Distress, Expressed Emotion, and Attributions in Relatives of Schizophrenia Patients

by Christine Barrowclough, Nicholas Tarrier, and Marie Johnston

Abstract

This article investigates the level of distress in relatives at the time of an acute episode of illness in the schizophrenia sufferer. Guided by attributional literature on the prediction of distress and depression, the association between relatives' distress and their explanations and beliefs concerning the illness is examined in the context of the expressed emotion status of the relative. The study found that although distress levels were unrelated to the relatives' beliefs about the patient's role in negative events, beliefs that illness events were caused by factors internal to the relatives themselves ("self-blaming" beliefs) were associated with distress in the relatives. The authors argue that understanding the cognitive appraisal processes involved in how caregivers perceive schizophrenia is important to understanding their response to the illness and helping them to adapt to the problems.


In the last two decades, much of the research on the relatives of schizophrenia patients has focused on the concept of expressed emotion (EE) and has examined relatives' influence on relapse rates through psychosocial stress mechanisms in the home environments of patients (see, e.g., Kavanagh 1992; Bebbington and Kuipers 1994 for reviews). EE is a dichotomous measure with a relative classified as either high EE or low EE, depending on their rating on three dimensions—criticism, hostility, and marked emotional overinvolvement. These dimensions have operationalized methods of scoring, and high reliability is achievable. Hostility, when present, is normally associated with high levels of criticism. A large number of prospective studies have been carried out to investigate the association between subsequent schizophrenia relapse and living with a relative rated as high EE. The majority of these have demonstrated that a significantly higher number of patients living with high-EE relatives relapse than patients living with low-EE relatives. Reviewing 26 studies investigating outcome in 1,323 patients, Kavanagh (1992) found a median first-year relapse rate of 48 percent with high-EE relatives and 21 percent with low; and the Bebbington and Kuipers (1994) aggregate analyses of data from 25 studies gives relapse rates of 50 percent in patients with high-EE families and 21 percent with low.

Research into the problems of the relatives themselves is limited, but there has been acknowledgment that relatives experience significant stress as a consequence of the illness and that the problems and burdens of living with a schizophrenia sufferer are considerable (e.g., Creer and Wing 1974; Gibbons et al. 1984; Fadden et al. 1987; MacCreadie and Robertson 1987; Bland 1989). The difference between subjective aspects and objective aspects of burden has been noted (Platt 1985). Objective aspects refer to actual disruptions to daily life and financial costs, whereas subjective aspects include the level of distress experienced by the relative as a consequence of the caregiving role.

Winefield and Harvey (1993)

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reported that 60.3 percent of caregivers who responded to a survey of a caregivers’ self-help group in Australia met the criterion for being a “case” of psychiatric disorder on the General Health Questionnaire (GHQ; Goldberg and Williams 1988). They note that the level of distress experienced by relatives of schizophrenia sufferers could seriously prejudice their role as caregivers, and attention must be paid to their psychological needs. However, little research helps to predict which relatives of which patients are vulnerable to developing problems with their own psychological well-being.

Research and theory about the attributions of relatives of the mentally ill (Hooley et al. 1987) and relatives of patients with schizophrenia (Hooley 1985; Greenley 1986; Brewin et al. 1991; Weissman et al. 1993; Barrowclough et al. 1994; Brewin 1994) suggest that relatives’ beliefs about the nature and the symptomatology of the illness may help explain different responses to schizophrenia and have helped to shift thinking away from the idea of EE being a simple and somewhat blameworthy traitlike response to the patient at a time of acute illness and crisis. In Brewin and colleagues’ 1991 study, relatives with marked criticism and hostility made more attributions to factors personal (idiiosyncratic) to and controllable by the patient than did relatives who had marked emotional overinvolvement. The latter group was characterized by universal and uncontrollable patient attributions and in this respect were similar to the low-EE group. In line with these findings, the Barrowclough et al. (1994) study found differences between high- and low-EE relatives in terms of their attributions: relatives with high criticism gave more causes internal to the patient, while the hostile relatives also tended to perceive the causes to be controllable by and personal to the schizophrenia sufferer. Emotional overinvolvement was again associated with beliefs similar to the low-EE relatives: that the patient’s illness and problems were caused by factors external to and uncontrollable by the patient. Looking at changes in beliefs following interventions designed to reduce the EE status of the relatives, Brewin (1994) found some evidence of attributional change. Weissman et al. (1993) found that relatives who were critical perceived patients to have more volitional control than did relatives who did not have marked criticism.

It has been suggested that the beliefs of relatives might mediate different coping strategies (Greenley 1986; Hooley et al. 1987; Barrowclough et al. 1994). On one hand, attributing problem behaviors to being internal to and controllable by patients would lead to trying to coerce the patient to get back to normal (a critical attitude); on the other hand, the idea that patients could not help themselves and that their problems were external to them would lead to strategies of taking control and doing things for the patient (overinvolvement). Furthermore, attribution variables were found to be a better predictor of patient relapse at 9 months’ followup than were EE measures (Barrowclough et al. 1994).

Theoretical frameworks from attribution theories may also be useful in understanding emotional stress in relatives. From the literature, a number of predictions may be formulated about distress in the relatives of schizophrenia patients.

1. When negative events occur, people look for causal explanations (Wong and Weiner 1981), and a central assumption of attribution theorists is that individuals use such explanations first to understand then to control and master their difficulties (Forsterling 1988). We may assume that having a family member who has a severe mental illness is universally appraised as a negative event, and the studies cited above demonstrated that relatives were indeed using and looking for explanations for illness behaviors. We may also assume that there will be considerable variation in relatives’ appraisal of the difficulty or threat of the situation. We suggest that greater causal search (more attributions) will indicate higher levels of distress.

2. Weiner’s work (1985) on the attributional analysis of emotions highlighted by Brewin (1988) suggests that different causal beliefs held about other people’s problems will be instrumental in producing specific emotional states. Of relevance here is the proposal that when the causes of a negative outcome for another person are seen to be internal and controllable by oneself, then guilt is experienced. Such guilt will likely be associated with increased levels of personal distress.

3. Attributional theories of depression (e.g., Alloy et al. 1988) propose that people’s emotional response to negative events that they seem unable to control will be dependent on their understanding of such events. Depression is more likely to result when events are perceived to be enduring or stable. Where many outcomes are affected and problems are global, and if the cause is perceived to be internal (personal helplessness) rather than external (universal helplessness), then a person is likely to suffer loss of self-esteem.

Drawing from this literature, the aim of this study was to examine the
association between relatives’ personal distress and their beliefs about illness events in the context of the relatives’ EE ratings and the chronicity of schizophrenia. Specific hypotheses to be tested were as follows:

1. Relatives of schizophrenia patients will show raised levels of distress, and there will be an association between the amount of explanations for illness events and the relatives’ level of distress.

2. Most distress will be evidenced in relatives who give causes internal and controllable by themselves for the illness (they blame themselves).

3. Raised levels of distress in relatives will be associated with a worse illness course as measured by chronicity of illness.

**Methods**

Data were collected during the course of a larger research study concerned with the effects of a family intervention on relapse rates in schizophrenia (Tarrier et al. 1988). Full details of the study of the attributions of the relatives have been reported elsewhere (Barrowclough et al. 1994) and a summary of the methodology is reported here.

**Subjects.** Included in the study were 51 patients and their 60 relatives (some patients resided with more than 1 relative). The patients were recruited during an acute episode of schizophrenia (symptoms were elicited by the Present State Examination and diagnosis was confirmed using the Catego program [Wing et al. 1974]) and were living with a relative for at least 3 months before index hospital admission. The mean age of the patients was 33.7 years (standard deviation [SD] = 11.7) and 53 percent were female. The majority (65%) had experienced at least one previous episode of schizophrenia, and the mean illness duration was 5.9 years (SD = 7.1) with a range of up to 26 years.

The majority of the relatives were parents of patients (36 or 60%), of which 22 were mothers and 14 were fathers; 19 or 32 percent were partners (15 husbands and 4 wives), and the remaining 5 relatives included children and siblings. There was a fairly even split between males and females (32 or 53%, and 28 or 47%, respectively) and their mean age was 51.8 years (SD = 14.2; range = 19-80).

**Assessments.** Two indices of illness chronicity were assessed from the patients’ notes: frequency of hospital admissions and duration of illness from the first hospital admission.

The EE ratings for the relatives were assessed by three trained raters from the audiotaped Camberwell Family Interview (CFI; Vaughan and Leff 1976) conducted at the time of the patient’s index admission. The semi-structured CFI allows the interviewer to question the relative about the history of the problem as perceived by the relative, about events associated with the recent illness episode, about the occurrence of irritability or arguments in the household, about the patient’s behavior and symptoms, and about the impact of the illness on the relative and other family members (see Leff and Vaughan 1985). The audiotapes were assessed by three trained raters on the EE scales used in this study—emotional overinvolvement score, 0–5; critical comments frequency count; and hostility score, 0–3. The interrater reliability of EE was calculated according to the conventions of EE research. The phi coefficients of agreement between pairs of raters were 1.0 and 0.84.

The 60-item GHQ was used to measure the distress of relatives at the time of the patient’s hospital admission. The GHQ consists of four subscales: somatic symptoms, anxiety/insomnia, social dysfunction, and severe depression. Two of the 60 relatives, whose CFI s were assessed for EE and attributions, did not complete the GHQ and thus the subject numbers are reduced to 58 in the analyses.

**Attributions.** Full details of the method of assessing the spontaneous causal attributions of the relatives using the CFI as the source material are reported in an earlier article (Barrowclough et al. 1994) that examines the relationship between the attributions, EE, and schizophrenia relapse. The Leeds Attributional Coding System (LACS; Stratton et al. 1988) was used for the identification and measurement of the attributional statements, in conjunction with Brewin’s guidelines (Brewin et al. 1991) for its use in schizophrenia studies, with some further modification to the system.

The definition of an attributional statement used was as follows: a statement that explains or explores the reasons or causes for a particular event or class of events, where “event” refers to a reported outcome, behavior, or situation. There were three categories of events: illness onset or exacerbation of illness; negative behaviors, feelings, or characteristics of the patient; and current or past negative situations in the patient’s life. For the measurement of causal dimensions, the LACS uses binary ratings for scoring causal dimensions (score 1 or 2 for each end of the causal dimension, for example 1 = internal, 2 = external); separate ratings can be used when causal information is too ambiguous or insuf-
cient to make a judgment (score 9) or when causal material involves both ends of the causal dimension (score 8).

In this study, the following causal dimensions were assessed: internal-external, personal-universal, controllable-uncontrollable, and stable-unstable. (The stability dimension was excluded since reliability of rating was unacceptable.) All four dimensions were assessed for the relative’s perception of the patient’s causal role in events. For the internality dimension, Does the relative believe that the cause is some feature of the patient (internal) or a condition or event in the outside world (external)? For the personal-universal dimension, Is the cause idiosyncratic to the patient (personal) or would many people be likely to behave in that way (universal)? For the controllability dimension, Is the outcome readily controllable by the patient (controllable) or only with exceptional effort (uncontrollable)? For the stability dimension, Is the same cause likely to operate again in the future (stable) or not reliably so (unstable)?

For two dimensions, internality and controllability, separate ratings were made for the patient’s and relative’s perceived causality (e.g., Did the relative believe that the patient’s and relative’s perceived causality?). For the sake of clarity, the two dimensions pertaining to relative causality have been labeled self-blame (internality) and self-control (controllability).

The attribution measures were as follows:

Frequency of attributional statements. The attributional statements of the relatives were identified directly from the audiotaped CFIs using the criteria described above. A reliability study was conducted. The agreement score was 73.5 percent for all attributional statements (a total of 135 identified by the author) from five randomly selected relatives’ interviews (range of agreements = 67.7% to 79.5%).

Scores on six dimensions of causality. The attributional statements of each relative were scored in the order they were made during the CFI. Three coders scored the six dimensions of causality (four for patient causality; two for relative causality). Their interrater agreement for the study was assessed from the 93 attributional statements of five relatives. Cohen’s kappa statistics of agreement across all coders for individual dimensions were as follows: Patient causality: internality = 0.85; personal/universal = 0.83; controllability = 0.78; stability = 0.75. Relative causality: self-blame = 0.76; self-control = 0.70.

Proportional attribution (PA) scores. To represent the relatives’ direction of causality for each of the causal dimensions, a PA score was calculated as follows: sum of causes scored 1 divided by sum of causes scored 1 or 2. For example, where 1 = internal, 2 = external, PA score = sum of the internal attributions divided by the sum of the internal and external attributions. The score had a range of 0 (zero 1s but at least one 2) to 1 (zero 2s but at least one 1); the higher the score, the greater the proportion of scores equal to 1. For example, a high score on the internal-to-patient causality dimension indicated a tendency to rate causes internal to the patient.

Results

Distribution-free statistics were used when scores deviated significantly from a normal distribution.

Nature of the Attributions. From the CFIs of the 60 relatives, 991 of the identified attributional statements were included for analysis. Fourteen were repetitions and were excluded. Of the attributional statements, 112 contained material that had been rated as a critical comment in the assessment of EE and were included in the analysis (representing 23.4% of the 474 critical comments made by the relatives). The mean number of attributional statements for each relative was 16.52 (SD = 7.68), with a range of 4 to 38 attributions. The length of the CFI varied widely from 45 to 140 minutes (mean length 86.2 minutes). A measure of the rate of attributions was calculated by dividing the number of attributions by the number of minutes of interview. The mean rate of attributions per minute was 0.22 (SD = 0.09), ranging from 0.05 to 0.50. Attributions for patient causality were fairly well distributed between internal and external causes (396 vs. 418) and were predominantly personal (692 vs. 263), uncontrollable (508 vs. 361), and unstable (568 vs. 362). Attributions for relatives’ causality were predominantly not self-blaming (879 vs. 60) and not self-controllable (879 vs. 60).

GHQ Scores. The GHQ was scored using a bimodal response scale for the total score and Likert scores for the subscales. Thus, the maximum score for the total score was 60, and the maximum for each subscale was 21 (there are seven questions in each subscale with a score range of 0 to 3). The median total GHQ score for the relatives was 13, with scores ranging from 0 to 57 (mean = 15.98, SD = 22.7). The suggested threshold score for “just significant clinical distur-
bance" (Goldberg and Williams 1988) is 11/12. The median and mean scores for the four subscales were as follows: somatic symptoms, median = 6 (range = 1–19), mean = 7.0, SD = 4.97; anxiety/insomnia, median = 8 (range = 1–19), mean = 8.5, SD = 4.9; social dysfunction, median = 7 (range = 3–18), mean = 8.1, SD = 3.4; and severe depression, median = 1 (range = 0–20), mean = 3.6, SD = 5.1. Thirty-two relatives (55%) reached the threshold for “caseness.” The correlations between age or sex of relatives and total GHQ scores were not significant (0.15 and 0.20, respectively).

**Attributions and Distress in Relatives.** The association between relatives’ distress and their causal attributions was examined using Spearman’s rank correlations: relatives’ scores on the four GHQ subscales (somatic symptoms, anxiety/insomnia, social dysfunction, and depression) and their total GHQ score were correlated with their PA scores on the six dimensions of causality. For the two dimensions of relative causality, self-blame and self-control, a second PA score was also correlated with the GHQ scores. This score was used since there were relatively few completely self-blaming or self-controlling attributions, and the second PA score took into account attributions that invoked both ends of the causal dimension, that is, causes both internal and external to the relative or both controllable and uncontrollable by them (scored 8). The second PA scores have been labeled partial self-blame and partial self-control.

Generally, there was a lack of association between distress scores and attributions to patient causality (beliefs about the patient’s causal role in outcomes). The only significant association was a negative correlation between the social dysfunction subscale and the stability dimension (r = −0.29, p < 0.05). Two of the subscales of the GHQ (depression and somatic) were significantly correlated with the rate of making attributions at the 0.05 level (table 1). Relatives’ perceived self-control of outcomes showed little association with distress, except for social dysfunction, for which the association with the partial self-control score was 0.35 (p < 0.01) (table 1).

Table 1 shows the four subscales of the GHQ and the total score correlated with the self-blame dimension. When attributions that were partly internal (and partly external) to the relative were also included (partial self-blame), the associations increased and were significant for all GHQ scores.

To further examine the relationship of this self-blame dimension to relatives’ distress, relatives were divided into those who made at least one self-blaming statement (in which they attributed the cause of the patient’s problem to factors internal to themselves) and those who made none. For 30 relatives, at least one self-blaming statement was present (range of frequency = 1–5, median = 1), and for 28 relatives self-blaming statements were absent. The groups were compared using Mann-Whitney U tests. For the GHQ total, the difference between groups was not significant (z = −1.3864, p = 0.16; medians: self-blame present = 15.5, absent = 9.5), but there was a significant difference for the depression subscale (z = −2.2231, p = 0.03; medians: self-blame present = 15.5, absent = 9.5). The size of the difference between groups increased when relatives who made at least one partially self-blaming statement were also included (where the cause was attributed to factors both internal and external to the relative). For 42 relatives, self-blame/partial self-blame statements were present (range of frequency = 1–6, median = 1), and for 16 relatives such statements were absent. Mann-Whitney U tests were as follows: GHQ total, z = −2.8043, p < 0.03 (median

Table 1. Relatives’ GHQ scores correlated with proportional self-blame and self-control scores (relative causality) and rate of attributional statements

<table>
<thead>
<tr>
<th>Causal dimensions</th>
<th>GHQ scales</th>
<th>Self-blame</th>
<th>Self-blame/partial self-blame</th>
<th>Self-control</th>
<th>Self-control/partial self-control</th>
<th>Rate AS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Somatic</td>
<td>0.23</td>
<td>0.32^1</td>
<td>0.10</td>
<td>0.10</td>
<td>0.30^1</td>
</tr>
<tr>
<td></td>
<td>Anxiety/insomnia</td>
<td>0.25</td>
<td>0.41^2</td>
<td>0.06</td>
<td>0.20</td>
<td>0.23</td>
</tr>
<tr>
<td></td>
<td>Social dysfunction</td>
<td>0.35^2</td>
<td>0.44^2</td>
<td>0.21</td>
<td>0.35^2</td>
<td>0.23</td>
</tr>
<tr>
<td></td>
<td>Depression</td>
<td>0.23</td>
<td>0.31^1</td>
<td>0.01</td>
<td>0.11</td>
<td>0.29^1</td>
</tr>
<tr>
<td></td>
<td>Total score</td>
<td>0.25</td>
<td>0.37^2</td>
<td>0.07</td>
<td>0.18</td>
<td>0.25</td>
</tr>
</tbody>
</table>

Note.—GHQ = General Health Questionnaire (Goldberg and Williams 1988); AS = attributional statements.

^1p < 0.05
^2p < 0.01
GHQ total for relatives with statement present = 16.0, absent = 5.5; GHQ depression, \(z = -2.8043, p < 0.005\) (median GHQ depression score statement present = 1.0, statement absent = 0).

Examples of the self-blaming and partially self-blaming attributional statements are given in the appendix.

The distribution of scores for the depression subscale was skewed, with only 30 of the 58 relatives scoring above 0 on this scale, and of these, 26 scored within the range of 1 to 11. There were four outliers, relatives who had very high scores (scoring 17, 18, 19, and 20). To examine whether these outliers accounted for the significant difference in depression scores between attributional groups, the analysis comparing relatives who made at least one partially self-blaming statement with those for whom such statements were absent was repeated when the four outliers were eliminated (\(n = 54\); self-blame present \(n = 38\); self-blame absent \(n = 16\)). The difference between groups was still significant (\(z = -2.3227, p < 0.02\)).

### Relatives’ Distress and Expressed Emotion

Table 2 gives the GHQ median scores (ranges) of low and high EE relatives.

<table>
<thead>
<tr>
<th>GHQ scales</th>
<th>Low EE (n = 18)</th>
<th>High EE (n = 40)</th>
<th>(z)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Somatic</td>
<td>5 (1–16)</td>
<td>6.5 (1–20)</td>
<td>-1.05</td>
</tr>
<tr>
<td>Anxiety/insomnia</td>
<td>7 (1–20)</td>
<td>9 (2–19)</td>
<td>-1.23</td>
</tr>
<tr>
<td>Social dysfunction</td>
<td>7 (5–18)</td>
<td>8 (3–21)</td>
<td>-1.13</td>
</tr>
<tr>
<td>Depression</td>
<td>0 (0–8)</td>
<td>2 (0–20)</td>
<td>-2.40(^1)</td>
</tr>
<tr>
<td>Total score</td>
<td>7 (0–49)</td>
<td>14.5 (0–57)</td>
<td>-1.36</td>
</tr>
</tbody>
</table>

Note.—GHQ = General Health Questionnaire (Goldberg and Williams 1988); EE = expressed emotion. \(^1p < 0.02\)

Whereas the median low-EE score was below threshold. Twenty-five high-EE relatives (62.5%) were “cases” compared with seven low-EE relatives (38.9%), but this difference was not significant (\(X^2 = 2.77, p < 1.0\)). Only the scores for the depression subscale showed a significant difference between groups, with the high-EE relatives (median = 2, \([0–20]\)) reporting more depressive symptoms than the low-EE relatives (median = 0, range = 0–8) (\(z = -2.40, p < 0.02\)).

### Distress and Specific Dimensions of the EE Scales.

Scores from the three scales from which high- or low-EE status is assessed (emotional overinvolvement, critical comments, and hostility) were correlated with the GHQ subscale and total scores using Spearman’s rank coefficients. Taking the order of cited correlations as total score for the GHQ followed by the four subscales of somatic, anxiety/insomnia, social dysfunction, and depression, the correlations with the EE dimensions were as follows: emotional overinvolvement: 0.22, 0.12, 0.17, 0.16, 0.26; critical comments: 0.24, 0.21, 0.25, 0.23, 0.44; and hostility: 0.22, 0.16, 0.22, 0.27, 0.35. Only the correlations between depression and criticism (\(p = 0.44, p < 0.001\)) and depression and the hostility scale (\(p = 0.35, p < 0.01\)) were significant. Given the close association between high criticism and hostility (hostility and critical comments correlate 0.74 with this sample) and the overlap between EE components in the relatives (eight relatives scored above threshold on both the criticism and hostility scales), further analyses were conducted to assess which combination of high-EE dimensions had most association with depression. For this purpose, the high-EE relatives were categorized into five groups. These mutually exclusive groups refer to EE classification by subscales and are (1) critical comments only; (2) critical comments and hostility; (3) critical comments and overinvolvement; (4) critical comments, overinvolvement, and hostility; and (5) overinvolvement only. There were 8 relatives in each group (40 relatives), and along with the low-EE relatives (18) their scores on the depression subscale were compared using a Kruskal-Wallis one-way analysis of variance. These scores are given in table 3. There was a significant difference between groups (\(X^2 = 11.20, p < 0.05\)). Comparisons between all possible pairs of groups using Mann-Whitney \(U\) tests showed that the only significant difference in scores was between those of low-EE relatives (median = 0, range = 0–8) and those who were high-EE status on all dimensions.
Table 3. GHQ depression scores for relatives categorized by all dimensions of EE

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Median score</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low-EE status (n = 18)</td>
<td>0</td>
<td>0–8</td>
</tr>
<tr>
<td>High EE status for</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Critical comments only (n = 8)</td>
<td>1.5</td>
<td>0–7</td>
</tr>
<tr>
<td>Critical comments and hostility (n = 8)</td>
<td>3.5</td>
<td>0–20</td>
</tr>
<tr>
<td>Critical comments and EOI (n = 8)</td>
<td>1.0</td>
<td>0–18</td>
</tr>
<tr>
<td>Critical comments, EOI, and hostility (n = 18)</td>
<td>7.5</td>
<td>2–17</td>
</tr>
<tr>
<td>EOI only (n = 8)</td>
<td>0.5</td>
<td>0–19</td>
</tr>
</tbody>
</table>

Note.—Chi square = 11.20, p < 0.05. GHQ = General Health Questionnaire (Goldberg and Williams 1988); EE = expressed emotion; EOI = emotional overinvolvement.

Discussion

The study has demonstrated that a substantial number of relatives are experiencing high levels of personal distress at the time of an acute admission of the schizophrenia sufferer. The levels of distress are similar to those reported by Winefield and Harvey (1993), although in their sample, the sufferers' illness was more chronic and the relatives were self-selected members of a self-help group. In the present study, the relatives were not self-selected and were assessed at a time of patient admission. Winefield and Harvey found 60 percent of their sample to be “cases” for a psychiatric disorder, compared with an overall total of 55 percent in our sample. In our study, there was no significant difference in levels of overall distress (total GHQ scores) between high- and low-EE relatives or in psychiatric “caseness” between these groups. However, high-EE relatives reported significantly more depressive symptoms than did low-EE relatives, with a significant association between higher depression scores and high criticism and hostility, and the hostility and emotional overinvolvement scales made significant contributions to the prediction of depression. The depression subscale of the GHQ as the outcome variable, three of the variables were selected for the final equation. The self-blaming attribution score had the largest contribution to explaining the variance (β = 0.27, adjusted R² = 0.14), with the EE dimension of hostility as the second predictor variable (β = 0.30, adjusted R² change = 0.06) and emotional overinvolvement as the third (β = 0.29, adjusted R² change = 0.06). In total, the three variables predicted 26 percent of the variance in the depression scores.

The study hypothesized that...
greater distress would be evidenced where patients had a more chronic illness profile. A significant association was found between relatives’ depression and illness chronicity in patients, but little association with chronicity and total GHQ scores or other subscales. The Winefield and Harvey (1993) study found that illness duration did not predict caregiver distress, but that the two sufferer characteristics adding to both caregiver distress and their complaints of burden were female sex and turbulent behavior. In the study reported here, the proportion of female patients (53%) is higher than in most samples, but as Winefield and Harvey comment, it is generally assumed that women would cause their caregivers less distress and burden, since they are less socially disruptive or prone to turbulent behavior. The nature and severity of patient problems (e.g., disturbed behavior or poor self-care) in relation to strain and stress in relatives requires further investigation. A clear distinction needs to be made between relatives’ appraisal of problems (as assessed when relatives are the information source concerning patient behavior, as in the Winefield and Harvey study) and independent assessments of patients’ behavior. There is some evidence to suggest the confounding of relatives’ perceptions or attitudes with their reports of patient behavior. For example, a study by Minz et al. (1989) found that some (low-EE) relatives underestimated patients pre-admission duration of illness when compared with estimates based on a compilation of sources.

The evidence from the study does highlight the association between aspects of the relatives’ cognitive appraisal of the illness experience and their distress. The amount of causal searching that the relatives engaged in during the CFI was a significant correlate of their level of distress. Moreover, as predicted, significant associations with attributions that invoked the relatives’ own role in outcomes were found: those relatives who made self-blaming attributions also experienced higher levels of distress and depression than those who did not. Although this link between self-blaming attributions and emotional distress was clear, how the relatives interpreted the patient’s role in illness-related problems had no bearing on their own distress. They were as likely to be distressed if they believed that the patient was responsible for the illness as they were if they believed that the problems were externally caused and beyond the patient’s control. Being critical of the patient or expressing hostility did not preclude distress associated with the experience of the illness. On the contrary, such criticism/hostility was associated with greater depressive symptoms. These findings suggest a much more complex model of caregivers’ responses to mental illness in family members than has been indicated in previous work focusing on the EE construct, suggesting that patient blame does not exclude self-blame. It is possible that self-blame is salient only at the time of illness exacerbations when caregivers may perceive their coping efforts to have failed. Prospective data would be required to study whether self-blame at crisis time is predictive of the relatives’ continued distress following patient discharge.

In accordance with Weiner’s (1985) attributional analysis of emotions, in which guilt is experienced when negative outcomes for another person are seen to be internal to and controllable by oneself, the study hypothesized that most distress would be evidenced in relatives who give causes both internal to and controllable by themselves. However, the results indicate that only the internal dimension was associated with relatives’ distress. In other words, blaming some aspect of oneself for the cause of a problem or bad outcome, irrespective of how much control one perceived as having over the outcome, was associated with poor emotional adjustment. Unfortunately, the study was unable to address the circumstances in which an internal locus of control might moderate ill or well-being in relatives, since the study did not make distinctions between such qualitatively different types of attribution. But the literature pertaining to predicting distress in people who themselves have an illness or disability suggests that this is a complex area (e.g., Turnquist et al. 1988). For example, in situations where relatives perceive themselves to have caused or contributed to a patient’s problem but feel able to improve it or at least contain the adverse effects, the perceived control may improve the relatives’ well-being. But where such a cause-and-effect relationship between the relatives’ actions and better outcome is not perceived or breaks down (e.g., when the patient’s condition deteriorates or the patient suffers a relapse), then internal locus of control beliefs may be unhelpful and lead to poor emotional adjustment in relatives.

Although there is no published work on attributions and mental health in relatives of schizophrenia patients, the importance of self-blaming attributions to emotional problems in relatives when caring for Alzheimer’s disease patients was reported by Pagel et al. (1985). They found that caregivers were more depressed, anxious, and hostile (anxiety and hostility were measured by the Symptom Checklist 90; depres-
sion by the Beck Depression Inventory) if they attributed the causes of upsetting events related to their spouse's disease to factors internal to themselves. The authors suggest that (1) contrary to the contention of Abramson et al. (1978) that attribution variables are specific to depression, self-blame may predict more general affective states in some circumstances and (2) the self-blaming attributions themselves were related to feelings of general demoralization and conflict.

The association of high depression scores with relatives who showed all aspects of high EE (emotional overinvolvement, criticism, and hostility) in the present study was noted, although it should be stressed that this finding needs to be viewed with caution because of the inadequate statistical power of the analyses. It is suggested that these relatives might perceive themselves as having "failed" to cope effectively with the illness—despite attempting different strategies mediated by their varied beliefs, the patient has continued to relapse. Again in the study of caregivers of dementia suffers, Coppel et al. (1985) found that depression was associated with a feeling of inability to cope with changes that had affected everything and had become a permanent feature in their lives.

There has been considerable debate over whether attributions are a cause or an effect of depression (e.g., Brewin 1985), and no further attempt will be made here to evaluate where attributions occur in the causal chain of depression and emotional maladjustment. Given that the hopelessness theory proposes that self-blaming attributions for negative outcomes are associated specifically with low self-esteem (Alloy et al. 1988), it could well be argued that the self-blaming beliefs are correlates of a general feeling of demoralization as suggested in the work of Pagel et al. (1985) with dementia caregivers. It is likely that psychological processes mediating distress and depression in relatives are shaped by complex factors. Again, in the area of dementia caregivers, some research indicates that poor premorbid relationships, lack of social support, and loss of control may be important predictors (Morris et al. 1988). The important finding of the present study is that self-blaming attributions are strong and reliable correlates of distress in relatives of schizophrenia sufferers, at least at the time of an acute episode of illness. Service providers need to take care of the caregivers; those workers who contribute to a caregivers feelings of self-blame should be aware that they may be culpable of increasing that person's level of distress.

Self-blame may be more predominant in Western culture where there is a strong popular belief that the family, particularly the parents, are to blame for their children's problems and deficits. Relatives in more traditional cultures may have less self-blame and less subjective distress. Hatfield (1987) discusses the distress to families that can be caused by the message of psychoanalytic theories such as those of Lidz et al. (1965), in which the blame for schizophrenia illness was put on family disturbance. Although the theories have been scientifically discredited, she suggests that they may still be propounded by some professionals, and the guilt and blame generated by these ideas will add to a family's already painful experiences. Since some degree of self-blame was evident in over half of the relatives in this study, we would query whether this may be partially iatrogenic, that is, inherent self-blaming tendencies have been reinforced by a message of family causation either from reading or clinical contact. While acknowledging the helpful contribution of psychoeducational approaches that give relatives more information and practical coping skills, Hatfield's concern is that these approaches retain the old idea that the family has major deficits. Moreover, she suggests that the theories based on the concept of EE, which conceptualize relatives as potential stressors implicated in the relapse of patients, still carry guilt and blame messages. These issues can be addressed only through interventions that give equal weight to the needs of the relatives and the patients and that give a clear message that the stress associated with mental illness in the family truly operates as a two-way process, developing as a normal response to abnormal stressors.

New theoretical models of caregivers' responses to mental illness that are free from stigmatizing concepts and descriptions of relatives' personal deficits would also be helpful. There is increasing recognition that cognitive processes may play an important role in the development and maintenance of affective disorders. We would argue that cognitive models of coping and emotion will be useful both in determining which caregivers are vulnerable to developing problems themselves and in clarifying relatives' different responses to schizophrenia sufferers, including those categorized as high-EE responses. Theories of stress and coping emphasize the importance of cognitive appraisal processes in intervening between the initial perception, subsequent experience, and management of potentially stressful situations (Lazarus and Folkman 1984).

Cognitive appraisals are evaluative judgments about stressful situations...
and include assessing the magnitude of the problem and making sense of it in terms of causality (primary appraisal) and assessing one's resources to deal with the problem (secondary appraisal). The appraisals are thought to determine people's responses to adverse events. Where the threat from the situation is perceived to be high and the person's appraisal of self-efficacy to deal with the threat is low, then the person will experience significant stress. Following this model, relatives' perceptions of the patients' problems and their response to them will be moderated by their appraisal of the illness and their coping resources—for example, how threatened or challenged by the illness they feel, or how optimistic they are for the future; how competent they feel in dealing with problems; and what resources they have to help them.

The significance of attributions in understanding distress and depression in this study and the consistent findings of previous studies that attributions are helpful in understanding the EE responses of relatives suggest that further prospective studies into the psychological processes of stress and coping in the relatives of mentally ill patients would be worthwhile. Making sense of relatives' perceptions and evaluations of the illness experience is a prerequisite to understanding their response to illness events and to helping relatives change their responses to ones that protect their own well-being while promoting better outcomes for patients.

References


Lazarus, R.S., and Folkman, S. Stress,

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