, thereby underpinning the rationale of the research design and providing the foundation for the pursuit of other aims including investigating specificity of adversity experience and the nature or form of psychological response. This paper therefore will exclude consideration of measures of psychiatric state.

Design and Methods

Bereaved Group Recruitment

From April 1988 to the end of May 1989, 13 general practitioner (GP) practies within Lothian Region were contacted once every 2 weeks to ascertain whether any married men of working age (i.e. under 65 years) had died during the preceding fortnight. Six of these practices served predominantly working class areas within Edinburgh City, whilst the remaining 7 practices served the populations in and around Livingston, East and West Calder and South Queensferry. 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.

Coronary Group Recruitment

The Coronary sample was recruited by approaching all married male patients who had been admitted either to the Royal Infirmary or to the Western General Hospital in Edinburgh following their experience of a myocardial infarction. Suitable patients were married, of working age and were living within the areas served by the above two hospitals. Each week the new patients were approached on the ward by a member of the research team who explained the study and sought permission to approach their wives. Following

agreement, the wife's general practitioner was contacted, (general practices serving the area had been circulated in advance with details of the study) to inform them of our wish to include their patient in the study. With the GP's agreement the wives were contacted at home with the intention of arranging a research interview about 1 month after their husband had experienced his MI. Those few MI patients who had left hospital prior to our initial contact were first approached at home. In addition, 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 group.

Refuge Group Recruitment

To obtain the Women's Aid sample, co-operation was obtained from the Edinburgh, Livingston, Mid- and East Lothian Women's Aid refuge groups. Staff in each of these groups approached, on our behalf, those new residents who indicated that they intended to remain in a refuge for more than just a few days. The research design required that interviews be completed about 4 weeks following refuge entry. Each refuge was contacted every 2 weeks to arrange for visits by members of the research team. Recruitment of this subject group proved most difficult because of the complex nature of the problems that had precipitated their departure from the marital home, of the requirement that women had to be married and because consent to a research interview given to refuge staff was sometimes withdrawn when the subject was finally approached by an interviewer.

Measures and the Selection and Training of Interviewers

A team of 12 interviewers was initially recruited for this study. A number of these had gained experience of work in social psychiatry through their involvement with other projects undertaken in Edinburgh. In particular several had been trained on the Present State Examination (PSE) (Wing et al. 1974) and its Edinburgh development, the Psychiatric Assessment Schedule (PAS) (Dean et al. 1983) during the early 1980's. Further psychiatric research experience had been gained over several years through their continuing involvement with other research groups associated with the Royal Edinburgh Hospital.

For the present study, a training programme was designed to cover the assessment areas included in the new interview. This included the collection of routine demographic information, social support (including that associated with event occurrence), coping styles, life stress and psychiatric status assessment (using an adaptation of the Longitudinal Interval Follow-up Evaluation (LIFE) (Keller et al. 1987).

Training on the assessment of life stress included the contextual assessment of life events and long-term difficulties following the principles underlying the LEDS developed by George Brown and colleagues (Brown and Harris 1989). However, whilst the procedures and categories of stressors rated were broadly similar to the LEDS (allowing direct comparison of equivalent classes of stressors rated in other studies using the LEDS), training on additional ratings and methods was also given. The additional ratings included personal loss, impaired relationships, focus, choice of action and uncertainty of outcome. The additional methods concerned special techniques for combining life stressors and for assessing changes in their impact over time. Further details are provided in a companion paper (Miller and Surtees 1993).

An initial interview was undertaken on average about 6–7 weeks following the target events. The interview was designed to assess the life stress and psychiatric status of each respondent over the period from 6 months prior to 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.

Table 1. Response and refusal rates

	The study groups					
	Coronary		Bereaved		Refuge	
	n	%	n	%	n	%
(A) Initial interview completed	**143**	(82.19)	**64**	(75.29)	**32**	(69.57)
(B) Refusals:						
(a) Coronary patient refuses to let spouse be approached for interview	**12**	(6.90)				
(b) General practitioner (or ward staff) refuse to allow approach	**2**	(1.15)	**2**	(2.35)		
(c) Subjects refuse the initial interview	**13**	(7.47)	**10**	(11.77)	**10**	(21.74)
(d) Subjects refuse interviews through General practitioner			**5**	(5.88)		
(C) No contact made (despite all efforts)	**3**	(1.72)	**3**	(3.53)	**4**	(8.69)
(D) Subjects too ill to be interviewed	**1**	(0.57)	**1**	(1.18)		
Total	**174**	(100.00)	**85**	(100.00)	**46**	(100.00)
Response rate = A/(A + B + C)		**82.66%**		**76.19%**		**69.57%**
Refusal rate = B/(A + B)		**15.88%**		**20.99%**		**23.81%**

Table 2. Demographic characteristics of the study samples at initial interview[a]

	Coronary		Bereaved		Refuge	
Mean age (s.d.)	51.1	(8.82)	51.2	(9.33)	31.2	(6.71)
	n	%	n	%	n	%
Age distribution:						
18–34	6	(4.2)	6	(9.4)	24	(75.0)
35–54	84	(59.2)	25	(39.1)	8	(25.0)
55–67	52	(36.6)	33	(51.6)	0	(0.0)
Social class (S)[b]						
Middle class	49	(35.5)	21	(36.2)	2	(6.9)
Working class	89	(64.5)	37	(63.8)	27	(93.1)
Social class (H)[b]						
Middle class	88	(61.5)	35	(54.7)	7	(22.6)
Working class	55	(38.5)	29	(45.3)	24	(77.4)
Employment status (S)[b]						
Employed[c]	98	(68.5)	42	(65.6)	9	(28.1)
Not employed	45	(31.5)	22	(34.4)	23	(71.9)
Employment status (H)[b]						
Employed[c]	108	(75.5)	42	(65.6)	18	(28.1)
Not employed	35	(24.5)	22	(34.4)	14	(71.9)

[a] Some data missing
[b] According to Goldthorpe and Hope (1974), (S) based upon subject's occupation, (H) based upon the occupation of partner
[c] Include those working full-time or part-time

Results

Response

A total of 174 eligible subjects were approached for the Coronary sample. As shown in Table 1, about 7% of the wives of MI patients refused the initial interview and a similar percentage of the husbands refused to allow their spouses to be approached for interview. The calculation of the overall refusal rates shown in the table was after excluding subjects where no contact had been made by the research team despite all efforts and those who were too ill to be interviewed.

The highest refusal rate was obtained in the Refuge sample, indicating the considerable difficulty experienced in obtained co-operation from this study group. However, the refusal rates for the other two groups compare favourably with other studies seeking co-operation from similar samples (e.g. for the recently bereaved an 'acceptance rate' of 58% was obtained by Clayton (1974) and in a more recent study, Jacobs et al. (1990) obtained a 57% rate for surviving spouses approached for interview within 6 months of their partner's death).

Of the coronary patients, 20.3% had experienced a previous myocardial infarction. The mean duration of their admission for this episode was 10 days (range 5–47

Table 3. Living group characteristics and childbearing history of the study samples at initial interview

Living group:	Coronary (n = 143)		Bereaved (n = 64)		Refuge (n = 32)	
Mean size (SD)	1.94	(1.07)	1.70	(0.81)	3.44	(1.72)
	n	%	n	%	n	%
Distribution:						
Subjects living with: Partner (only)	65	(45.4)	33	(51.6)	2	(6.2)
and 1 child (only)	32	(22.4)	15	(23.4)	6	(18.8)
and 2 children (only)	34	(23.8)	10	(15.6)	12	(37.5)
and ≥3 children (only)	6	(4.2)	0	(0.0)	10	(31.3)
and with child(ren) and other relative(s)	4	(2.8)	3	(4.7)	2	(6.2)
and with other relative(s) but no children	2	(1.4)	3	(4.7)	0	(0.0)
Childbearing:						
Ever had children	133	(93.0)	56	(87.5)	31	(96.9)
Ever had children who have died	14	(9.8)	8	(12.5)	4	(12.5)
Number of children[a]:						
No children	9	(6.3)	8	(12.5)	1	(3.1)
One child	27	(18.9)	10	(15.6)	5	(15.7)
Two children	50	(35.0)	28	(43.8)	12	(37.5)
≥3 children	57	(39.9)	18	(15.6)	14	(43.7)

[a] One adopted child (coronary group)

days, mode 7 days) and was broadly in line with what might have been expected from published health statistics. (During 1989 the mean duration of stay in inpatient care in Scotland for those males admitted with acute myocardial infarction (9th Revision of the International Classification of Diseases code 410 was 9.0 days) (Annual Report of Registrar General 1990).

For the recently widowed, the commonest specific cause of death of their husbands was MI (35 women approached, 25 took part in the study). Carcinoma (all sites) was a further common cause (of 20 wives approached for interview, 17 (85%) agreed to participate). Other causes of death included multiple sclerosis, motor vehicle accident, suicide and death from violent causes.

Table 2 shows the demographic characteristics of the three study groups. In general the Coronary and Bereaved Groups were not significantly different in terms of their mean ages, social class (according to Goldthorpe and Hope 1974 and to whether or not based upon the subject's occupation or that of their partner) and employment status distributions (again whether subject or partner based); though as might reasonably be expected, the Bereaved sample had a greater proportion aged 55 years or older than the Coronary Group ($\chi^2 = 7.76$, $df = 2$, $P < 0.05$). On average the Refuge sample were about 20 years younger than the other two groups; almost all were working class and not in paid employment.

Table 3 shows the childbearing history and living group characteristics of the three samples. The living group for the Refuge sample was their 'usual home'. As with the factors shown in Table 2, no significant differences were found between the Coronary and Bereaved groups on any of the factors examined. Analyses involv-

ing all three groups showed no significant differences in their childbearing history; though the Refuge sample had the largest families (mean number of children: Refuge sample 2.68 (SD 1.49); Coronary sample 2.46 (SD 1.53); Bereaved sample 2.11 (SD 1.35). Given these results and the age differences between the Refuge and remaining samples, it is perhaps not surprising to find significant differences ($P < 0.01$) between the overall size of the living groups with the Refuge sample having on average the largest group.

A simple classification of the target events is shown in Table 4 and reveals the extent to which they were found to vary on just two dimensions (severity and dependency) within each group. Events (and long-term difficulties) were classified according to their severity (by the LEDS scheme) on a four point scale of how threatening or diffi-

Table 4. Classification of the 'target events' according to ratings of threat[a] and dependency[b]

Ratings	Coronary (n = 143)		Bereaved (n = 64)		Refuge (n = 32)	
	n	%	n	%	n	%
Independent severe	68	(47.5)	63	(98.4)		
Dependent severe	5	(3.5)	1	(1.6)	29	(90.6)
Independent minor	70	(49.0)				
Dependent minor					3	(9.4)
Totals	143	(100.0)	64	(100.0)	32	(100.0)

[a] Severe events include a) all events with a long-term threat rating of 3 and b) subject focussed events with a long-term threat rating of 2. All other events are classified as 'minor'
[b] Binary rating

Table 5. Life event rates/100 women/6 months preceding the target event. Results are displayed by event class, by study group and with or without inclusion of the target event

Event class	Target event included					Target event excluded				
	Coronary (C)	Bereaved (B)	Refuge (R)	P^a	P^b	Coronary (C)	Bereaved (B)	Refuge (R)	P^a	P^b
All minor	145.5	98.4	103.1	a	a	96.5	98.4	93.7	ns	ns
Dependent minor	16.8	1.6	43.7	c	a	16.8	1.6	34.4	a	a
Independent minor	128.7	96.9	59.4	b	ns	79.7	96.9	59.4	a	a
All severe	89.5	235.9	309.4	c	c	38.5	135.9	218.7	c	c
Dependent severe	14.7	18.7	284.4	c	ns	11.2	17.2	193.7	c	ns
Independent severe	74.8	217.2	25.0	c	c	27.3	118.8	25.0	c	c
All dependent	31.5	20.3	328.1	c	ns	28.0	18.7	228.1	c	ns
All independent	203.5	314.1	84.4	c	c	107.0	215.6	84.4	c	c
All events	235.0	334.4	412.5	c	c	135.0	234.4	312.5	c	c

[a] Kruskal-Wallis one-way analysis of variance ('a' $P < 0.05$; 'b' $P < 0.01$; 'c' $P < 0.001$; 'ns' = non-significant)
[b] Mann-Whitney U test (two-tailed) Group 'C' vs Group 'B' ('a' $P < 0.05$; 'b' $P < 0.01$; 'c' $P < 0.001$; 'ns' = non-significant)

cult the problem would be for the average person in that situation. The rating was based, as far as was possible, on the 'objective' facts of the situation and not on any 'subjective' feelings that might have been expressed by the respondent. The dependence-independence rating was designed to reflect the extent to which the subject brought about the problem within the study period. It was rated as a binary scale. If the subject was considered to have played an important role in either bringing about the event or influencing the course of a long-term difficulty this was rated dependent. Virtually all interpersonal events and difficulties were rated dependent, on the grounds that, although the subject may have blamed others exclusively for the incident, it was possible that she herself could be partly to blame, in ways which she either did not admit or of which she was unaware.

The Coronary group target events were divided almost equally between minor and severely rated events with 96.5% being rated independent; all but one of the bereaved events were rated as independent (the particular case was an alcohol related death, the subject's husband having been very demanding and difficult, requiring the subject to supply alcohol on demand. The death in the sense of the rating dimension was considered to have been aided by the subject). Note that five of the coronary target events were also rated as (severe) dependent. In all these cases there was a poor or very poor marital relationship (involving frequent rows and violence, including attempted murder) and the husbands had all experienced at least one previous MI. The rating reflects the view that the spouse (our subject) had acted to increase the stress on their husband (e.g. by infidelity). All the refuge target events were rated as dependent.

Of particular interest, of course, is the relative severity of the target events in the context of all others that were experienced, whether occurring before the target event or after. This is an area that has been somewhat neglected in many other studies that have focused upon a single incident (e.g. Stein and Susser 1969; Parkes 1970; Clayton et al. 1972; Bruce et al. 1990; Futterman

et al. 1990; Jacobs et al. 1990), the underlying view perhaps being that the stress of the event focused upon has always been assumed to dominate (in severity terms) all others experienced within the study time frame.

To examine this issue, the event exposure of the study groups was observed over the 6 months before the target events occurred and during the post-target event period up to the time of the follow-up interview. The results for the 6 months up to the time of the target events are shown in Table 5.

The table reports results with and without inclusion of the target events and according to whether the analysis involves a contrast between the two principal study groups or involving all three samples. Life event experiences were classified according to conventions adopted in earlier publications (e.g. Miller et al. 1986; Surtees 1989a and b). In absolute terms, the Refuge group experienced the highest rate of event experience (in 5 of the 9 event classes) during the 6 months prior to (but also including) the target event. However, this excess tended to be due to their experience of 'dependent' events. Differences between the event experience of the Coronary and Bereaved groups appeared to reflect the rating of their target events, particularly their severity.

The table also shows that with the target events excluded from the rate calculations then the Refuge sample still remains the group with the highest overall event rate. Of particular interest was the finding that the independent severe event rate of the bereaved (at 118.8/6 months/100 women) remained at a level of 4.35X that of the Coronary group and 4.75X that of the Refuge group over the 6 months leading up to bereavement. To put this in some perspective, an Edinburgh general population sample of 574 women reported an independent severe event rate of 11.3/6 months/ 100 women (Surtees 1987). Whilst this latter unmatched comparison can be hazardous in interpretation, it suggests that the Bereaved sample experienced (prior to the bereavement) over 10X, that of the coronary wives 2.4X and that of the Refuge sample 2.2X the rate of such events in the Edinburgh general population. These results under-

Table 6. Life event rates/100 women/6 months following the occurrence of the target event. Results are displayed by event class and by study group

Event class	Coronary (C)	Bereaved (B)	Refuge (R)	P^a	P^b
All minor	185.0	107.6	153.8	a	b
Dependent minor	22.3	16.8	89.2	c	ns
Independent minor	162.8	90.8	64.5	c	b
All severe	112.4	90.5	291.2	a	ns
Dependent severe	12.4	18.6	243.5	c	ns
Independent severe	100.1	71.9	47.7	a	ns
All dependent	34.6	35.4	332.8	c	ns
All independent	262.8	162.7	112.2	c	b
All events	297.5	198.1	445.0	b	b

[a] Kruskal-Wallis one-way analysis of variance ('a' $P < 0.05$; 'b' $P < 0.01$; 'c' $P < 0.001$; 'ns' = non-significant)

[b] Mann-Whitney U test (two-tailed) Group 'C' vs Group 'B' ('a' $P < 0.05$; 'b' $P < 0.01$; 'c' $P < 0.001$; 'ns' = non-significant)
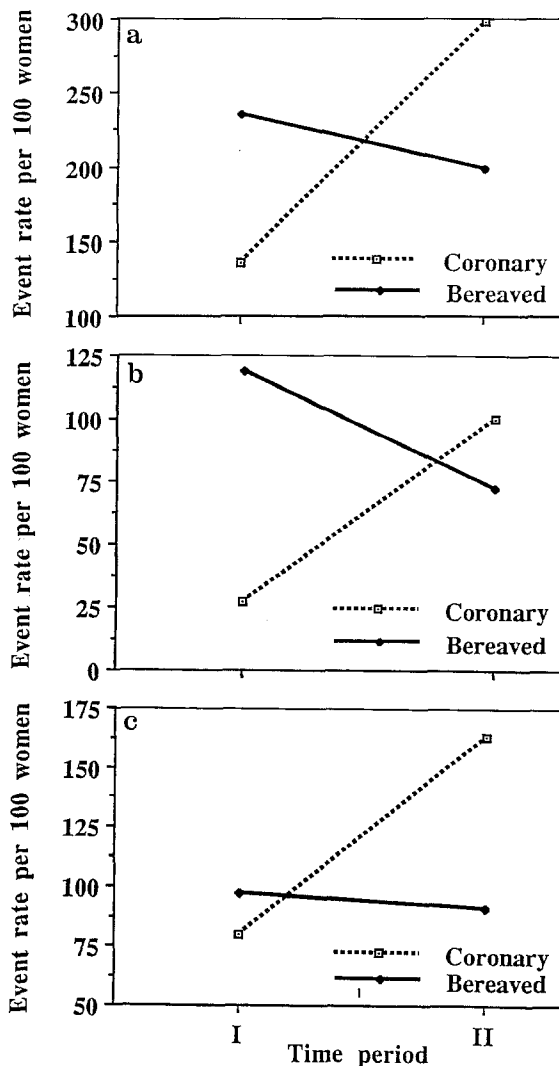
Fig. 1a–c. Event rates (excluding Target Events)/100 women/six months preceding (I) and following (II) the bereavement and MI events. **a** All events; **b** Independent severe events and **c** Independent minor events

pin the importance for analytic purposes of establishing the exent to which other, perhaps equally stressful situations to the target situation pre-date the occurrence of the study criterion events.

In the same way that considerations need to be given to all stressful occurrences preceding the target incident, so in evaluating its sequelae, details are needed of all additional stressors that occur during the study period that follows. Table 6 shows the event rates for the three groups, all event rates standardised to a 6-month period to allow direct comparison with the results shown in Table 5.

The results shown in Table 6 were based upon all available data following the target events. Whilst the full samples contributed data over the interval following Target Event (TE) occurrence up to the inital interview, inevitably there were losses to the follow-up interview. Completed follow-up interviews were obtained from 126 (88.1%) of the Coronary sample; 58 (90.6%) of the Bereaved but only 19 (59.4%) of the Refuge group reflecting the immense difficulties that were associated with undertaking research on this latter sample. Table 6 indicates that whilst substantial differences in the levels of event rates continued to be found between the groups following their criterion events, (and though the Refuge group remained the group with highest overall rate), the pattern of the differences changed from that apparent prior to TE occurrence particularly involving the Coronary and Bereaved groups. Of course, it would have been surprising had this not been shown, given the acknowledged impact of loss (whether real or threatened). Results of particular interest are shown in Fig. 1.

These figures indicate the relative changes in standardised event rates between those preceding TE occurrence (but excluding that event) and those same rates based upon events occurring during the post-TE period. The results in Fig. 1 are for the coronary and bereaved wives. Clearly shown is the relative reversal in rates for these two groups. The change in rates over pre-TE rates for the Coronary group was 2.2X (for all events); 3.7X (for all independent severe events) and 2.0X (for all independent minor events). The results therefore clearly illustrate the heightened severe event rate for the Bereaved group during the 6 months preceding occurrence of the bereavement beyond that of the Coronary group. There was very little difference in the minor event rate over this time between the two groups. Post TE no difference in the trend in severe event rates was found, but the rate for the coronary wives is clearly (and significantly $P < 0.01$) greater than that of the bereaved for minor events.

Finally, to complement the results just reported, two further figures were prepared to illustrate the extent to which the three target events (namely; loss of husband, husband's coronary or entry to a refuge) placed each group at the time of these occurrences at an altered level of adversity from that at study times preceding or following their occurrence. Figure 2 shows the severe and minor (independent) event rates (calculated for each of 16 available 3-week periods) for the Bereaved and Coronary groups. Figure 3 shows similar results based
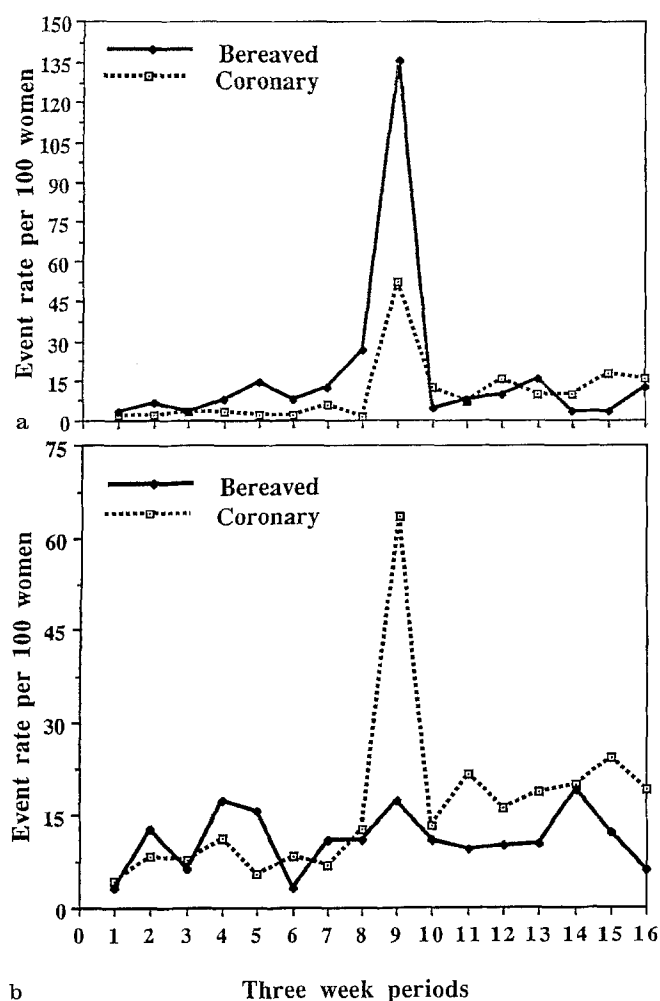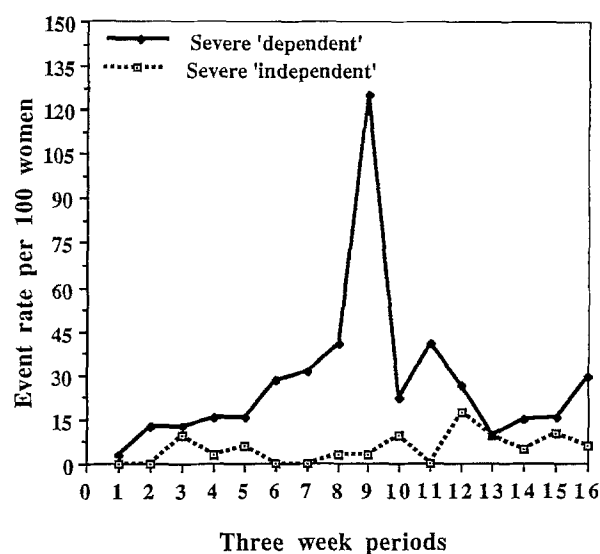
Fig. 2a, b. Event rates/100 women/3-week periods over the duration of the entire study. a Severe independent events; b Minor independent events. The bereavement and MI events occurred during the 9th. 3-week period

Fig. 3. Severe dependent and independent event rates/100 women/ 3-week periods over the duration of the entire study. Refuge entry occurred during the 9th. 3-week period

upon the refuge event data, the selection of event rates being governed by the ratings of their target event experiences.

The results shown in Fig. 2 clearly demonstrate the extent to which event experience during the three week period which included the target events exceeded the rate of similarly rated stressful experiences at all other study times. Referral to Table 4 confirms that over 96% of the coronary events and over 98% of the bereaved events are included in Fig. 2. The results shown in Fig. 3 not only reveal the rarity with which severe independent events were rated but also that this study group experienced a raised rate of dependent severe events during the period leading up to their fleeing the marital home.

Discussion

This paper has described the design of a study constructed around the occurrence of three distinct and potentially stressful incidents. Rigorous assessment methods were applied to rate the principal study events

and all the other adverse experiences that met research event criteria and had been detected within the study time frames. It is the first study to our knowledge to attempt to orient the design around the occurrence of specific adverse experiences and to assess all other stressors within pre-defined periods both preceding and following their occurrence. The work was completed to permit a precise evaluation of the impact of these often harrowing experiences upon the development and evolution of mental state in the women interviewed. However, as a precursor to that objective this paper has concentrated on a description of the primary experiences and the context in which they occurred.

The results have revealed that of the three groups studied, the Refuge sample experienced the highest overall event rate, both preceding and following those particular events that gained them entry into the study. This was achieved largely through their excess experience, over the other groups, of dependent events. However, it is important to note that the Refuge group also differed sharply from the other two groups in several important respects. As shown above, they were on average about 20 years younger, tended to be more working class, were less likely to be employed and had more children than the other groups. Some of the differences reported here might therefore be due to these extraneous variables. Miller et al. (1986) found that younger women in Edinburgh did indeed have more work related events, marital events and difficulties and fewer health ones than did older women. Unemployed women and those of lower socio-economic status had more provoking events and difficulties in the sense of the term as originally used by Brown and colleagues. Yet in the authors opinion, it is most unlikely that the extraneous factors account for all the differences. The event rates found in the present study (and based upon the time preceding the occurrence of the target events) exceed those found in the Edinburgh general population sample by a factor

of from two to ten times. In the Miller et al. (1986) paper the variation in rates due to socio-economic status, unemployment status and age were found to be less. This issue is commented upon further in the companion paper (Miller and Surtees 1993). Whilst both studies adopted very similar rating strategies, two factors (which themselves are inter-related) become particularly important in the assessment of samples with event rates which are higher or very much higher than general population rates. The first of these concerns the meaning of the individual events. It is inevitable that only some of their full meaning and impact can ever be captured by the rating classification being imposed; the ratings only crudely reflect the salience of the experiences either in 'objective' terms or subjectively for the women interviewed.

The second factor is that in a sample experiencing high event rates many will be inter-related; it would therefore be desirable to assess the extent to which events are inter-related and to contrast findings with that of the standard approach presented in this paper, where inter-dependence is ignored. Both these factors have been recognised in the collection of the data for this study. That the event ratings applied, only crudely reflect the salience of the experiences can be revealed by examples of those narrative accounts obtained from subjects in the study. These follow: (Certain details have been changed to avoid the identification of the subjects and the families concerned.)

A loss: The police came to the door at about 9 pm. It was not unusual for her husband to work until 7 pm. He was terribly busy and she thought he must have decided to do extra work. It did not cross her mind that anything might be wrong. S had just received a 'phone call from her confidant telling her that she had just been told she had inoperable breast cancer, when there was a hammering at the door. She at first ignored it because the 'phone call was so important; however the hammering continued so she responded. The police were there asking to come in and she thought well maybe George (her husband) had had a drink and been caught driving. When the police said, "are you on your own?" she knew then that her husband was dead. They went through the routine of informing her, including bringing a neighbour in to help. Her family were all at her daughter's house because it was a granddaughter's brithday. The police eventually brought everyone together. (When they tried to drive to S's house they could not go via the usual road as it was closed because of the accident in which George had been killed.) S said she did not cry for days while everyone else was weeping around her.:

A coronary: Two years ago a random test had showed her husband to have a high cholesterol level. Since last Christmas they had a great deal of money worries and debts from their own business. On Friday husband had indigestion – blamed it on drinking whisky (he does not usually drink alcohol). He took some Rennies on and off during the day which seemed to relieve the pain; it was the same on Saturday. On Sunday we visited friends, came home for tea, but he could not eat. Pain in chest, tingling in one arm, sweating. He finally settled down and went to bed. (S wanted to get the doctor at this time). On Monday morning husband woke up with pain and took more Rennies, then went back to bed. S went to her dentist at 10.30 am. At 11 am husband in really severe pain, collapsed on floor and started vomiting, then crawled to the bedroom from the bathroom; when S came from the dentist he was in terrible pain and had difficulty breathing – asking for the doctor. S phoned the GP and she told the surgery that she thought it was a heart attack. She was told this was unlikely for someone so young.

Doctor came within a few minutes. A new doctor in the group examined husband, asked lots of questions and said it was nothing serious, could be indigestion, but doctor 'phoned hospital because of the chest pain telling them that the patient was having chest pain but did not think that it was anything serious, and saying that he was a heavy smoker. The doctor did not even arrange for an ambulance – got a neighbour to take him in. At this time husband was rolling about in pain, grey in colour and sweating. (S became really agitated talking about this). Doctor did not seem or look concerned. S stayed with children while husband went to hospital about 12.15 pm with neighbour. S phoned CCU when neighbour came back and S was told to come to the hospital and speak to the doctor. Did this and was told it was a heart attack. S became very upset and started crying – overcame this and went in to see husband and then totally panicked when she saw her husband and all the equipment.:

Entering a refuge: S had contacted Women's Aid about a month before she finally entered the refuge after hearing about it from a girl at work. S was talking about how miserable her life was and her colleague suggested she get in touch with Women's Aid. S 'phoned them and found them very helpful. They offered her accommodation whenever she was ready to come. She also contacted the Citizen's Advice Bureau about this time to enquire about debt liability and possible rehousing (she lives in a council house). Husband was unemployed and had been borrowing money for drink. Husband's drinking had been getting steadily worse over a two year period leading up to the time of S leaving home. His father had died of cancer at this same time 2 years ago and he was very upset at this loss. He lost job after job through drinking heavily and he had only worked for one week during the past year. He had taken four overdoses in that time, vodka and paracetamol and other tablets in each case and had been admitted to a clinic on each occasion. This was the pattern S had got used to; she would then call a relative who was a nurse and then an ambulance.

The latest overdose and admission to the clinic took place 2 weeks before S left home. Husband was admitted to the clinic the day following his overdose. He was discharged 1 day later, and two days after that took more tablets and vodka and was again admitted; he was discharged one week later when it was discovered he had been drinking in the clinic. He continued drinking at home that day. Subject came home from work to find him drunk. She had planned to go to a friend's house that night but because of the situation at home felt she could not go and wanted to 'phone her friend to apologise. Husband then smashed the 'phone china and furniture and hit and kicked her. S said that she had got used to this miserable life of being abused. Husband then went out drinking after she refused to give him any money. She saw him go to one of their neighbour's to borrow money. S made up her mind that night that she had had enough. She 'phoned her brother and asked him to come round after work with his car and collect her belongings. S was nervous in case her husband appeared during the move. In the event, she was able to leave in his absence. She went to a local Women' Aid hostel and felt a great sense of relief that she had made the decision. She found comfort in talking to the other women in the refuge. S was worried that her husband might take a fatal overdose in her absence, but has since been reassured by his sister that he is managing, although still drinking. S said she did not know why she had stayed with him so long, why she had put up with such a miserable existence. She supposed that marriage was for better or worse and that you had to take the good with the bad. She said her work was her escape route. She never missed a day, she enjoyed it and all the people she met. She used to go to work and shut the door on her problems and than at the end of the day, dread going home not knowing what she was going to find. She said that was her way of coping.:

The rating scheme classified the first example (of a bereavement) and second (of a coronary) as severe independent events, whilst the Refuge example was rated as

232

a dependent event 'of some threat'. Clearly this is a gross simplification of the impact of these situations. Whilst mindful to take heed of those calls (e.g. by Alexander 1988), in relation to the growing literature on bereavement) to... "display a self-denying ordinance and confine (ourselves) to producing only that which genuinely advances our knowledge, understanding, and skills."... We have applied a much broader set of event ratings, for the reasons stated in the introduction, in order to more precisely tap the meaning inherent in each incident. In addition, an attempt has been made to deal with the inter-relatedness of event sequences within this same rating approach. The result of bringing these two strategies together is provided in the companion paper (Miller and Surtees 1993).

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