

Self-esteem and depression

III. Aetiological issues

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Summary. This is the last of a series of three papers dealing with the role of self-esteem in the onset of clinical depression. On the basis of a longitudinal population enquiry a comprehensive psychosocial model of depression is developed. It is concluded that self-esteem (primarily in terms of a negative measure) does play a significant role. However, this can be only properly interpreted in the light of the full model. This highlights: 1. the importance of the occurrence of both a negative environmental factor (negative interaction with children or husband for married or negative interaction with children or lack of a very close tie for single mothers) *and* a negative psychological factor (low self-esteem or chronic subclinical condition); and 2. how a relatively small group of high risk women in these terms (23% of total at risk based on measures collected well before any onset) contain three-quarters of all instances of onset of depression occurring over a 12 month period.

The literature on cognitive aspects of depression for the most part has not been concerned with self-esteem as a comparatively stable personality trait, but with negative cognitions generated in response to experiences in which the self often features (e.g. Beck et al. 1979; Brewin 1985; Teasdale 1983). Thus cognitions of helplessness, hopelessness and self-blame have all been considered important for understanding depression. It is usually argued that external stimuli are capable of causing the release of cognitive schemas (including associated emotions), but these are not necessarily readily accessible to the person. 'Situationally accessible knowledge' is only released by an appropriate stimulus and the person may have no idea of the reason for a particular set of thoughts, emotions and physiological responses – either in terms of the past or the present. Some see such negative schemas as of relevance for depression only when primed by a stressor (e.g. Alloy 1988; Beck 1967; Brewin 1985; Riskind and Rholes 1984); and Beck (1967) has further emphasised how they can stem from early adverse experience. However, Teasdale (1988) has noted that much of what appears to be of importance aetiologically about cognitions

follows the development of depression, and the disorder itself can be a priming factor for the activation of negative cognitions with these further reinforcing the depressed mood.

The bulk of such research has been either carried out on those already clinically depressed or by creating experimentally a mild depressed mood. However, despite a range of approaches, it has proved extremely difficult to gain access to the hypothesised schema prior to the development of depression – indeed, this has been the main reason for asserting that they are latent. There is, in fact, at present a general air of uncertainty about what has been established – for a recent pessimistic review see Barnett and Gotlib 1988. In this sense the present enquiry has achieved a certain success: the self-evaluation measures described in the first of this series of papers (Brown et al. 1990 a) predicted onset which suggests that schemas relevant for depression may not be entirely latent. (A subsequent paper shows that it also plays a role in recovery – Brown et al. 1990 c). Indeed, some cognitive psychologists have recently argued that self-esteem rather than the alternatives so far studied by cognitive researchers may be what is critical and that depressogenic cognitions may be more influenced by the ongoing environment that has been allowed (Pyszczynski et al. 1987). The second paper in the series documented the considerable association of self-esteem with negative and positive aspects of the current environment (Brown et al. 1990 b). NES (negative evaluation of self) was highly correlated with close ties characterised by tension and difficulty. PES (positive evaluation of self) by contrast was correlated not only with positive aspects of these same close relationships, but with the quality of a broader range of ties and experiences, including employment. The experience of early inadequate parenting was related to NES (but not to PES), but for the most part this link was restricted to those women where there were also shortcomings in the current quality of close ties. In addition, current depressive symptomatology, either at a case or borderline case level, was quite highly related to NES (Brown et al. 1990 a).

The task in this third paper will be to consider self-esteem in terms of a *causal* role in onset. Unfortunately,

this is quite unrealistic without taking account of other psychosocial factors found to be causally important, and it will be necessary to consider quite complex models.

The analysis will concern the same 303 Islington women with at least one child living at home described in the earlier papers (Brown et al. 1990a, b). The women were studied in detail at the time of our first contact with them, using the Self-Evaluation and Social Support Schedule (SESS) and the Present State Examination. All women were followed up for one year, but those suffering from depression at a caseness level at the time of the first contact were excluded from the analysis. Thirty-two of the 303 women developed depression at a caseness level during the follow-up year. It is these onsets we wish to explain – both in terms of an array of psychosocial measures and, more narrowly, in terms of measures of self-esteem made at the time of the first interview.

Measurement

Self-esteem indices

There are two overall measures of self-evaluation dealing with self-esteem (Brown et al. 1990a). The negative measure, *Negative Evaluation of Self* (NES) includes any person with a score of ‘marked’ or ‘moderate’ on any of three 4-point scales dealing with comments about 1. personal attributes, 2. competence in roles, and 3. lack of self acceptance. This gave a dichotomy in terms of presence or absence of NES. The positive index, *Positive Evaluation of Self* (PES), by contrast added the scores of the two positive scales dealing with self-evaluation (personal attributes and competence in roles) giving a three-fold index of ‘high’ (7 and 8), ‘moderate’ (6), and ‘low’ (2 to 5).

Negative elements in close relationships index – revised

In the second paper a complex regression procedure was outlined for describing the ‘objective’ environment in the period before the first interview that was most highly associated with current levels of self-esteem, and particularly of NES (negative evaluation of self) (Brown et al. 1990b). However, in dealing with this background measure in terms of onset in the follow-up year we were concerned that any strict replication of the research would be difficult without carrying out a full version of the SESS. Therefore in the analyses that follow a simpler version of the ‘negative’ elements in close relationships index of the second paper has been used and which could be obtained with a shortened version of the SESS. Fortunately it gives almost as good a result in terms of the prediction of onset as the original. As in the previous index, all were rated at the time of the first interview. Women were included if they were rated ‘marked’ or ‘moderate’ on a 4-point rating of *negative interaction with a child living at home*. For married women, a woman was also considered positive on the index if she had been rated ‘marked’ or ‘moderate’ on the 4-point scale of *negative interaction with husband or partner* which takes into account reports about arguing, strain,

violence, indifference and ignores anything positive. It is important to note that a relationship a child or husband could be satisfactory in a number of ways, and still be given a ‘moderate’ rating. Single mothers were also considered positive on the revised index if they *lacked a ‘true’ very close relationship*. The women concerned had either failed to name someone as very close at the time of the first interview, or, if they had, did not confide in or see the person as often as once a month (O’Connor and Brown 1984). (Those named as ‘very close’ excluded a child at home, a husband or boyfriend).

The revised negative elements in close relationships index is therefore:

All women: ‘Marked’ or ‘moderate’ negative interaction with a child at home,
or
Married women: ‘Marked’ or ‘moderate’ negative interaction with husband or partner,
or
Single mothers: Lack of a ‘true’ very close relationship (i. e. a confident, seen at least once per month).

In addition, the following two measures, which have not so far been discussed, will be used:

Matching D/R-events. For each severe event in the follow-up period a judgement was made about any ‘link’ between it and any ongoing marked difficulty (i. e. rated on the top 3 points of a 6-point scale of severity of threat) present at the time of the first interview and lasting at least 6 months. For example, the threat of eviction because of rent arrears was rated as ‘matching’ an ongoing difficulty concerning such payments. Ongoing difficulties were usually the source in a causal sense of such D-events (D standing for difficulty) – e. g. a husband leaving home in the context of marital disputes over his heavy drinking and violence, or a difficulty with a child (say misbehaviour at school) culminating in an event with the same child (say referral to a Child Guidance Clinic).

It is also possible to characterise severe events as ‘matching’ a prior role conflict. Such conflict, often arising from diverging obligations, such as that between domestic and external spheres, was fairly common. Events that matched the area are conflict were called R-events – R standing for role conflict. Such conflict commonly covered conflicting demands of work and household responsibilities, for example any concern at first interview about how work demands might interfere with care of a child would match the subsequent event of the child being found stealing. Since risk of depression is also increased by R-events and there is a great deal of overlap with D-events, a combined ‘D/R event’ category will be used (see Brown et al. 1987 for details).

Psychiatric state and chronic subclinical conditions. The first paper in this series described the use of the Present State Examination (PSE) to collect material about basic symptomatology (see Brown et al. 1990a). Conditions at caseness level are broadly comparable to the Research Diagnostic Criteria (Spitzer et al. 1978). Borderline cases

have a lower threshold – for example, for depression it is depressed mood and 1 to 3 core depression symptoms on the PSE (Brown et al. 1985). It is necessary to take account of initial psychiatric symptoms at first interview (once cases of depression are excluded) because earlier research has shown that *chronic* subclinical conditions lasting 12 months or more prior to the first contact with the women was related to risk of a subsequent onset of depression in the follow-up year. Most of these were borderline case depressive (11) or anxiety (and not depression) (19), but they did include other conditions at a caseness level (10). These 43 women will be referred to as having *chronic subclinical conditions*. The earlier research indicated that such a condition raised risk of depression independently of NES and the impact of such symptoms was entirely through the subsequent occurrence of D/R-events (Brown et al. 1986 b).

Crisis support in the follow-up year. The description of support with a severe event in the follow-up year was kept quite distinct from the various measures of ‘support’ made at the time of first interview, and conceptualised in terms of crisis support received (or not received) from particular individuals. To rate as present it was necessary for the woman to:

1. confide in the person about the event at a ‘moderate’ or ‘marked’ level,
2. receive at least ‘moderate’ emotional support from the same person, and
3. receive no negative response from the person in terms of efforts to confide and get support (see Brown et al. 1986 a for details).

In practice only support from so-called core ties proved to be relevant i.e. a husband, cohabitee, lover or someone named as ‘very close’ at first interview. It turned out that such support was far from stable and that women when faced by a severe event did not necessarily receive what they could reasonably have expected in terms of the situation at the time of the first interview. This was reflected in the notion of being ‘let down’ – i.e. confiding at the time of first interview, but failing to get crisis support once a severe event occurred (op cit for details).

Women were defined as receiving *inadequate support* if they had either no crisis support or had been ‘let down’ by a husband, lover or someone previously defined as ‘very close’. This held even if they had got support from someone else e.g. a woman ‘let down’ by a husband would be classed as receiving inadequate support, although she also received crisis support from a sister whom she had previously named as ‘very close’.

Time perspectives

Two time perspectives will be used in the analysis of onset: one from the vantage point of the first interview (before any onset), and one from the perspective of the follow-up interview dealing with the period immediately before any onset. For the sake of simplicity measures dealing with ex-

periences in childhood and adolescence will be omitted. This is possible since, as documented in the second paper, impact on depression appears to be largely via current adverse environmental factors – see Brown et al. 1990 b and also, Brown 1988. A brief résumé of the main aetiological factors to be discussed will first be given.

A series of studies have now documented the key role of severe events in provoking depressive disorder (see Brown and Harris 1986) and it is therefore not necessary to explicate their importance any further here. In the present enquiry 29 of the 32 onsets in the follow-up year among the 303 women at risk were preceded by a severe event (Brown et al. 1986 a). By concentrating on the 130 of the 303 women with such a severe event, it will be possible to increase the sensitivity of the analysis: since nearly all the onsets occurred in this restricted group, additional risk factors can be revealed more sharply. (However, we will also give relevant information for those without a severe event).

We will, in fact, deal with three types of measure: 1. background *environmental*, and 2. background *psychological*, both collected at first interview, and 3. *immediate environmental*, measured at the time of the follow-up interview. The two background measures are of significance because, since they were collected at the time of the first interview, they are free of possible measurement bias resulting from collecting material after any onset of depression. The two immediate environmental measures are of importance because, since they are nearer onset, they are likely to tell us more about the actual causal mechanisms involved in onset. The presentation is complicated by the fact that the background first interview measures turn out to be highly associated with those of the immediate environment, and this will need to be taken into account in reaching any overall aetiological picture of onset.

The background negative *environmental* and *psychological* measures have already been introduced and will be used as set out below. To these two negative measures will be ultimately added a background positive psychological one discussed in the first paper in this series (Brown et al. 1990 a) – see Table 1.

In addition there are two key *immediate environmental* measures: 1. The occurrence of a severe event matching a prior difficulty or role conflict – a D/R event – which considerably increases risk over and above an ordinary severe event (Brown et al. 1986 b), and 2. the quality of

Table 1. Main variables

	Background factors	Immediate factors
Negative environmental	Negative elements in close relationships index	Matching D/R event (severe event matching prior difficulty or role conflict) Lack of crisis support
Negative psychological	Negative evaluation self – NES Chronic-subclinical conditions	
Positive psychological	Positive evaluation of self – PES	

Table 2. Background negative environmental index and psychological negative background states (negative evaluation of self (NES) and chronic subclinical conditions (CSC)) at 1st interview and onset depression among 130 Islington women with a severe event

Background environmental (Negative elements in close relationships)	Background negative psychological states					
	NES & CSC	NES alone	CSC alone	Neither	Total	
	% onset					
Yes	(7/16) 44	(10/23) 44	(5/9) 56	(4/26) 15	(26/74) 35	
	46 (22/48)					
No	(0/4) 0	(0/7) 0	(3/6) 50	(0/39) 0	(3/56) 5	
	18 (3/17)					
Logit analysis						
Model fitted	Scaled deviance	df	<i>P</i> <	Reduction in deviance	df	<i>P</i> <
Constant	33.62	3	0.001			
A. Psychological	12.29	2	0.01	21.33	1	0.00
B. Environmental	14.97	2	0.001	18.65	1	0.001
A + B	2.35	1	0.05	9.94	1	0.01
Best model is A + B.						

support given by a close tie with such a severe event, particularly in terms of confiding and emotional support (Brown et al. 1986a).

Finally, one possible ambiguity about the dating of self-esteem should be mentioned. Unlike chronic subclinical conditions, established by the PSE at the first and follow-up interviews, no attempt was made to document changes in the follow-up year. However, although only measured at first interview, it seems reasonable to assume that it is relevant for the follow-up year and that we are dealing with the probable level of self-esteem before any severe event in the follow-up year. This does not rule out, of course, that in some instances self-esteem worsened before onset of depression – say following a major loss.

In constructing an aetiological account the two background measures will be treated as occurring at the same point in time, and a good case can therefore be made about the time order implicit in the following analysis.

Results

Table 2 deals with the ability of the two negative background measures to predict onset. Table 7 in paper 1 showed how NES is quite highly related to depressive and non-depressive conditions (whether case or borderline case) and that PSE symptoms of 'self depreciation' and 'lack of confidence' were particularly likely to be involved (Table 8 in paper 1). And as would be expected NES and

chronic subclinical conditions are quite highly related¹. The central result of Table 2 is that it is the occurrence of either the negative environmental or negative psychological measure that is critical if a severe event is to be followed by an onset. None of the 39 women with a severe event but without at least one of these background measures developed depression. Also worth noting is that the two negative psychological states, NES and chronic subclinical conditions are associated with much the same number of onsets. (If anything chronic subclinical conditions have a somewhat greater effect although this is far short of significance). They are also non-additive in their effect – i. e. in the presence of a negative environment risk of depression among those with both negative psychological states (top left hand column Table 2) is no greater than having one but not the other (top 2nd and 3rd left hand columns).

Table 3 A, dealing with the 130 women with a severe event, summarises the more detailed material of Table 2. Table 3 B, dealing with the remaining women without a severe event, shows how onset (as already noted) was practically absent among them. However, it is of interest that even without a severe event there was an onset rate of 10% (2/21) when *both* background measures were present compared with 1% (1/152) for the rest of the women – *P* = 0.06.

Scrutiny of Table 3 C dealing with the total 303 women reveals that in practice most of the onsets in the follow-up series as a whole occurred among the women with *both* background factors – that is, in the presence of both the environmental and the psychological. In all, 75% (24/32) of the onsets within the total 303 women occurred among them. Put another way, the bulk of the onsets occurred to a relatively small group of 69 high-risk women with both environmental and psychological background measure – that is 23% of the total women. This is the first glimpse of what will be a central conclusion: that it is the occurrence of both the environmental and psychological that is particularly important for the understanding of onset of depression. This concentration of depression is such a small group of women is due not only to the very high rate of onset in the group once a severe event occurs (46%), but also because of the quite high association of the environmental and psychological factors in the population as a whole – a gamma of 0.56 (see denominators in Table 3 C for basic data).

So far we have dealt with the two background measures. At this point we turn to the two measures concerning the *immediate* environment and consider their role in the context of the background negative psychological state persisting (in the case of NES, assumed to persist) into the follow-up period. The results of Table 4 dealing with the 130 with a severe event are highly reminiscent of the results in Table 2 that were based on the two back-

¹ For the 130 with a severe event shown in Table 2 the association between chronic subclinical conditions (CSC) and NES is:

CSC	NES	
	Yes	No
Yes	20	15
No	30	65

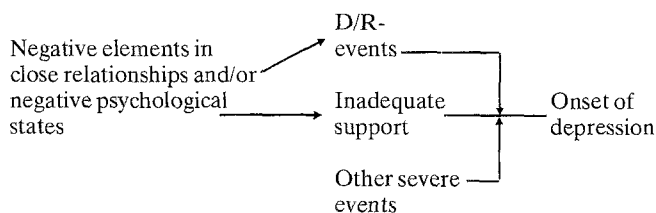
Table 3. Background 1st interview negative environmental and psychological measures and onset of depression among 303 Islington women by occurrence of a severe event

Background environmental (Negative elements in close relationships)	A. With severe event Negative psychological state		B. Without severe event Negative psychological state		C. Total Negative psychological state	
	Yes	No	Yes	No	Yes	No
	% onset					
Yes	46 (22/48)	15 (4/26)	10 (2/21)	0 (0/28)	35 (24/69)	6 (4/64)
No	18 (3/17)	0 (0/39)	0 (0/27)	1 (1/97)	7 (3/44)	1 (1/146)

ground measures. This further analysis of the follow-up material confirms that the majority of onsets occur when there is both a negative psychological and a negative environmental factor; it also shows that there is a marked interactive effect in terms of onset when both occur together. To sum up the results of Table 4: 1. the great majority of onsets (75% – 24/32) occur in the joint psychological/environmental category; 2. risk of onset is very high given such a joint occurrence, reaching as it does 51%²; 3. risk with only the psychological or only the environmental is relatively low – 11% (5/43) – and zero without at least one of them, despite the occurrence of a severe event (0/36); and 4. finally, there is a suggestion that the effects of the two separate immediate environmental measures (D/R event and inadequate support) are additive.

At this point, it only remains to link the two time perspectives on onset presented in Tables 2 and 4. In fact, the background negative environmental and psychological measures, irrespective of their association with onset, are powerful predictors of the two immediate environmental risk factors in the follow-up period. Table 5 shows that there is a fourfold greater chance of an immediate environmental risk factor occurring where there has been at least one of the negative background measures: 37% (62/167) vs 9% (13/136) – $P < 0.001$; and 84% (62/74) of those with an immediate risk factor had one of the background negative measures (Table 5). It should also be noted that once D/R events are excluded the background negative measures are unrelated to the occurrence of a severe event.

Therefore, the situation at the time of first interview often presaged both subsequent inadequate support and the occurrence of a D/R event:



² In an earlier analysis, using a more complex background environmental index which took into account the presence of interpersonal difficulties on the LEDS, there was also a marked interactive effect in Table 2 (Brown in press). A combined *Conjoint Index* was therefore used in terms of the presence of both the background negative psychological and environmental factors. In the present analysis the decision to use a simpler background environmental index has probably therefore led to a somewhat more conservative result in Table 2.

Table 4. Background negative psychological state and immediate environmental risk factors – 303 women

Background negative psychological state	Immediate environmental risk factors			
	Both – with a severe event	One – with a severe event	Nil – but a severe event	Nil – no severe event
	% onset			
Yes	63 (15/24)	39 (9/24)	6 (1/17)	4 (2/49)
	50 (24/48)			
No	33 (1/3)	13 (3/24)	0 (0/36)	1 (1/124)
	15 (4/27) (4 nk on inadequate support)			

Logit analysis						
Model fitted	Scaled deviance	df	$P <$	Reduction in deviance	df	$P <$
Constant	40.88	3	0.001			
A. Psychological	20.23	2	0.001	20.55	1	0.001
B. Environmental	12.06	2	0.001	28.82	1	0.001
A + B	0.63	1	ns	11.43	1	0.001

Best model is A + B.

Two main causal effects have been isolated: the *production of the immediate environmental risk factors*, and the *onset of depression* itself. There are some practical difficulties in producing an overall path analytic model that would do justice to both of these effects. An important statistical interactive effect is present when the background negative psychological and the immediate environmental measures are considered in terms of onset (Table 4), and this is not readily dealt with in a path diagram – see Brown 1988, for a discussion of this difficulty. However, the associations are so large that it is easy to get an overall sense of the causal effects from Tables 3 and 4 without further analysis. The key result is that for those with both background measures (only 23% of the total women) the chances of a subsequent immediate risk factor was 59% (against 15% for the remaining women), and as many as 75% of the onsets occurred in this small group of women with both background measures.

Furthermore, enough has been presented to indicate the tightness of the aetiological links from the perspective of either the first or follow-up interview. That is, the negative environmental and psychological are quite highly re-

Table 5. Association of 1st interview negative environmental and psychological measures with factors in follow-up period – 303 Islington women

Background negative measures		Women by presence of factors in follow-up period			
Environmental	Psychological	Immediate risk factors (D/R event or inadequate support)	Severe event only (excluding D/R event)	None of the three	Total
		% with factors			
Yes	Yes	59	10	30	100 (69)
Yes	No	26	22	52	100 (54)
No	Yes	16	23	61	100 (44)
No	No	10	34	57	100 (136)

$P < 0.001$ 6 df.

lated at one point in time, the background negative states predict later environmental risk factors, and the joint occurrence of environmental and psychological risk factors act interactively to produce a rate of depression of 51% in a relatively small high-risk group of women.

Self-esteem and onset of depression

Bearing in mind the high interrelationships between relevant aetiological factors, two questions arise about the role of self-esteem. First, whether NES has a role in onset over and above that of other factors? And second, whether PES, the positive background psychological measure not

so far considered in this paper, plays any part in aetiology? In order to answer the first question it is necessary to return to an expanded version of Table 4, that deals separately with the two background negative psychological states and the two immediate environmental risk factors, D/R-event and inadequate support (see Table 6).

The right-hand column of Table 6 (first three rows) shows, as already noted, that the association of NES and chronic subclinical symptoms with onset are of much the same order with an overall rate of depression of 39% (25/64). It is, however, now important to note again that neither has an effect of this high order without the presence of one or the other of the two immediate environmental risk factors. This is shown in column 4 (first three rows again) where among those belonging to this very same set of high risk women (i.e. with an overall rate of depression of 39%) only 6% (1/17) of those with at least one of the background psychological states, but without one of the immediate environmental risk factors, developed depression. (The numbers involved are relatively small due to the considerable association of the environmental and psychological measures.) As a corollary neither a D/R-event nor inadequate support stand out on their own as much related to risk (in the sense of the very high rates being discussed) without one or other of the psychological states (i.e. a rate of 13% – 3/23)³. As already

³ Only 3 women had both environmental factors and no psychological factors so a realistic test could not be made for this combination – see bottom left hand cell of main table.

Table 6. NES (negative evaluation of self), chronic subclinical conditions (CSC) and onset among the 130 women with a severe event in terms of the two immediate environmental risk factors

1st Interview negative psychological states		Immediate environmental risk factors				Total
NES	CSC	Both	D/R-event alone	Inadequate support alone	Neither	
		% onset				
Yes	Yes	60 (6/10)	0 (0/2)	33 (1/3)	0 (0/5)	35 (7/20)
Yes	No	50 (4/8)	20 (1/5)	50 (6/12)	0 (0/6)	34 (10/29)
No	Yes	83 (5/6)	40 (6/15)	–	17 (1/6)	53 (8/15)
No	No	33 (1/3)	67 (2/3)	18 (3/17)	0 (0/36)	6 (4/62)
		59 (16/27)	14 (2/14)	31 (10/32)	2 (1/53)	23 (29/126)
		26 (12/46)				(4 nk for support)

Logit analysis (using 4 × 3 version of table)

Model fitted	Scaled deviance	df	$P <$	Reduction	df	$P <$
Constant	44.17	5	0.001			
A. Background psychological factors	23.52	4	0.001	20.65	1	0.001
B. Immediate environmental risk factors	7.44	3	ns	36.73	1	0.001
A + B	0.86	2	ns	6.58	1	0.01

The best fitting model is A + B.

seen, it is the presence in the follow-up year of a negative psychological state *and* a negative environmental factor that is critical.

Yet, despite this picture of interrelationships, it is possible to conclude that NES plays an aetiological role in the sense that the logistic regression in Table 6 shows that it is needed in addition to one of the immediate risk factors to model onset. The same conclusion holds for chronic subclinical symptoms – see Table 6.

The second aetiological question regarding self-esteem concerns the role of the positive measure, PES. The result of the first paper in this series (Brown et al. 1990a) showing that it had no association with onset once NES was taken into account was counter intuitive given the protective role of social support which has links with the PES index. Indeed, more detailed consideration of the question of social support turns out to resolve the anomaly. Table 7, which takes into account both those receiving inadequate support throughout the period of study and those 'let down' in the following year suggests the original result was misleading in a causal (as against a predictive) sense.

The table shows, in fact, that high/moderate PES does appear to have a protective effect among *those who are not 'let down' in terms of support* (see 2nd line of Table 7). There might, indeed, be a cross-over effect in which those with high/moderate PES among those 'let down' are most likely to develop depression, while among those not 'let down' are least at risk. The result makes intuitive sense: those with positive evaluation of self have further-to-fall, as it were, when support which could have been expected is not forthcoming; not least because their original self-evaluation may have depended on the very person that has now let them down – often a husband or lover.

There remains the question of the role of PES when all relevant risk factors are considered. If those 'let down' are excluded, high/moderate PES appears to offer some protection in the presence of both negative environmental and psychological risk factors. In such circumstances once a severe event has occurred PES is associated with a halving of risk (Table 8 – compare top two rows).

Discussion

The first paper in the present series documented the effectiveness of measures of self-esteem in predicting onset (Brown et al. 1990a), and the second their substantial correlation with environmental factors in the past and the present (Brown et al. 1990b). The present one has documented the notable predictive power in terms of onset of the background negative psychological and environmental measures made at the time of the first interview. Given the longitudinal design of the enquiry there is a reason to believe that important causal effects are involved. The psychological background measure involved the presence of either negative evaluation of self (NES) or a chronic subclinical condition, usually of depression or anxiety. The two negative psychological states had a similar impact – in terms of number of onsets of depression NES was slightly more important and in terms of the size of the ef-

Table 7. PES (positive evaluation of self) and onset among 130 women with a severe event in terms of being 'let down' in the follow-up year

'Let down'	Positive evaluation of self (PES)					
	High or moderate (6–8)	Low (2–5)	Total			
	% onset					
Yes	48 (13/27)	25 (2/8)	43 (15/35)			
No	10 (7/73)	39 (7/18)	15 (14/91)			
Total	20 (20/100)	35 (9/26)	23 (29/126)			
(4 nk for support)						
Logit analysis						
Model fitted	Scaled deviance	df	P	Reduction in deviance	df	P
Constant	19.37	3	0.01			
A. 'Let down'	9.36	2	0.01	10.01	1	0.01
B. PES	17.05	2	0.01	2.32	1	ns
A + B	7.18	1	0.01	2.18	1	ns
A × B	0.00	0	ns	7.18	1	0.01

The best fitting model is A × B.

Table 8. The role of PES as a protective factor taking into account negative psychological states among women with a severe event including only those with a D/R-event or inadequate support, but excluding those 'let down' ($n = 38$)

NES or chronic subclinical condition	High/moderate PES	% onset
Yes	No (7/10)	70
Yes	Yes (6/18)	33
No	No (0/2)	0
No	Yes (0/8)	

$P < 0.01$, 2df.

fect chronic subclinical conditions were slightly more important, although neither difference approach significance. It is important to note that the negative feelings involved in the two negative psychological states were often less than overwhelming and in fact could, coexist with a high rating on positive evaluation of self (PES).

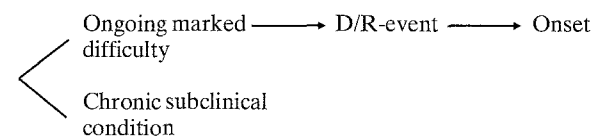
One surprising result has been the simplicity of the final background environmental index. In the second paper a complex multiple regression procedure was employed to select the best measures from some 60 'objective' SESS scales, but in the present analysis we have only taken into account the occurrence of three SESS items with relatively little fall-off in effectiveness. The items finally utilised were negative interaction with husband or with a child for married women, and negative interaction with a child or lack of a 'true' very close relationship for single mothers. While these items at times reflected seriously disturbed relationships or serious states of deprivation, it was also clear that often they represented more humdrum and everyday difficulties. When the background environmental measure is considered in the light of the presence of a negative background psychological state, only 23% of the women (69/303) had both, and yet three-quarters of total onsets (24/32) occurred among them.

There appear to be two main reasons for this somewhat surprising result. The first is that the two background factors are quite highly predictive of two immediate environmental risk factors in the follow-up year – a matching D/R severe event and inadequate support with a crisis. There tends therefore to be a fairly tight interrelationship of risk factors over time. Second, the joint occurrence of a negative psychological and a negative environmental measure in the follow-up period produced a strong interactive effect once a severe event had occurred. If the occurrence of both the negative environmental and psychological measure is considered, risk of depression reaches around 50%, whether one takes the perspective of the first interview or the follow-up period, and relatively few onsets occurred outside either set of high risk factors. Somewhat unexpectedly, a severe event had no effect without the presence of at least one or other of the negative environmental or psychological risk factors (Table 3A). Therefore, the background first interview measures appear to be important largely because of the way they predict particularly depressogenic experiences in the follow-up period. However, for a full grasp of what is going on it is necessary to see that the joint occurrence of negative psychological and environmental in the follow-up period increased risk whether or not the environmental factors were predicted by the first interview measures.

The main task of this paper has been to examine how far self-esteem contributed to onset in the light of this highly interrelated picture. The results have emphasised the importance of how negative rather than positive self-esteem plays an important role in onset, albeit only in the presence of one of the two environmental immediate risk factors – i. e. a D/R-event or inadequate support (Table 6). However, an additional case has been made that positive self-esteem also contributes by lessening risk of onset under certain restricted circumstances – but this only emerged when those ‘let down’ in terms of support with a severe event were excluded. This effect was suppressed (in a statistical sense) by the fact that those ‘let down’ had a particularly high risk of depression when they had had high/moderate PES at first interview (Table 7). Nonetheless, the effect is significant and, although the result obviously requires replication, it is important for theoretical reasons to emphasise this possibility. Therefore in terms of present evidence, despite the apparently clear result of the first paper showing no predictive role for positive self-evaluation, the two forms of self-esteem appear to act in a similar and opposite fashion, although NES is clearly the more important.

It also needs to be added that self-esteem has been considered in terms of the psychological state of women a fair time before onset and there remains the possibility that it may play a role at a number of other points in the aetiological process. It may, for example, be further reduced after the occurrence of a severe event and before the development of the depression itself – certainly self-esteem appears to fall about the time of a depressive disorder (e. g. Lewinsohn et al. 1981). Nor would it be surprising if such a fall were of particular significance after an experience of being ‘let down’ by a close tie.

There are other possibilities of interest. Less emphasis has been given in this paper to the association of chronic subclinical conditions with risk of depression at a caseness level, which, if anything, is greater than that of NES (Table 6). However, an earlier analysis clearly indicated that such chronic subclinical conditions only raise risk via the occurrence of a matching D/R-event, while the risk related to NES is much more general. Therefore, while there is some case to be made for combining NES and chronic subclinical conditions in developing an aetiological model (as we have done with the background negative psychological index), it should be borne in mind that they might well prove to be acting in somewhat different ways. It is possible that such chronic conditions have no direct role in onset, and simply predict the likely occurrence of depressogenic D/R-events:



(For a fuller discussion see Brown et al. 1986b: pp 17–18).

Psychological and environmental factors relevant for onset of depression therefore tend to be closely associated and while it would go too far to see the environment and self-esteem as different sides of the same coin, it may make little practical sense to worry overmuch about giving one or the other causal priority. It has certainly proved fruitful to deal with them as distinct both in terms of measurement and analysis. But this is compatible with the fact that in real life (and hence in a realistic theoretical interpretation) they are probably part of a highly complex system of mutually reinforcing effects.

The NES measure itself might be an indicator of the kind of underlying negative schema posited by cognitive psychologists, albeit keeping in mind Teasdale's view that depression can also recruit depressogenic schema. But, as far as the Islington material is concerned, it would, even if this were true, make little sense to see the provoking major loss or disappointment as merely a triggering device. (This was argued in earlier research in Camberwell from a different perspective in terms of the concept of ‘brought forward time’ – Brown et al. 1973). If one conclusion emerges from recent research, it is that what happens in the external world usually determined when a depressive disorder will occur. There is no evidence that women in any numbers develop depression in response to the combination of minor stress and negative cognitions. Nor, for that matter, does the experience of inadequate parenting and negative cognitions appear to be enough (see second paper, Brown et al. 1990b). Furthermore, as we have seen, the research gives some support to the view that what is critical for depression is self-esteem rather than cognitive schemas as these have been usually understood (see Pyszczynski et al. 1987). It follows that more research emphasis needs to be given to the sensitivity of relevant depressogenic cognitions to current environmental inputs – and less to the role of more or less static schemas.

But it is still necessary to ask how self-esteem contributes to depression. We have previously argued (as have others) for the key role of lack of hope concerning some core concern and it is generalisation in terms of Aaron Beck's triad that can lead to clinical depression (see Brown and Harris 1978). Here it is perhaps helpful to distinguish hope and hopefulness (Ortony et al. 1988: p 115). Feeling hope (and feeling hopeless) can be seen as springing from the person irrespective of what the environment tells us about possible contingencies – we can hope for the moon, but hardly feel hopefulness about it. Hopefulness is more firmly grounded in what the world appears to be able to offer (or not offer) in a realistic sense. With regard to any one point in a person's life hope and hopefulness can be expected to come together to give a particular degree of optimism or pessimism. On balance our results probably underline the greater importance of hopefulness – that is cognitions buttressed by the current environment. (While the present analysis has emphasised the negative aspect of self-esteem, it may be useful to anticipate the results of a fourth paper (Brown et al. in press c) which shows that it is positive self-evaluation that is critical in course and recovery.)

To sum up: Whether or not an onset of depression will occur appears to be largely determined by the combined presence of *negative psychological* and *negative environmental* factors. But these can under certain circumstances be buffered by *positive environmental* factors, particularly support from a close tie (Brown et al. 1986b). Furthermore a psychological input from positive self-evaluation (despite the presence of negative psychological states) may well also serve some kind of protective role. The key implication of the Islington material is that it is the coming together of the psychological and the environmental, in the setting of a major loss or disappointment, that is critical for an understanding of onset. Furthermore, there is no reason why biological risk factors once established should not be added to this picture. In the highest risk group among Islington women defined in psychosocial terms, it was still only half who went on to develop depression at a caseness level: this still leaves room for other aetiological factors and some of these may well be biological. The final paper deals with the role of self-esteem in the course of depressive disorders (Brown et al. 1990 c).

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