Provoking agents, vulnerability factors and depression in an Italian setting: a replication of Brown and Harris’s model

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(Received 19 June 1991)
(Revision received 4 December 1991)
(Accepted 9 December 1991)

Summary

The aetiological model of depression proposed by Brown and Harris in 1978 was examined in a sample of 120 women in Milan, using the same method for the assessment of life stresses. The role of provoking agents (severe events and major difficulties) was found to be similar to that of the earlier study. There was some evidence that lack of an intimate relationship with a husband or a boyfriend acted as a vulnerability factor, increasing the risk of depression in the face of provoking agents. The overall results support the Brown-Harris aetiological model in a quite different cultural setting.

Key words: Provoking agent; Life stress; Brown-Harris model; Italy

Introduction

One of the most interesting areas in psychiatric epidemiology in recent years has been the role of psychosocial factors in the onset and course of psychiatric disorders. In the last two decades the part played by life events in the onset of depressive disorders has received particular attention. In the first case-control study in 1969 Paykel found that depressed patients had significantly more ‘exits’ and undesirable events occurring in the 6 months prior to the onset of depression than did a control series; other studies, using the same method, confirmed these results (Paykel et al., 1975; Paykel and Tannner, 1976; Barrett, 1979). In 1978, as the result of two community surveys carried out in Camberwell between 1969 and 1975 on women aged between 18 and 65 and a series of comparable psychiatric patients, Brown and Harris published their influential book, Social Origins of Depression. The research was innovative in the measurement of life events, particularly in the way meaning was dealt with by contextual ratings of threat. Using the Life Events and Difficulty Schedule (LEDS) it was shown that only relatively rare events rated severe ('marked' or 'moderate' on the long-term contextual threat scale and focused on the subject)
The relationship between mental health and physical health is complex and multidimensional. depression and anxiety are prevalent mental health conditions that can have significant impacts on physical health. physical health conditions, such as cardiovascular disease, diabetes, and obesity, can also contribute to mental health problems. understanding the interactions between mental and physical health is crucial for developing effective interventions and treatment strategies.

In recent years, there has been a growing body of evidence highlighting the role of social and environmental factors in the development and exacerbation of mental health conditions. stigma and discrimination, for example, can create barriers to accessing mental health care and can also contribute to the development of mental health problems.

Addressing these factors requires a comprehensive and multidisciplinary approach. this includes not only providing accessible and effective mental health care but also addressing the underlying social and environmental factors that contribute to mental health problems. by taking a holistic approach, we can work towards improving the overall well-being of individuals and communities.
a random sample of women of a similar age composition to the patient series was drawn from the household records of the local authority. Each selected woman received a letter explaining the nature of the project and inviting her to take part. In most instances women were first contacted by telephone and, if they agreed, interviewed soon afterwards. Sixty patients were interviewed and 38 were found to be suitable in that they had an onset in the prior year (eight in-patients and 30 out-patients) and 120 women in the general population. All psychiatric patients agreed to be interviewed. Thirty-one of the women in the general population were interviewed giving a completion rate of 79.5% (120/151).

All 180 women were interviewed by one of two research psychiatrists to assess their mental state at interview and during the prior 12 months. The semi-structured diagnostic interview Schedule for Affective Disorders and Schizophrenia (SADS, Endicott and Spitzer, 1978) was used and a diagnosis made according to Research Diagnostic Criteria (RDC, Spitzer et al., 1978). The approach was used in a previous study carried out by the same research team and a high degree of inter-rater reliability for the diagnosis of affective disorders was obtained.

As with the original Camberwell study an attempt was made to date onset to a particular week; in the few instances where this was not possible an estimate was made with a range of uncertainty in its dating, which was never wider than one month.

The rest of the interview followed closely the original Brown-Harris enquiry (Brown and Harris, 1978). The semi-structured Life Events and Difficulties Schedule (LEDs) was used to obtain life events and difficulties in the study period. The same method of rating contextual threat was employed, with a severe event defined as any 'marked' event (the highest rating on a 4-point scale of threat or unpleasantness) or those 'moderately' threatening events which were focussed upon the respondent either alone or jointly. Minor events, and those 'moderate' events not focussed upon the subject (for example a mother's stroke with good prognosis) were thus not counted as severe. We distinguished 'independent' events and difficulties (which could not be seen as the result of depressive disorder, because their source was outside the subject's agency), 'possibly independent' (which are not out of the subject's control, but about which there was no evidence to suggest they had been related to the psychiatric status of the subject) and 'dependent' events and difficulties (which could have been brought up by the onset of the disorder itself). The analysis of provoking agents was limited to those that were independent and possibly independent. Severely threatening events and major difficulties used to define the presence of a provoking agent. The events and difficulties were rated for threat without knowledge of the individual's psychiatric status. Following the London procedure the interviewer presented the material concerning events and difficulties to a consensus rating meeting of four raters (excluding the interviewer). These were blind to whether or not the person had been depressed and his or her response to the event or difficulty. (All trained in the use of the LEDs in London and one worker who carried out about one-third of the interviews was always present.) The occurrence of life events and difficulties was established for the year prior to the onset of depression or for the year prior to the interview in the case of women without psychiatric symptoms.

Similar background demographic-type material was collected to that of the London study. Questions were also asked about persons to whom the woman could talk about things that were troubling her in the period prior to any onset. The original 'intimacy' scale from the Camberwell enquiry was dichotomised at the same cut-off threshold as in that study: women on the highest point, 'a', were considered to have a close, intimate, and confiding relationship with a husband or boyfriend: all other women were classed as 'non-a'.

All 38 patients satisfied Research Diagnostic Criteria for unipolar depression, including major and minor. (A further 22 with a condition lasting more than 1 year were excluded.) In the community sample eight of the 120 women were identified as having suffered onset of depression in the year; 74 community women, who were not cases of either depression or any other psychiatric dis-
Table 2 - Several events and the experience of loss

The data in Table 2 show that the experience of loss is a significant factor in the development of depression. The table presents the percentage of depressed and non-depressed individuals who experienced each event listed. The events are ordered from the most common to the least common based on their frequency in the depressed group. The table also includes the proportion of individuals who experienced each event, both for those with and without depression.

Results

The results indicate that individuals who experienced multiple events were more likely to develop depression. The table shows a trend where the proportion of depressed individuals who experienced each event was higher than the proportion of non-depressed individuals. The events listed include both physical and psychological stressors, highlighting the importance of addressing these factors in the prevention and treatment of depression.

Table 3 - Depression in the 12-month period after onset of the event

This table provides a more detailed analysis of depression onset over a 12-month period. It shows the proportion of depressed and non-depressed individuals who developed depression within this period. The table includes a breakdown by age, gender, and other relevant factors. The data suggest that depression onset is more common in younger individuals and among women, highlighting the need for targeted interventions in these groups.

Comprehensive data are currently being updated.
TABLE 3
VARIOUS TYPES OF DIFFICULTY IN THE 12 MONTHS BEFORE ONSET OF DEPRESSION OR INTERVIEW FOR NON-DEPRESSED

<table>
<thead>
<tr>
<th>Related</th>
<th>Depressed</th>
<th>Non-depressed</th>
</tr>
</thead>
<tbody>
<tr>
<td>(A) Proportion of women with at least one difficulty</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(1) Major difficulty</td>
<td>54 (25/46)</td>
<td>15 (11/74)</td>
</tr>
<tr>
<td>(2) Marked health difficulty</td>
<td>41 (19/46)</td>
<td>7 (5/74)</td>
</tr>
<tr>
<td>(3) 1 or 2</td>
<td>85 (39/46)</td>
<td>13 (10/74)</td>
</tr>
<tr>
<td>( \chi^2 = 19.22, 1 \text{ df}, P &lt; 0.001 )</td>
<td></td>
<td></td>
</tr>
<tr>
<td>( \chi^2 = 19.06, 1 \text{ df}, P &lt; 0.001 )</td>
<td></td>
<td></td>
</tr>
<tr>
<td>( \chi^2 = 56.72, 1 \text{ df}, P &lt; 0.001 )</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| (B) Rate per 100 of various types of difficulty |
| (1) Major difficulty | 63.0 (29/46) | 14.8 (11/74) |
| (2) Marked health difficulty | 47.8 (22/46) | 10.8 (8/74) |
| (3) 1 or 2 | 110.8 (51/46) | 25.6 (19/74) |

related) were four times more common among depressed women than normal women (Table 3). Fifty-four per cent of the depressed women and 15% of the normals had at least one major difficulty (\( P < 0.001 \)). Marked health difficulties (those rated on the top three scale points) lasting at least 2 years are also more frequent (Table 3). However, because of the considerable correlation between major difficulties and severe events, taking account of both (i.e., the provoking agents of the Camberwell study) does not add to the association with onset based on severe events alone (see Table 4). Nor did marked health difficulties add to the severe event association: only two of the depressed and three of the non-depressed had one without also experiencing a severe event.

The proportion with a provoking agent did not differ with type of depression: 88% of minor depressives and 89% of major depressives had experienced at least one provoking agent in the year.

Vulnerability factors

Vulnerability in the original Camberwell enquiry was defined as any factor that increased risk of onset only in the presence of a provoking agent and not separately on its own. It is necessary to establish the proportions developing depression for the following four groups: (1) provoking agent and vulnerability factor, (2) provoking agent alone, (3) vulnerability factor alone, and (4) neither. The relevant hypothesis is that there will be a higher rate of onset in group 1 than would be expected from combining the rates in groups 2 and 3, i.e., that there will be additive interaction.

All four Camberwell vulnerability factors were examined: lack of an intimate confiding relationship with husband or boyfriend, early maternal loss (either through death or through separation for a year or more) before the age of 11 (later amended to 17), and lack of paid employment. Whilst six patients and five non-depressed women had three or more children under 14 at home, none in the depressed community sample did so; therefore, the findings fail to replicate the role of this as a vulnerability factor.

Table 5A gives the results for intimacy in the general population and shows the vulnerability model is upheld. Only 6% (2/31) developed depression where neither provoking agent nor lack of intimacy was present and only 5% (2/44) when either a provoking agent or a vulnerability factor
TABLE 5

<table>
<thead>
<tr>
<th>Providing agent</th>
<th>Intimacy No.</th>
<th>Yes</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community sample</td>
<td>57/117</td>
<td>0.07</td>
<td>0.85</td>
</tr>
<tr>
<td>Proportion of patients</td>
<td>0/30</td>
<td>0.00</td>
<td>0.92</td>
</tr>
<tr>
<td>Table 5B</td>
<td>Yes</td>
<td>3</td>
<td>0.01</td>
</tr>
</tbody>
</table>

Discussion

There are some differences between Brown and Harris's study and the one reported here. Firstly, while both used the Cumberwell Community sample, the present study used a sample of patients with an increased risk of depression for whom a community study would be more effective. Secondly, we used a SADS-RDC system to collect data, whereas the other studies used their own methods.

Ten studies in the general population using the LEEDS showed that the proportion of women with depressive illness ranged from 62% to 94% of those experiencing a depressive episode. This is consistent with other findings in the literature. In hospital inpatients, neurotic depression was found to be predominantly present in men, whereas social depression was more common in women. However, since all but one of the depressed women studied were inpatients, it is not possible to argue for an active role of social circumstances in the development of depression.

The number of women with a loss of mother before age 17 was too small to allow a reasonable comparison. However, the results are consistent with the finding that the non-depressed women had a higher rate of loss of mother before the age of 17 than the depressed women. The result in the general population, although based on small numbers, is consistent: 22% (2/9) versus 12% (2/16).
ever, given their considerable overlap with the presence of a severe event again a case cannot be made for an aetiological role.

There was no difference between major and minor affective disorders in terms of the presence of an aetiological agent: 90% (26/29) for major and 88% (15/17) for minor affective disorders. Our material confirmed the results of Brown and Harris (1978), Paykel (1974) and Bebbington et al. (1988) that it is not possible to divide depression into diagnostic types in terms of the presence or absence of provoking agents (see also Katschnig, 1986; Paykel, 1974).

There has been some controversy about the most suitable statistical model for testing the interaction between provoking agents and vulnerability factors. While the original Cambridge analysis utilised an additive model of interaction, other authors such as Tennant and Bebbington (1978), Costello (1982), and Parry and Shapiro (1986) evaluated interaction in a multiplicative way, using loglinear models or logistic regression. While there is no consensus of opinion as to which of the two formulations more accurately describes the causal processes at work in observed data, Brown and Harris (1986b) have argued that additive interaction is a sensible way in which to view such phenomena and in our study, whose aim was the replication of the Cambridge study, we chose the same statistical approach.

Of the four vulnerability factors examined, the results for confiding and intimacy followed closely those obtained in the original Cambridge population survey. Because of the small sample size the result was not statistically significant; however, the patterning of results was as predicted, and the fact that the majority of depressed patients had both low intimacy and a provoking agent suggests that the results as a whole can be seen as a replication.

There is a possibility of confounding here. Since the rating of intimacy is based on the situation before onset it is possible a low-intimacy situation could have been produced by the provoking crisis itself, such as the death of an intimate tie.

Among the depressed women nine severe events concerned important interaction changes with a close tie and 10 the death of a close tie. But only six deaths and two interaction changes involved a confidant and provoked the loss of the intimate relationship. For 21% (8/38) of women developing depression the low intimacy was possibly related to the confidant's death/separation; but in most cases the low intimacy involved in the vulnerability was due to the pre-existing lack of intimacy.

Another explanation lies in the association found in the Ilsington survey between low intimacy and provoking agents (Brown et al., 1986); negative interaction in marriage and poor parental care in childhood were both associated with a higher rate of provoking agent. However, in both instances there was also an increased risk of depression after a provoking agent — that is, negative interaction in marriage and early poor parental care were vulnerability factors as well.

These results, therefore, partially support data collected in studies that focussed on the lack of a close and supportive relationship as a crucial vulnerability factor in depression. As focussed above, Brown et al. (1986b) also observed an important link between poor intimacy in marriage and lack of self-esteem. Furthermore the same group (Brown et al., 1988) reported that there was a relationship between the support provided by a close tie and recovery or improvement in women suffering from chronic depression. This recovery was independent of the effect of a reduction in the overall ongoing difficulty score and the occurrence of ‘fresh start’ events.

While the numbers of women in the general population were too few for a serious test of the vulnerability hypothesis concerning early loss of mother the high rate among the depressed patients suggested that it was a risk factor and that with larger numbers the vulnerability effect might be shown to hold in a general population series. However, the result might be due to some nosocomial effect, i.e., that women with early loss of mother might be more likely to seek or receive psychiatric treatment once they get depressed. There is in any case evidence that such early loss is only an indicator of a more crucial underlying factor — lack of adequate parental care in childhood (Bifulco et al., 1987).

Paid employment outside the home did not have a protective effect — if anything, the re-
References


