Coping strategies in relatives of people with schizophrenia before and after psychiatric admission

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Background Most research on expressed emotion (EE) has used an empirical approach to describe relatives' ways of coping with people with schizophrenia.

Aims To use the stress and coping model proposed by Lazarus and Folkman to examine how relatives coped with patients.

Method Patients with DSM–III–R schizophrenia and their relatives were assessed just after hospitalisation of the patients and nine months after discharge. Both assessments included the symptoms of the patients and the coping strategies, burden, distress and levels of EE of the relatives.

Results Fifty patients and 50 relatives were assessed at inclusion, and 31 patients and 36 relatives at follow-up. Coping strategies were used more frequently at inclusion than at follow-up. Problem-focused coping was the strategy used more often at both assessments. Avoidance coping was strongly associated with burden, distress and high EE at both assessments.

Conclusions Ways of coping are influenced by relatives' perceptions of the situation with patients. Avoidance strategies seem to be less effective in regulating the distress of care-givers than problem-focused strategies.

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Research on expressed emotion (EE) in relatives of patients with schizophrenia has encouraged an interest in understanding the way in which relatives cope with patients' illness (Leff & Vaughn, 1985; Birchwood & Cochrane, 1990). Interventions with families have emphasised changes in attitudes and behaviours that are more common among relatives with a high EE status (showing high levels of criticism, over-involvement and hostility) and have tried to enhance more positive and constructive attitudes (Leff et al, 1985). Such interventions were mainly empirically driven. Thus, the stress and coping theory offered by Lazarus & Folkman (1984) might aid our understanding of the therapeutic change that occurs in these interventions and inform us of new interventions (Lam, 1991).

STRESS AND COPING

According to Lazarus & Folkman (1984), coping refers to the constantly changing thoughts and behaviours that people use in order to manage stressful situations. Following this theory, ways in which relatives cope with patients are influenced by the situational and personal characteristics of both patients and relatives, and depend on relatives' appraisal of patients' situation. Some studies of people with mental illnesses have investigated the effectiveness of coping by examining outcomes such as distress. In general, such studies found that avoidance strategies are associated with unsatisfactory outcomes, whereas problem-solving is associated with more satisfactory outcomes (Troop, 1994).

The present study aimed to contribute to the understanding of how relatives of patients with schizophrenia cope with the demands imposed by the patients' illness, using the stress and coping model proposed by Lazarus & Folkman (1991). The first objective was to describe how often relatives used the different forms of coping strategies at two different moments in their lives. It was hypothesised that relatives would use coping strategies more often in the weeks before patients' admission to hospital compared to nine months after discharge. The second objective was to examine whether the use of coping strategies was associated with demographic characteristics of patients and relatives, intensity of patients' symptoms, relatives' feelings of burden, emotional distress and EE levels.

METHOD

Sample

Patients and relatives were selected at the time of patients' admission, due to an acute psychotic crisis, to the Maudsley and Bethlem hospitals in London. Patients had to satisfy the following criteria: aged 17–65 years; living or in contact (at least once per week) with a relative for at least three months before the index assessment; and a diagnosis of schizophrenia or schizophreniform disorder according to the DSM–III–R (American Psychiatric Association, 1987). Patients and relatives were asked to give informed consent prior to their interviews. When there were two or more eligible relatives, the one who had most contact with the patient was approached.

Assessments

A standard form was used to collect information on demographic characteristics of patients and relatives and length of patients' illness. The ninth version of the Present State Examination (PSE; Wing et al, 1974) was used to assess the patients' symptoms. The total PSE score was derived by using the CATEGO program.

Relatives' ways of coping were assessed with a self-reported check-list adapted by MacCarthy & Brown (1989) from the Ways of Coping Checklist (Folkman & Lazarus, 1985). Each item has a brief description of a cognitive or behavioural strategy for coping with stressful events. Relatives were asked how often they had used any of the strategies to deal with the problems they had experienced by being in contact with someone who had a serious mental illness during the three months prior to interview. For the present study only 13 items from the MacCarthy & Brown (1989) instrument were used, representing

problem-focused, seek-social-support and avoidance strategies. Problem-focused items represent deliberate efforts to remedy the situation. Seek-social-support items represent efforts to obtain information and emotional support. Avoidance items represent escape behaviour or wishful thinking. Items were scored using a five-point Likert scale (1=never to 5=all the time). The total score for each scale was derived by summing the score of each item of the scale. A proportional score for each scale was also derived, and indicated how often coping strategies from one scale were used, relative to all three styles of coping used by each carer.

Relatives' EE levels were assessed with the shortened version of the Camberwell Family Interview (CFI; Vaughn & Leff, 1976). A relative was considered high-EE when he/she made six or more critical comments or revealed any degree of hostility, or was rated ≥3 on emotional over-involvement. Burden of care was assessed using the section on 'adverse effects on others' of the Social and Behaviour Assessment Schedule (SBAS; Platt et al, 1980) and items from the CFI concerning the informants' relationship with the patient. Scores can range from 0 to 38, higher scores indicating more burden. Interrater reliability for EE and burden during the study was satisfactory (Scazufca & Kuipers, 1996). Relatives' emotional distress was assessed with the General Health Questionnaire (GHQ–28; Goldberg & Hillier, 1979). Each item was assigned on a four-point Likert scale. Scores could range from 0 to 84, higher scores representing increased distress.

Procedures

On a weekly basis, medical records were checked to identify eligible subjects. Patients and relatives who agreed to participate were assessed soon after patients' admission to hospital and were reassessed nine months after patients' discharge from index admission with the same instruments. At the outset, patients were interviewed before relatives. For the follow-up, relatives were interviewed, whenever possible, before patients. Follow-up interviews were carried out only if relatives were living with patients or were in close contact with them during the previous three months. The interviewer did not have any contact with patients and their relatives between index and follow-up assessments.

Analysis

Data handling and analysis were carried out using the statistical package SPSS/PC+6.0 for Windows. The dependent variables were the total scores of the three coping scales (problem-focused, seek-social-support and avoidance). Pearson's product moment correlation was used to examine whether coping scores were associated with continuous variables, and t-tests were used to examine whether coping scales were associated with categorical variables. Paired t-tests were used to compare index and follow-up scores of coping, burden and GHQ of relatives, and PSE scores of patients who were assessed twice.

RESULTS

Index assessment

Characteristics of the sample

Fifty patients and fifty relatives were included. Four patients and nine relatives eligible for the study refused to participate. Thirty-seven patients (74%) were men and the patients' mean age was 26.52 years (s.d.=6.03, range 17–43). On average, patients had been ill for 5.02 years (s.d.=5.58, range 0–26). Thirty-eight relatives (76%) were women and the relatives' mean age was 49.62 years (s.d.=12.88, range 22–77). Thirty-four relatives (68%) were living with patients. Thirty relatives (60%) were rated as high-EE.

Coping strategies

Relatives more often used problem-focused strategies (41.0%), followed by seek-social-support (32.6%) and avoidance (26.4%). Table 1 shows how often each strategy was adopted by relatives. Each problem-focused and seek-social-support strategy was adopted 'sometimes' or 'more often' by at least two-thirds of relatives, with the exception of seek-social-support strategy number 7, which was never or rarely adopted by 56% of the relatives. Avoidance strategies followed a different pattern. Two (numbers 10 and 11) were adopted quite frequently, whereas four others (numbers 8, 9, 12 and 13) were never or rarely adopted by more than two-thirds of relatives.

Relationship between coping strategies and characteristics of relatives and patients

Coping strategies did not vary according to relatives' and patients' demographic characteristics (age, gender and whether relatives and patients lived together). The PSE total scores and length of patients' illness were not correlated with any of the coping strategies.

High-EE relatives used more avoidance coping than low-EE relatives (mean low-EE=11.95, s.d.=2.98; mean high-EE=14.20, s.d.=3.94; t=2.20; d.f.=34; 95% CI for difference=0.21–5.40; P=0.035), whereas high- and low-EE relatives had similar scores on problem-focused and seek-social-support strategies. Emotional over-involvement was the only EE component associated with avoidance (r=0.40, P=0.004).

Relatives with higher feelings of burden used more avoidance and seek-social-support coping (r=0.42, P=0.003 and r=0.30, P=0.03, respectively). Burden was not associated with problem-focused coping. The GHQ scores were higher for those relatives who used more avoidance coping (r=0.55, P<0.001). Problem-focused and seek-social-support coping were not associated with GHQ scores.

The four avoidance strategies used less frequently were correlated with emotional over-involvement, burden and GHQ scores (r=0.38, P=0.006; r=0.42, P=0.002; and r=0.66, P=0.001, respectively). The two avoidance strategies used more commonly were not associated with emotional over-involvement, burden and GHQ scores.

Follow-up assessment

Thirty-six relatives (76.0%) were reassessed at follow-up, six (12.0%) had lost contact with patients during the follow-up period, five (10.0%) refused to be reassessed, one (2.0%) had ill-health problems and two (4.0%) were not reassessed because the patients had died. Relatives found and lost to follow-up had similar demographic characteristics, EE level, burden and GHQ scores at inclusion. Twenty-two relatives (61.1%) were rated as low-EE at follow-up.

Thirty-one patients (62.0%) were reassessed at follow-up, five refused to be re-interviewed, two had died during the follow-up period and 12 were not reassessed because their relatives were not reassessed. Patients who had their relatives reassessed (n=36) and those who had their relatives lost to follow-up (n=14) had similar characteristics.

Relatives reassessed reported that they felt less burdened at follow-up than at the outset (index: mean=10.20, s.d.=7.32;

Table I Distribution of answers for each coping strategy (in %) at index and follow-up assessments

	Index assessment (n=50)			Follow-up assessment (n=36)		
	Never/ rarely	Sometimes	Often/all the time	Never/ rarely	Sometimes	Often/all the time
Problem-focused						
1. Tried to work out just what the problems were and what makes things better or worse, so that I could work out a plan for the future	12	34	54	28	22	50
2. Carried out one or more practical things that I hoped would help	14	46	40	31	25	44
3. Tried to work out problems calmly with the family or friends in my household	10	30	60	36	25	39
Seek social support						
4. Asked professionals, friends or relatives for practical advice and information	22	44	34	34	33	33
5. Asked someone to do something practical about the problem	32	32	36	47	22	31
6. Talked to someone about how I was feeling; tried to get emotional support	32	34	34	39	33	28
7. Tried to find other people who had experienced the same problems	56	18	26	61	25	14
Avoidance						
8. Tried to take my mind off things by smoking, drinking or taking pills to relax	72	18	10	92	8	–
9. Took my feelings out on something or someone: for instance, shouted, nagged or grumbled; threw things about; broke things	68	28	4	81	16	3
10. Tried not to think about what was happening	26	48	26	61	28	11
11. Daydreamed, imagined or wished that the situation would go away; hoped for a miracle	26	18	56	44	25	31
12. Avoided other people	74	18	8	91	6	3
13. Tried to take my mind off things by eating	86	6	8	78	11	11

follow-up: mean=6.06, s.d.=6.14; 95% CI for paired difference=2.10–6.18; $P<0.001$) but had similar GHQ scores at both assessments (index: mean=20.92, s.d.=9.88; follow-up: mean=20.67, s.d.=12.06; 95% CI for paired difference=−3.47 to 3.97; $P=0.89$). Patients' symptoms had improved at follow-up (index: PSE mean=21.45, s.d.=12.30; follow-up: PSE mean=10.77, s.d.=9.56; 95% CI for paired difference= −16.17 to −5.19; $P<0.001$).

Coping strategies at follow-up

Problem-focused (41.0%) and seek-social-support (35.0%) strategies were used more frequently than avoidance (24.0%), following the same pattern observed at the outset. However, there was an overall reduction in the use of coping strategies over time. The problem-focused mean fell from 10.83 to 9.11 (95% CI for paired difference=0.54–2.91; $P=0.006$), the seek-social-support mean fell from 11.69 to 10.11 (95% CI for paired difference=0.36–2.81; $P=0.013$) and the avoidance mean fell from 13.31 to 10.47 (95% CI for paired difference= 1.36–4.31; $P<0.001$).

Again, high-EE relatives used more avoidance strategies than low-EE relatives (mean low-EE=9.23, s.d.=2.67; mean high-EE=12.43, s.d.=5.00; unequal $t=2.20$; d.f.=17.78; 95% CI for difference=0.15–6.26; $P=0.04$). Use of more avoidance continued to be correlated with higher scores of emotional over-involvement ($r=0.57$, $P<0.001$). Low-EE relatives had lower seek-social-support score than high-EE relatives (mean low-EE=8.68, s.d.=4.02; mean high-EE=12.36, s.d.=4.11; t value=2.65; d.f.=34; 95% CI for difference=0.86–6.49; $P=0.012$). Problem-focused scores were not associated with EE levels.

The correlation of burden and GHQ scores with avoidance became stronger at follow-up ($r=0.61$, $P<0.001$ and $r=0.74$, $P<0.001$, respectively). There was also a stronger correlation between burden and seek-social-support ($r=0.55$, $P<0.001$). The GHQ score continued not correlated with seek-social-support. At follow-up, problem-focused coping showed correlations with relatives' burden ($r=0.44$, $P=0.007$) and GHQ scores ($r=0.36$, $P=0.03$). Coping strategies were not correlated with patients' PSE scores and length of illness.

DISCUSSION

Methodological limitations

The sample was composed of relatives and patients from inner-city London, therefore the results may not be generalisable to other settings. Several statistical tests were carried out when examining the association between the three coping strategies and burden, GHQ, EE, PSE and length of illness, thus increasing the probability of finding statistical associations due to chance alone. Therefore, the size of P values and the consistency of associations must be taken into account when interpreting the results. The interviewer was not blind to patients' symptoms when assessing relatives at inclusion. However, good results on interrater reliability for EE and burden interviews, with a second rater who was blind to patients' symptoms, suggest that results were not biased by knowledge of patients' state.

Ways in which relatives cope with patients' problems

The majority of relatives used a variety of strategies to cope with the demands

imposed by patients, which is in accordance with the theoretical background adopted in the present study (Folkman & Lazarus, 1980). Birchwood & Cochrane (1990) also found that relatives of patients with schizophrenia employed broad styles of coping in response to behavioural changes in patients.

Some avoidance strategies were rarely used by relatives, whereas others were used as often as problem-focused and seek-social-support strategies. The avoidance strategies not used very often were more behavioural ways of coping, while the avoidance strategies used more often were more cognitive ways of coping. Fadden et al (1987) found a similar result with spouses of depressed patients, who also tended to use more frequently what might be called cognitive rather than behavioural avoidance coping.

Relatives used coping strategies more often at the time of patients' psychotic crisis and admission to hospital than at nine months after patients' discharge. Use of less coping at follow-up was accompanied by an improvement in relatives' feelings of burden. According to the background theory adopted in the present study (Lawton et al, 1989; Lazarus & Folkman, 1991), coping and burden are influenced by appraisal: both the use of coping and feelings of burden are more likely to be more intense when the situation is appraised as threatening. In other words, coping strategies are not randomly assigned to relatives, but show logical links to relatives' appraisals and emotions. The use of less coping and the improvement in relatives' burden at follow-up might well be reflecting changes in their appraisal of the situation with patients, which is seen as less stressful than when patients were admitted to hospital.

For Lazarus & Folkman (1991), problem-focused strategies are more likely to be used when the situation is appraised as amenable to change, so coping is directed at improving the problem causing the distress, whereas avoidance strategies are more likely to be used when the situation is appraised as unchangeable, and coping is directed at regulating the distressing emotions. The use of more problem-focused than avoidance strategies at both assessments suggests that most of the time relatives perceived that they could do something to improve the situation.

Links with appraisal

High-EE relatives used more avoidance strategies at both assessments. This group of relatives might have a tendency to appraise their situation with patients as more unchangeable than the group of low-EE relatives, and therefore feel more pessimistic about the future. Barrowclough & Parle (1997) have also found links between high EE, appraisal of problems and distress. It is important to note that the only subtype of high EE clearly associated with avoidance was emotional over-involvement, and this was due to higher use of behavioural avoidance rather than cognitive avoidance coping. Leff & Vaughn (1985) described relatives high in emotional over-involvement as being more intrusive towards patients, which seems to coincide with some forms of behavioural avoidance strategies. It is possible that the use of behavioural avoidance coping has a more negative impact in patients' symptoms than the use of other strategies, and might therefore contribute to patients' relapse. This hypothesis deserves further examination.

Coping strategies and distress

For Folkman & Lazarus (1991), coping is seen as a mediator of distress, and no strategy of coping should be considered as inherently good or bad for managing stressful situations. However, the association of more use of behavioural avoidance strategies with higher GHQ scores suggests that such strategies are not as effective in mediating distress as other ways of coping in this situation. The association between more use of problem-focused strategies and the higher levels of distress and burden that appeared at follow-up was not expected. It was also not expected that at follow-up relatives would report levels of distress similar to those observed at the outset. It is possible that distress as measured here is a more general feature, only partially related to the care-giving task, that is also associated with other problems that relatives have in their lives.

Suggestions for interventions with families and further research

One of the assumptions on which clinical interventions with families have been based is that the quality of peoples' emotional lives can be improved by addressing deficiencies in coping skills (Lam, 1991). As Tarrier et al (1993) have already postulated for patients, from a cognitive–behavioural perspective the focus on coping strategies is also an appealing basis for interventions with relatives. However, results showed that relatives used a variety of coping strategies, which implies that it is not their coping repertoire per se that is at fault. This suggests that interventions with families should be focused on improving aspects of the relationship between patients and relatives that influence, and are influenced by, current ways in which relatives appraise patients' behaviour.

The use of more avoidance strategies was strongly related to burden, distress and emotional over-involvement at both assessments, suggesting that relatives with those characteristics may have greater need of psychological help to deal with the care-giving task and also with other problems in their lives.

The results also suggest that the assessment of ways of coping at any point in time may indicate preferred ways that relatives adopt to cope with patients, because the pattern of strategies adopted did not change much between assessments, only the intensity. The association of ways of coping with other variables, such as burden and distress, may also vary according to the situation. Therefore, interventions with families that aim to improve coping should take into account both the time of the assessment and how other variables that influence coping, such as burden and distress, might also be changed.

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CLINICAL IMPLICATIONS

■ Relatives who use more avoidance strategies show more distress and burden, and may constitute a group with greater need for help from community services.

■ Interventions with families should aim to improve aspects of the relationship between patients and relatives that influence relatives' appraisals of problems, in order to improve coping abilities.

■ Relatives attempt to use a wide range of coping strategies, most of which appear to be helpful.

LIMITATIONS

■ The assessment of coping was focused on ways in which relatives deal with the care-giving situation, not allowing inferences about how relatives cope with specific behavioural problems of patients.

■ Although the study had a longitudinal design, it is not possible to be sure about the direction of the associations between coping, burden, EE and distress.

■ Results may not be generalisable to relatives of patients treated at home during psychotic crises. In that situation relatives may show different ways of coping with patients.

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