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**UTILIZATION OF EXPRESSED EMOTION
IN PREVENTION OF RELAPSE OF
SCHIZOPHRENIA PATIENTS IN KELANTAN**

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DI KELANTAN

LAPORAN LENGKAP

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INTRODUCTION

Expressed emotion is currently among the most thoroughly investigated psychosocial research constructs in psychiatry (1-4). Developed some three decades ago by George Brown and his colleagues in England, the term "expressed emotion" refers to a global index of particular emotions, attitudes, and behaviours expressed by relatives about a family member diagnosed with schizophrenia. The specific factors that make up the construct of expressed emotion are criticism, hostility, and emotional overinvolvement. Several naturalistic studies have demonstrated the association of these factors with clinical relapse (5-8). Patients living in home environments characterized by high levels of expressed emotion are significantly more likely to experience a clinical relapse than are patients residing in households with low levels of expressed emotion. This finding has not surprisingly resulted in a great deal of clinical interest in a construct originally developed for purposes of basic research (9-12).

In a series of studies of the influence of family life on the course of an established schizophrenic illness, it has been shown that the level of emotion expressed by relatives within a few weeks after a schizophrenic patient is admitted to hospital is strongly associated with symptomatic relapse during the nine months following discharge (13, 5). The Camberwell Family Interview Schedule, which shortens the interview to less than half of its original length without affecting the predictive value of the

expressed emotion scales, has been used successfully in a replication and extension of the 1972 study carried out by Brown, Birley & Wing (5).

Much work has been done by Brown and his colleagues concerning possible factors precipitating schizophrenic relapse, particularly the role of relationships in the home. An exploratory study of discharged long-stay male patients suggested that it might not always be desirable for schizophrenic patients to return to the close emotional ties often existing with parents and wives (14, 15). In a second study (5) acutely ill schizophrenic male patients and their relatives were seen individually just before the patient's discharge from hospital, and again together in the home within two weeks of discharge. Patients returning to 'high emotional involvement' homes, as judged by the relative's behaviour when interviewed with the patient, were significantly more likely to relapse with florid schizophrenic symptoms during the one year follow-up period. This remained true even when the severity of disturbance at time of discharge was allowed for. The distinction between 'high emotional involvement' and 'low emotional involvement' homes was derived from simple ratings of the emotional relationship between patient and relative, made on four-point scales according to fairly commonsense signs: the content of speech, the tone of voice, gestures. Two important assumptions were being made. First, that the relative's account was a fair description of relationships in the home, and could be relied on even though his actual day-to-day behaviour toward the patient was not being observed. Secondly, that the attitude shown by the

relative over patient during the interview was representative of an enduring relationship over time. Despite the simplicity of the measures used, the finding of an association between living in a 'high emotional involvement' home and relapse of schizophrenia appeared to justify these assumptions.

As this stage in the research many questions remained unanswered. These centered on the nature of a rather nebulous concept, 'emotional involvement', and the direction of cause and effect between the relative's emotional involvement and the patient's illness behaviour. Furthermore, there were questions about the effects of other factors on the course of the illness: drug-taking patterns, the amount of face to face contact between patient and relatives, and the occurrence of critical life events. Therefore a further study was designed. The main research instrument for this particular study was the Camberwell Family Interview schedule.

A detailed description of the schedule and its development may be found elsewhere (16, 17). Briefly, it is concerned with two kinds of information: the one to do with events and activities, the other with attitudes and feelings. It aims to obtain an account of circumstances in the home in the three months preceding the patient's admission, particularly details of the onset and development of the present illness episode and its impact on various aspects of family life, such as the participation of family members in domestic tasks, the frequency of irritability and

quarrelling, and the amount of contact between the patient and the rest of the family. At the same time the relative's behaviour in the interview situation is being observed and notice taken of the feeling he expresses about family members, especially about the patient and his actions over recent months. Particular emphasis is placed upon vocal aspects of speech in the measurement of feeling: tone, pitch, rate and the intensity of emotion with which a comment is made. Self-reports of emotion and the spontaneous expression of feeling during the interview are both noted, although the emphasis is on the latter. All interviews are tape-recorded for later analysis.

The initial development of the instrument was based on pilot interviews with 80 families with children, in which one parent was psychiatric patient. Later a study of the reliability and validity of the measures used was carried out using 30 additional families. Three different interviews were given. Patient and spouse were each seen alone for several hours by separate interviews and given slightly different versions of what is now called the main family interview. Then both were seen together in a brief 'joint' interview in which general questions were asked about contacts with medical and social services in order to get couple talking.

The actual scales of emotion are of two types: ratings on observed emotions, such as warmth, hostility and emotional over-involvement; and a frequency count of the number of positive of

critical remarks the informant makes about a particular person during the interview. For definitions and examples of each kind of rating, the reader is referred to Brown et al. (5). It should be emphasized, however, that much attention was paid to issues of reliability and validity in the development of these scales. The aim was to develop a family interview which would be relatively free of the methodological and conceptual weaknesses which have characterized other family research instruments and have been described by several investigators (18, 19). In one of the few successful attempts to reliably assess emotional relationships, Brown & Rutter demonstrated in their pilot work that high levels of inter-rater reliability (average $r = 0.85$) can be achieved in the measurement of emotion and counts of emotive remarks, providing certain precautions are taken.

The study by Brown et al (5) featured a prospective follow-up design, so that measurement of past behaviour, present emotional response and future relapse could be made independently. Results of this study, using the Family Interview Schedule, replicated the main finding of the earlier work and also clarified the concept of 'emotional involvement'. An index of 'expressed emotion' was devised which included three measurable components: emotional over-involvement, hostility, and the number of critical comments made by the key relative about the patient. Using this composite index, a significant association was found between the amount of expressed emotion shown by relatives at the time of key admission and symptomatic relapse during the nine months following discharge. Results did suggest that patients living with

relatives who expressed high emotion at the time of key admission were less likely to relapse if they received regular phenothiazine medication or managed to avoid close contact with the family. But the index of expressed emotion remained the best single predictor of symptomatic relapse. The interview with the relative alone, rather than with the patient or with both jointly, produced the significant finding, making it the definite interview for any replication study.

Although shown to be a reliable and valid instrument, in its original form the interview sometimes took as long as four or five hours to administer. This could be a taxing exercise for both interviewer and informant, and usually two separate visits were required in order to complete the schedule. Every conceivable aspect of family life was covered. Since the factors most closely associated with symptomatic relapse were not known at the time of the 1972 study, it seemed desirable then to elicit as much information as possible about potentially relevant areas. Also, it seemed likely that it might be necessary to question someone for quite a while, perhaps several hours, before rapport was such that the person would be willing to give an honest account of his feelings. This was a most important point, since a primary purpose of the schedule, as designed by Brown & Rutter, was to provide material from which ratings of emotional response could be made. But if these same ratings could be made on the basis of a shorter interview, this would of course be preferable. Some people would be spared an exhausting ordeal and later inves-

tigators interested in the technique for research purposes would not be deterred by its sheer length.

In the 1972 study, the single most important measure contributing to the overall index of a relative's expressed emotion proved to be the number of critical remarks made about the patient by the relative when interviewed alone. Hostility and emotional over-involvement also contributed to the overall index, but hostility appeared to be highly related to criticism, while marked emotional over-involvement was found only in parents and not in spouses. By itself contributed only a small number of cases to the high expressed emotion subgroup. As the number of critical comments was the crucial measure in predicting symptomatic relapse, it seemed desirable to listen to tape-recorded interviews from the original study in order to determine the point in time when, and the area of inquiry in which, critical comments occurred. If the main criticism occurred in the early stages of the interview or during some other specific stage, a judiciously abbreviated interview might well be justified.

In cases where all critical remarks had been recorded by the interviewer on the rating summary, it was necessary only to listen to each tape and to note at which points individual criticisms occurred and which topics were being covered at the time. Fifteen interviews were listened to in this way, with equal representation of high, medium and low criticism interviews. Individual time graphs were then plotted.

The results were remarkably consistent. The three sections of the interview which deal with psychiatric history, irritability and quarrelling, and clinical symptoms in the three-month pre-admission period accounted for 67 per cent of all critical remarks over 15 interviews. It is difficult to know whether topic or primacy of questioning was responsible for this finding, since these same three sections were also the first three areas covered in almost every interview. Furthermore, in the first part of the interview the interviewer would sometimes allow the relative to talk freely about the patient until it seemed possible to begin questioning in a more systematic way. He might follow up individual areas of questioning earlier than usual if brought up spontaneously by the relative. In any event, the majority of critical comments were produced within the first hour, and there was virtually no relationship between total number of critical comments and length of interview ($r = 0.08$). Criticism occurred particularly during detailed questioning about the development of the illness and the patient's present clinical condition. What was surprising was that once certain areas were covered, later sections (with the exception of Household Tasks/Money Matters and, in the case of parental households only, Relationships) produced very little criticism relative to the total amount. Kinship, for example - a lengthy section about which questioning often continued for as long as an hour - accounted for only 0.5 per cent of all critical comments. This is not to say that patients were never criticized for their performance as husbands or wives; they frequently were. The point is that if such criticism

occurred at all, it was brought out spontaneously early on the interview, and not during the direct questioning about the marital relationship.

These results supported the use of a shortened interview in which the areas most likely to produce any criticism were given priority in the sequence of of questioning. In practice, only minimal reordering was required. The household tasks/money matters and relationship sections now follow the psychiatric history, irritability/quarrelling and clinical symptoms sections. A few additional sections have been retained in order to make other required ratings such as amount of face-to-face contact and drug-taking. Once these sections are covered, however, questioning ceases. The present abbreviated version takes from one to two hours to administer. The form and content of the questions in each section and the relevant rating scales are unchanged.

PURPOSE OF STUDY

- 1) To establish the relationship of Expressed Emotion (EE) with the relapse rate in cases of schizophrenia in Kelantan.
- 2) To find the extent of high EE in families of schizophrenia in Kelantan.
- 3) To find the extent of low EE in families of schizophrenia in Kelantan.

In addition the study is also designed to:-

- 1) suggest modes of intervention programme to reduce relapse rates of schizophrenia.
- 2) aid a better understanding of the type of EE prevalent among family members of high relapse rate schizophrenia in Kelantan.

item that did not tally with that of the research assistant then the researchers would make the home visit to clarify the item on the CFI until all the items marked by the researchers and the research assistant were identical. The following criterias were used for the interviews:-

- i) main family interview must be carried out at home
- ii) if married, the spouse will always be seen, otherwise both parents
- iii) family members will be seen alone
- iv) duration of interview should not be more than 1 hour
- v) the events queried are those three months prior to admission
- vi) the emphasis as on
 - a) events
 - b) feelings expressed during interview towards patient

The ratings that were made were:-

- i) Number of criterial comments. One comment is counted as one unit.
- ii) Hostility whether present or absent only. This is an indication of rejection of the patient.
- iii) Dissatisfaction. This uses a 4 point scale.
- iv) Warmth. This has a 6 point scale.
- v) Emotional involvement. This is mainly in the case of parents. It could also be rated in

the spouse it is present.

The criteria of relapse used were:-

- i) change from normal/non-schizophrenia to schizophrenic state
- ii) marked exacerbation of resistant schizophrenia symptoms

The compliance is taken into account.

The results were tabulated and the EE scores were then calculated and each item of the EE were also calculated using the EDINFO-5

RESULTS

The following results were obtained

Table 1 - Nagging the patient

N1	FREQ	PERCENT	CUM.
no	43	51.8%	51.8%
not sure	14	16.9%	68.7%
yes	26	31.3%	100.0%
Total	83	100.0%	

The results indicate that

43 (51.6%) of the family members do not nag the patient while 26 (31.3%) nag the patient

Table 2 - Giving love to patient

N2	FREQ	PERCENT	CUM.
no	52	62.7%	62.7%
not sure	5	6.0%	68.7%
yes	26	31.3%	100.0%
Total	83	100.0%	

The results indicate that

52 (62.7%) of the family members do not give much love and affection to the patient

while 26 (31.3%) do give much love and affection to the patient

Table 3 - Opposing patient's speech

N3	FREQ	PERCENT	CUM.
no	59	71.1%	71.1%
not sure	10	12.0%	83.1%
yes	14	16.9%	100.0%
Total	83	100.0%	

The results indicate that

59 (71.1%) of family members do not oppose too much whatever the patient says

while 14 (16.9%) do opposed too much whatever the patient says

Table 4 - Worrying about patient

N4	FREQ	PERCENT	CUM.
no	13	15.7%	15.7%
not sure	6	7.2%	22.9%
yes	64	77.1%	100.0%
Total	83	100.0%	

The result indicate that

13 (15.7%) of the family members do not worry too much about the patient and his illness

while 64 (77.1%) do worry too much about the patient and his illness

Table 5 - Patient's behaviour beyond tolerance

N5	FREQ	PERCENT	CUM.
no	52	62.7%	62.7%
not sure	14	16.9%	79.5%
yes	17	20.5%	100.0%
Total	83	100.0%	

The result indicate that

52 (62.7%) of the family members do not feel the patient's behaviour was beyond their tolerance

while 17 (20.5%) do feel the patient's behaviour was beyond their tolerance

Table 6 - Overlooking patient's habits

N6	FREQ	PERCENT	CUM.
no	54	65.1%	65.1%
not sure	5	6.0%	71.1%
yes	24	28.9%	100.0%
Total	83	100.0%	

The result indicate that

54 (65.1%) of the family members do not over look the patient's habits

while 24 (28.9%) do over look the patient's habits

Table 7 - Pressuring patient to change behaviour

N7	FREQ	PERCENT	CUM.
no	61	73.5%	73.5%
not sure	4	4.8%	78.3%
yes	18	21.7%	100.0%
Total	83	100.0%	

The result indicate that

61 (73.5%) of the family members do not pressurize the patient to change his behaviour

while 18 (21.7%) do pressurize the patient to change his behaviour

Table 8 - Incooperating patient in family entertainment

N8	FREQ	PERCENT	CUM.
no	32	38.6%	38.6%
not sure	13	15.7%	54.2%
yes	38	45.8%	100.0%
Total	83	100.0%	

The result indicate that

32 (38.6%) of the family members do not frequently, incorporate the patient in family entertainment

while 38 (45.8%) do frequently, incorporate the patient in family entertainment

Table 9 - Dissatisfaction with patient's behaviour

N9	FREQ	PERCENT	CUM.
no	33	39.8%	41.0%
not sure	10	12.0%	53.0%
yes	39	47.0%	100.0%
Total	83	100.0%	

The result indicate that

33 (39.8%) of the family members do not find the patient's behaviour dissatisfied them

while 39 (47.0%) do find the patient's behaviour dissatisfied them

Table 10 - Giving required assistance to patient

N10	FREQ	PERCENT	CUM.
no	44	53.0%	53.0%
not sure	7	8.4%	61.4%
yes	32	38.6%	100.0%
Total	83	100.0%	

The result indicate that

44 (53.0%) of the family members do not give more than required assistance to the patient

while 32 (38.6%) do give more than required assistance to the patient

Table 11 - Criticizing patient's behaviour

N11	FREQ	PERCENT	CUM.
no	50	60.2%	60.2%
not sure	8	9.6%	69.9%
yes	25	30.1%	100.0%
Total	83	100.0%	

The result indicate that

50 (60.2%) of the family members do not criticize patient's behaviour

while 25 (30.1%) do criticize patient's behaviour

Table 12 - Attention on patient's activities

N12	FREQ	PERCENT	CUM.
no	55	66.3%	66.3%
not sure	3	3.6%	69.9%
yes	25	30.1%	100.0%
Total	83	100.0%	

The result indicate that

55 (66.3%) of the family members do not pay very little attention on the patient's activities

while 25 (30.1%) do pay very little attention on the patient's activities

Table 13 - Remaining angry because of patient's behaviour

N13	FREQ	PERCENT	CUM.
no	45	54.2%	54.2%
not sure	16	19.3%	73.5%
yes	22	26.5%	100.0%
Total	83	100.0%	

The result indicate that

45 (54.2%) of the family members do not remain angry because of his behaviour

22 (26.5%) do remain angry because of his behaviour

Table 14 - Relationship with patient

N14	FREQ	PERCENT	CUM.
no	3	3.6%	3.6%
not sure	1	1.2%	4.8%
yes	79	95.2%	100.0%
Total	83	100.0%	

The result indicate that

3 (3.6%) of the family members do not say the relationship between the patient and themselves were generally friendly

while 79 (95.2%) do say the relationship between the patient and themselves were generally friendly

Table 15 - Imposing ideas on patient

N15	FREQ	PERCENT	CUM.
no	70	84.3%	84.3%
not sure	4	4.8%	89.2%
yes	9	10.8%	100.0%
Total	83	100.0%	

The result indicate that

70 (84.3%) of the family members do not try to impose their ideas on the patient

while 9 (10.8%) do try to impose their ideas on the patient

Table 16 - Tolerance to patient even if he does not listen

N16	FREQ	PERCENT	CUM.
no	-	-	-
not sure	7	8.4%	8.4%
yes	76	91.6%	100.0%
Total	83	100.0%	

The result indicate that

no family have problem of to tolerating the patient even when the patient does not listen to them

while 76 (91.6%) of them can tolerate the patient

Table 17 - Sympathy for patient

N17	FREQ	PERCENT	CUM.
no	63	75.9%	75.9%
not sure	7	8.4%	8.4%
yes	13	15.7%	100.0%
Total	83	100.0%	

The result indicate that

63 (75.9%) of the family members do not give very much sympathy for the patient

while 13 (15.7%) do give very much sympathy for the patient

Table 18 - Spending time with patient

N18	FREQ	PERCENT	CUM.
no	33	39.8%	39.8%
not sure	8	9.6%	49.4%
yes	42	50.6%	100.0%
Total	83	100.0%	

The result indicate that

33 (39.8%) of the family members do not often spend their time with the patient

while 42 (50.6%) do often spend their time with the patient

Table 19 - Avoiding attention to patient's day to day behaviour

N19	FREQ	PERCENT	CUM.
no	52	62.7%	62.7%
not sure	6	7.2%	69.9%
yes	25	30.1%	100.0%
Total	83	100.0%	

The result indicate that

52 (62.7%) of the family members do not try to avoid paying attention to the patients day to day behaviour

while 25 (30.1%) do try to avoid paying attention to the patients day to day behaviour

Table 20 - Disturbance by patient's behaviour

N20	FREQ	PERCENT	CUM.
no	39	47.0%	47.0%
not sure	6	7.2%	54.2%
yes	38	45.8%	100.0%
Total	83	100.0%	

The result indicate that

39 (47.0%) of the family members do not get very little disturbed by patients behaviour

while 38 (45.8%) do get very little disturbed by patients behaviour

Table 21 - Showing closeness with patient during conversation

N21	FREQ	PERCENT	CUM.
no	59	71.1%	71.1%
not sure	6	7.2%	78.3%
yes	18	21.7%	100.0%
Total	83	100.0%	

The result indicate that

59 (71.1%) of the family members do not show very little closeness with the patient during their conversation

while 18 (21.7%) do show very little closeness with the patient during their conversation

Table 22 - Delay in fulfilling patient's wishes

N22	FREQ	PERCENT	CUM.
no	42	50.6%	50.6%
not sure	14	16.9%	67.5%
yes	27	32.5%	100.0%
Total	83	100.0%	

The result indicate that

42 (50.6%) of the family members do not seldom delay in fulfilling patients wishes

while 27 (32.5%) do seldom delay in fulfilling patients wishes

Table 23 - Punishing patient to stop bad behaviour

N23	FREQ	PERCENT	CUM.
no	77	92.8%	92.8%
not sure	1	1.2%	94.0%
yes	5	6.0%	100.0%
Total	83	100.0%	

The result indicate that

77 (92.8%) of the family members do not punish the patient to stop his bad behaviours

while 5 (6.0%) do punish the patient to stop his bad behaviours

Table 24 - Feeling torturous on separaation from patient

N24	FREQ	PERCENT	CUM.
no	8	9.6%	9.6%
not sure	2	2.4%	12.0%
yes	73	88.0%	100.0%
Total	83	100.0%	

The result indicate that

8 (9.6%) of the family members do not feel torturous on separation from the patient

while 73 (88.0%) do feel torturous on separation from the patient

Table 25 - Giving time to patient during conversation

N25	FREQ	PERCENT	CUM.
no	34	41.0%	41.0%
not sure	3	3.6%	44.6%
yes	46	55.4%	100.0%
Total	83	100.0%	

The result indicate that

34 (41.0%) of the family members do give little time to the patient during conversation

while 46 (55.4%) do not give little time to the patient during conversation

Table 26 - Mixing freely with patient during conversation

N26	FREQ	PERCENT	CUM.
no	10	12.0%	12.0%
not sure	3	3.6%	15.7%
yes	70	84.3%	100.0%
Total	83	100.0%	

The result indicate that

10 (12.0%) of the family members do not often mix freely with the patient during conversation

while 70 (84.3%) do mix freely with the patient during conversation

Table 27 - Looking down upon patient

N27	FREQ	PERCENT	CUM.
no	65	78.3%	78.3%
not sure	1	1.2%	79.5%
yes	17	20.5%	100.0%
Total	83	100.0%	

The result indicate that

65 (78.3%) of the family members do not look down upon the patient as compared to others

while 17 (20.5%) do look down upon the patient as compared to others

Table 28 - Interrupting patient for wrong behaviour

N28	FREQ	PERCENT	CUM.
no	37	44.6%	44.6%
not sure	12	14.5%	59.0%
yes	34	41.0%	100.0%
Total	83	100.0%	

The result indicate that

37 (44.6%) of the family members do not seldom interrupt patient even if he is doing something wrong

while 34 (41.0%) do seldom interrupt patient even if he is doing something wrong

Table 29 - Tolerance to patient's symptoms

N29	FREQ	PERCENT	CUM.
no	63	75.9%	75.9%
not sure	10	11.0%	86.0%
yes	10	12.0%	100.0%
Total	83	100.0%	

The result indicate that

63 (75.9%) of the family members do have less tolerance to patient's symptoms

while 10 (12.0%) do not have less tolerance to patient's symptoms

Table 30 - Sacrifice for patient's treatment

N30	FREQ	PERCENT	CUM.
no	9	10.8%	10.8%
not sure	1	1.2%	12.0%
yes	73	88.0%	100.0%
Total	83	100.0%	

The result indicate that

9 (10.8%) of the family members are not prepared to sacrifice everything they have for the patient's treatment

while 73 (88.0%) are prepared to sacrifice everything they have for the patient's treatment

Table 31 - Critical comments

NEGATIVECO	Freq	Percent	Cum.
0.0	32	38.6%	38.6%
1.0	10	12.0%	50.6%
2.0	22	26.5%	77.1%
3.0	4	4.8%	81.9%
4.0	15	18.1%	100.0%
Total	83	100.0%	

Sum = 126.00
 Mean = 1.52
 Standard deviation = 1.49

The total critical comments score is in 32 (38.6%) families and the mean negative score of all patients is 1.52 with a standard deviation of 1.49. This means that a relatively high proportion of relatives have positive emotion.

Table 32 - Hostility

N32HOSTILI	Freq	Percent	Cum.
0.0	31	37.3%	37.3%
1.0	10	12.0%	49.4%
2.0	17	20.5%	69.9%
3.0	5	6.0%	75.9%
4.0	14	16.9%	92.8%
5.0	1	1.2%	94.0%
6.0	1	1.2%	95.2%
7.0	1	1.2%	96.4%
8.0	3	3.6%	100.0%
Total	83	100.0%	

Sum = 157.00
 Mean = 1.89
 Standard deviation = 2.07

The total hostility score is 0 in 31 (37.3%) of the families and the mean score of all patients is 1.89 with a standard deviation of 2.07. Only 3 (3.6%) of the families score 8 on hostility, again indicating that the majority of the families have positive emotion towards the patient.

Table 33 (a) - Positive dissatisfaction

POSITIVE	Freq	Percent	Cum.
0	38	46.3%	46.3%
1	5	6.1%	52.4%
2	39	47.6%	100.0%
Total	82	100.0%	

Sum = 83.00
 Mean = 1.01
 Standard deviation = 0.97

The total positive dissatisfaction score is 0 in 38 (46.3%) families and 39 (47.6%) of them score 2. The mean is 1.01 and the standard deviation is 0.97. This indicates that there is an equal proportion of families with both positive and negative emotion towards the patient.

Table 33 (b) - Negative dissatisfaction

NEGATIVE	Freq	Percent	Cum.
0.0	16	19.3%	19.3%
1.0	9	10.8%	30.1%
2.0	19	22.9%	53.0%
3.0	10	12.0%	65.1%
4.0	16	19.3%	84.3%
5.0	6	7.2%	91.6%
6.0	6	7.2%	98.8%
8.0	1	1.2%	100.0%
Total	83	100.0%	

Sum = 215.00
 Mean = 2.59
 Standard deviation = 1.93

The total negative dissatisfaction score is 0 in 16 (19.3%) families and 1 (1.2%) scored 8. Those with score of 0 to 3 are 65.1% of the group. The mean score is 2.59 with a standard deviation of 1.93. This again indicates that the majority of the families have positive emotion towards the patient.

Table 34 - Warmth

N34WARMTH	Freq	Percent	Cum.
0	10	12.0%	12.0%
1	3	3.6%	15.7%
2	70	84.3%	100.0%
Total	83	100.0%	

Sum = 143.00
 Mean = 1.72
 Standard deviation = 0.67

The total score for warmth is 2 in 70 (84.3%) of the families and only 10 (12%) of the families have score of 0. The mean is 1.72 and the standard deviation 0.67. This means that 84.3% of the families have positive emotion towards the patient.

Table 35 (a) - Positive emotional overinvolvement

N35EMOTION	Freq	Percent	Cum.
5.0	2	2.4%	2.4%
6.0	3	3.6%	6.0%
8.0	4	4.8%	10.8%
9.0	2	2.4%	13.3%
10.0	10	12.0%	25.3%
11.0	6	7.2%	32.5%
12.0	13	15.7%	48.2%
13.0	10	12.0%	60.2%
14.0	5	6.0%	72.3%
16.0	11	13.3%	85.5%
17.0	5	6.0%	91.6%
18.0	4	4.8%	96.4%
19.0	1	1.2%	97.6%
20.0	2	2.4%	100.0%
Total	83	100.0%	

Sum = 1067.00
 Mean = 12.86
 Standard deviation = 3.44

There is no 0 score in this category (positive Emotional Over involvement). The lowest score is 5 and the highest score is 18. Most of the families has a score of 12 and 13 (27.7%). The mean is a high 12.86 with a standard deviation of 3.44. This strongly indicate a strong positive emotion among the family members.

Table 35 (b) - Negative overinvolvement

EDINEGATIV	Freq	Percent	Cum.
0.0	1	1.2%	1.2%
1.0	2	2.4%	3.6%
2.0	10	12.0%	15.7%
3.0	4	4.8%	20.5%
4.0	14	16.9%	37.3%
5.0	8	9.6%	47.0%
6.0	22	26.5%	73.5%
7.0	5	6.0%	79.5%
8.0	6	7.2%	86.7%
9.0	3	3.6%	90.4%
10.0	2	2.4%	92.8%
11.0	2	2.4%	95.2%
12.0	3	3.6%	98.8%
14.0	1	1.2%	100.0%
Total	83	100.0%	

Sum = 464.00
 Mean = 5.59
 Standard deviation = 2.80

The majority of the families have a score of 6 (26.5%) and 73.5% of them have scores between 0 to 6 in the negative over involvement score. The mean is 5.59 with a standard deviation of 2.8. This means that most families have positive although a substantial number have negative over involvement with the patients.

Table 36 - Final Score

FINAL SCORE	Freq	Percent	Cum.
Negative	21	25.3%	25.3%
Positive	60	72.3%	97.6%
Zero	2	2.4%	100.0%
Total	83	100.0%	

This table clearly indicates that the majority of the families (72.3%) have positive emotions while only 21 (25.3%) of them have negative emotions, only 2 families were equivocal with their emotions.

Table 37 - EE Rating

RATINGE	Freq	Percent	Cum.
Low	2	2.4%	2.4%
Low neg	18	21.7%	24.1%
Low pos	41	49.4%	73.5%
Mod neg	3	3.6%	77.1%
Mod pos	19	22.9%	100.0%
Total	83	100.0%	

This table again indicates that most of the families have positive emotion although the majority (49.4%) have a low positive emotion.

SUMMARY OF RESULTS

- a) In summary the following
- 1/ the critical comments score
 - 2/ the total hostility score
 - 3/ the negative dissatisfaction
 - 4/ the total score for warmth
 - 5/ the positive over involvement score
 - 6/ the negative over involvement score
- indicate positive emotions among the families
- b) Only the positive dissatisfaction score indicates equivocal emotions but not negative emotions.
- c) 72.3% of the families have positive emotions
- d) 49.4% have low positive emotions, and 22.9% have moderate positive emotions only 25.3% have negative emotions.

DISCUSSION

The most salient finding to emerge from this study is the almost absence of high negative levels of household EE in schizophrenics relapse. At one level at least, failure to support the oft reported association between high negative EE and relapse places this study at odds with much of the recent literature. Indeed, Leff et al (20) began their paper by reminding readers that only one study, that of Kottgen et al (21), had so far failed to support the association. Our review of the recent literature follows, and it leads us to feel less confident about the EE/relapse association, and hence the predictive value of EE for the course of schizophrenia, than some other authors; especially if it is considered in isolation from other potentially important factors, such as neuroleptic compliance, duration and severity of illness (22).

The consensus emerging from studies up to and including the Californian replication study by Vaughn et al (7), pointed strongly towards the importance of EE in shaping the course of schizophrenic illness. Yet Vaughn et al's (7) study, which has assumed major significance in the literature (see for example, Koenigsberg & Handley (23)) as the definitive international replication of earlier predominantly British studies, merits critical comment on two important grounds. First, the reported EE/relapse association was sex specific and did not hold for

females, for whom the 9-month relapse rates were 14% and 17% for high and low EE subjects respectively. The authors acknowledged that it was male subjects who were responsible for the significant EE/relapse association, but argued that this in turn could be attributed to structural differences in households with male and female relapsing patients. Secondly, their criteria for defining relapse, nevertheless ignored the 37% (11/30) of nonrelapsers who required rehospitalization, albeit for conditions other than positive symptom schizophrenia.

Since then, several studies (8, 24, 25, 26, 27, 28, 29, 30) have all purported to provide support for the association between EE and relapse. Conversely, other studies (21, 22, 31) offer evidence at odds with the association. Hogarty et al (32) and McCreadie & Phillips (33) also report findings which are difficult to reconcile with the earlier EE/relapse data.

Turning first to the affirmative reports, Moline et al (25) reported a significant association between household EE and relapse in 24 mainly young schizophrenics. However, this was only achieved by raising the cut-off point for critical comments from 6+ to 9+. Moreover, the authors themselves drew attention to problems associated with data collection at follow-up, some of which was obtained by telephone interview.

Karno et al's (8) study of Mexican-Americans offers good support for the Ee/relapse hypothesis, although the authors express concern at the extent to which their study is directly comparable

with the Anglo-American studies, given the very different family structures that prevail in the two cultures. The main difference between Karno et al's (8) study and the others is that his subjects were not first or early admission schizophrenics. Indeed, their mean duration of illness was 4-5 years.

Leff et al's (26) Chandigarh study is weakened by the relative absence of high EE (23% compared with over 50% in the Anglo-American studies), and a very low rate of relapse; 14% or 18% depending on the diagnostic criteria applied. Given these difficulties, it is noteworthy that of the three contributing EE scales, only hostility was significantly linked with relapse over 12 months. A similar picture is reported at 24 months (27).

The relapse data in TARRIER et al's (28) study has to be gleaned from an examination of sub-groups of the parent study, which was primarily concerned with different intervention procedures. Although the 9-month follow-up data appear to support an association between EE and relapse, the 24-month follow-up of the same cohort (28) fails to replicate this finding; with neither of the high EE groups (behavioural intervention or control) showing significantly higher relapse rates than the low EE groups.

Barrelet et al (30) have recently reported a significant relationship between EE and relapse rates for their cohort of 36 first admission schizophrenics, although when their analysis is restricted to patients who live with their families during follow

up (N=30), the association fails to reach significance. If the three EE components are considered individually, only CC discriminates significantly between relapsers and non-relapsers, and Barrelet et al. admit that defining EE by the classic criteria introduces 'noise'. Curiously though, hostility, which was recorded in 5 out of 36 households, is not included in Barrelet et al's (30) designation of EE index.

Moving now to those studies which, by and large, have failed to support the EE/relapse association, Kottgen et al's (21) report has been roundly criticized on methodological grounds (34). The Hamburg group found a (non-significant) trend in the opposite direction to that predicted by the EE/relapse model, but the design deficiencies make interpretation problematical. MacMillan et al's (22) study generated apparently supportive findings (of higher rate of relapse among high EE subjects) that were confounded by length of illness prior to index admission, and drug/placebo administration. Taking these factors into account, the authors argued that the EE/relapse association diminished to the point of non-significance. This study has been extensively reviewed elsewhere (25, 35).

Parker et al's (31) Australian study of EE and relapse merits careful consideration. In an exhaustive series of reanalyses of their data on different sub-sets of the initial sample, the group failed to provide any substantial support in favour of the original hypothesis. In a detailed and provocative discussion of their (negative) findings, Parker et al (31) speculate about the extent

to which EE may comprise a reactive component in addition to a constitutional one. It is interesting to note that in her recent review Vaughn (35) also alludes to state and trait elements of EE. This is an issue that clearly merits further investigation.

The purpose of the preceding discussion is to illustrate that the relationship between family EE and relapse has yet to be fully resolved. Such is the nature of this type of research that fault can usually be found with some aspects of design, procedure, or method. This is apparent in the studies reviewed here, and on several occasions, the authors themselves have been the first to point out weaknesses. Our concern is that in light of these operational difficulties, there is a need to be doubly cautious in interpreting results. In this respect, Parker et al's (31) discussion bears further consideration: as the authors put it, they could have chosen to focus on their findings in respect of the CFI hostility rating, which alone among the three EE scales lent some weight towards the EE/relapse hypothesis. However, even this weak effect only emerged if a higher than usual criterion for hostility was used, and the authors therefore wisely chose not to pay it undue attention. We share Parker et al's (31) concern that many EE research studies have proceeded with an apparent commitment more to confirmation than falsifiability; an approach that has sometime been coupled with a readiness to criticize studies in which results fail to support, or even go against the hypothesis, and a reluctance to consider alternative interpretations of affirmative findings.

Another issue raised by the foregoing discussion is that of direction of causality. The view that relapse is (at least in part) a consequence of frequent contact with high EE relatives is not shared universally even by those research groups who have published positive findings. The alternative interpretation; that high EE is a reaction in some key relatives to living in close contact with a psychiatrically disordered individual, has also been mooted: Brown et al (36) noted that in about one-third of relatives, level of criticism dropped appreciably following a marked improvement in the discharged patient's condition. Yet for others the first of the intervention studies (37) firmly established direction of causality. Hirsch (38) for example, wrote that this study substantiated the casual effects of relatives' expressed emotion on the relapsing schizophrenic. Nuechterlein et al (25) similarly interpreted their data as supporting a directional causative role of EE on relapse.

Our research findings clearly indicates that positive emotions are very high among the family members of schizophrenic patients who have relapsed. This means that high negative expressed emotions which have been linked to frequency of relapse in schizophrenic patients in western studies reviewed above is not seen in our patients. What could possibly account for this very dramatic findings? In spite of positive emotions, the patients are relapsing; what then is the factor in EE that contributes to relapse and if it is positive emotions, then should the relatives be

trained to have negative emotions? This is of course ridiculous as it has been said to increase relapse. Is it that Kelantan patients are not really affected by EE scores in terms of relapse. If this is so, then there is no need to prepare a treatment plan that aims to reduce EE among family members, as it is the majority of the families have low positive EE. What then is the cause of these. The most likely cause to our minds is culture. The culture of Malaysians and specifically Kelantanese are totally different from those of the west and this certainly results in a different approach to patients and EE as perceived by the west may be different in our patients. Perhaps the components of EE itself needs to be altered for Kelantan patients and perhaps with the inclusion of other variables and components, only then can we see the actual EE of Kelantan relatives.

Other theoretical accounts are also necessary. Relatives' responses to a family member's illness include a complex of features that dynamically interact with one another. An abbreviated outline of some of these factors are:-

- 1) Cultural interpretations of the nature of the problem. Relatives' interpretations of the problem are their views of its nature, cause, and course (e.g., laziness caused by illicit drug use that would improve if the patient exercised willpower). These interpretations mediate relatives' emotional responses to the problem (39, 40). The works of Edgerton (41) and Kleinman (42) serve as anthropological classics on this topic.

2) Cultural meanings of kin relations. Relatives' responses to an ill family member are formulated in the context of culturally prescribed definitions of family life that suggest appropriate patterns for interpersonal relations among kin. Family relations have sometimes been characterized on a continuum between an individualistic orientation and a family orientation (43).

3) Identification of cultural rule violations. Cultures define what counts as behavior deserving of legitimate criticism. Identification of cultural rule violations (e.g., failure to be independent) varies in relation to the values, norms, and expectations in particular settings and in accord with culturally defined statuses that may legitimately exempt individuals from criticism (44).

4) Vocabularies of emotion. Cultures differentially construct a universe of discourse on emotion, or ethos, within which the relatives' responses to illness are articulated. Emotions that are culturally salient (e.g., sadness as opposed to anger) provide models that may shape how individuals might or should feel in a given situation (45, 46).

5) Relatives' personality traits or predispositions. Although the subject has yet to be explored, variations in individual personality or temperament are common partial explanations for why relatives might display varying degrees of expressed

emotion. (47) Responses indicative of high levels of EE may also be partially explained by some degree of shared (and possibly genetic) vulnerability to pathology for relatives and patients alike (48). Variations in relatives' attributional styles have also been explored (49).

6) Degrees and kinds of patients' psychopathology. It is frequently hypothesized that variations in degrees of patients' psychopathology might account for differences in relatives' expressed emotion. This assumption undoubtedly holds merit in some instances (e.g., extremely bizarre schizophrenic behavior); however, empirical examination has repeatedly demonstrated a nonsignificant relationship between severity of patients' symptoms and relatives' expressed emotion.

7) Family interaction dynamics. Typical family patterns of identification, communication, and separation can also be expected to shape relatives' emotional responses to an ill family member. Displacement of hostility, ridicule, protection, and devotion, for example, may vary in accord with individual family dynamics. In addition, the socialization of particular family dynamics may be culturally mediated. In a study of schizophrenia in rural Ireland, Scheper-Hughes (50) found that the youngest sons were often expected to preserve the family's identity and longevity. Failure to do so typically generated critical and hostile reactions.

8) Attempts to socially control a deviant relative. Expressed emotion can be considered a behavioral intervention strategy of families that is designed to restrict the objectionable activities and actions of a deviant family member (51).

9) Availability and quality of social supports. The compositional features of households, including size and kin type, may influence a relative's expressed emotion. For example, expressed emotion may be higher among parents than spouses (8). In an Australian study (31), expressed emotion more successfully predicted relapse in single-parent households than in two-parent homes. Social supports, like life events, might mediate the impact of expressed emotion (52).

10) Historical and political economic factors. It has been suggested that explanations for differences in expressed emotion profiles may change over time (52). Changing social and economic conditions may influence the emotional climate of a society in general, with repercussions for how families reflect societal attitudes towards individuals identified as deviant (53). There is also evidence for differences in expressed emotion in relation to social class (54).

Cultural Interpretations of the Problem.

Cultural conceptions of mental disorder - indigenous nations of the nature, cause, and course of illness - have long been a focus

of anthropological investigation (39, 40, 41, 42). To what extent do cultural conceptions of the illness mediate expressed emotion in families? Can such conceptions create a culturally legitimate status that inhibits high levels of criticism? Is the cultural locus of the problem deemed to be a personality problem, an illness entity or an external malevolent agency? Several authors (34, 49) have identified this issue as important to the formation of expressed emotion attitudes. The identification of this factor as a specifically cultural issue in psychiatric research has been slow in coming, however.

In studies of Mexican-descent relatives (39, 40), the concept of nervios served as a cultural label for schizophrenic illness. The term nervios is in broad cultural use for a wide range of everyday distress (e.g., schizophrenia, depression). This inclusive use of the term serves to destigmatize such conditions. Since severe cases of nervios are not considered blameworthy or under an individual's control, the person who suffers its effects is deserving of sympathy, support, and special treatment. Moreover, severe cases of nervios are potentially curable. It is interesting to note that Mexican-descent relatives do not adopt another possible cultural label for craziness, loco. As a loco, the individual would be much more severely stigmatized and considered to be out of control with little chance for recovery.

Although such conceptions may be important, other forms of cultural knowledge may also mediate attitudes towards the illness. For example, even Anglo-Americans who believe the problem to be a

psychiatric condition called schizophrenia may nonetheless simultaneously believe that their relative is lazy (a culturally based personality attribution), and this might inhibit any possible recovery. That family views often combine broader cultural knowledge with more specific medical explanations points to the fact that these interpretations are complex and sometimes resilient in the face of attempts to modify them through psychoeducational programs offered by psychiatric professionals or advocacy groups. Estroff (55) has noted that schizophrenia is typically conceived of as an "I am" disease as opposed to an "I have" illness. The fact that Mexican-descent relatives conceive of schizophrenia as nervios, a legitimate illness that is outside the realm of personal control, may have a more salutary impact on personal identity that mediates the course and outcome of illness (54).

Cultural Meanings of Kin Relations

Cultural meanings of family relations may differ along a continuum between a family orientation and an individualistic orientation. In cultures at one end of the continuum individuals may see themselves primarily as member of a larger kin-based social unit, behaving in ways that appear to maximize the family welfare relative to that of the individual. In cultures at the other end, individuals may consider family bonds secondary to the pursuit of their own personal goals and actions. Shweder and Bourne (56) conceptualized such differences in terms of sociocentric as opposed to egocentric definitions of the person. The sense of self in relation to others is important in family settings in

outlining cultural preferences for affective and symbolic distancing. Although these formulations must be considered as ideal types, they nonetheless are important to determining different degrees of identification, involvement and obligation that could in turn affect responses to a relative's illness.

In a study of schizophrenia in Ireland, Scheper Hughes (50) found that patients were often harshly rejected and extruded from family settings. Ostracism by the family served to delimit the boundaries between self and others by condemning what was considered unacceptably deviant. The criticism and rejection also served to preserve the family identity as morally upstanding. Anglo-American relatives may more sharply delimit boundaries between the normal and the sick family members. For example, some Anglo-American relatives said that they had no personal experience or knowledge of their relative's problem and therefore could not "relate to" or identify with the relative (34). Behaviorally, this sometimes means that relatives feel quite uncomfortable spending much time together. Symbolically, the problem relative comes to be identified as unknown, foreign, and "other". This contrasts sharply with the family processes of identification among Mexican-descent relatives. Defining the problem as nervios, a common condition that in its milder forms afflicts nearly everyone, provides them a way of identifying with and minimizing the problem by claiming that the ill relative is "just like me, only more so" (40).

Identification of Cultural Rule Violations

The behavior of individuals with schizophrenic illness can violate a host of cultural norms and proscriptions. This is perhaps why in some societies, such as those of the Javanese of the Pintupi aborigines of Australia, the same term is used for the mentally ill and for young children, indicating that such persons are not fully socialized (45, 46). Edgerton (44) has observed that although societies may allow for acceptable diversity in some human conduct, one knows "when the limits of acceptable variation have been exceeded because the result is 'trouble' in the form of complaints, disputes, accusations, recriminations, and the like". Critical comments may be viewed in this way - as complaint about the perceived violation of rules that people with schizophrenic illness may engage in with disquieting regularity. Shweder (57) underscored Freud's identification of "criticism (and related activities such as accusing and accounting) as the primary activity associated with rules". The criticism component of the expressed emotion research - which empirically makes up the lion's share of the construct - is valid for cross-cultural research if it is grounded in a generalizable definition of criticism as a negative response to cultural rule violations.

A limitation of previous analyses of critical comments is that researchers have considered that only two coding categories - symptom behaviors and enduring personality traits - can adequately inform a qualitative understanding of the nature of critical

remarks. This analysis differs markedly from that development for Mexican-descent and Anglo-American relatives, in which several additional coding categories became essential, and provides an example of the limitations of expressed emotion research in the absence of concern for indigenous perspectives (54). It is also reflective of North American ethnopsychology since in the British and Anglo-American analysis (52), relatives' preoccupation with personality reflects the broader cultural and ethnopsychological concern about the importance of individual character traits. This analysis is not useful in the case of the Mexican-descent (and we would suspect Indian) relatives, where criticism of relatives on the grounds of personality defects is likely to be a less frequent occurrence.

This point serves to underscore how, in the absence of cross-cultural comparative analysis, science risks reification of our own cultural categories (58). In analyzing the content of critical comments, do we code the data from the perspective of the relatives who are motivated to make the critical comments or from the perspective of the analyst who codes it? The anthropological concern for the importance of perspective (the emic or indigenous categorization of meanings versus the etic or outside analyst's view) is crucial to the identification and interpretation of critical comments. This has yet to receive adequate attention, but we suggest that analysis of critical comments as complaints about cultural rule violations may provide a more productive basis for cross-cultural comparative analyses (4).

Vocabularies of Emotion

Although mental disorder within the family may universally engender painful feelings among close kin, substantial differences exist with respect to the nature, intensity, and meaning of these affects. Relatives necessarily draw upon implicit cultural knowledge of which affects should be expressed and under which conditions they should be inhibited (59). Sanctions for and against the expression of certain emotions (such as anger manifest in criticism and hostility) exist as part of the culture's vocabulary of emotion (46). Whereas some societies (such as those of Tahitians or Inuit Eskimos) nearly always censure the expression of anger, others, such as that of the Kaluli of New Guinea, may require such expressions in particular settings (60). Cross-cultural variations in the vocabulary of emotion must play a part in the observed variations in expressed emotion profiles, as recorded for the British, Anglo-American, and Indian studies.

CONCLUSION

Attempts to conceptualize EE have this far been largely restricted to a relatively microanalytic view of the characteristics of patients and relatives on their interactional qualities. These conceptualizations are based on personality, attributional, psychopathology, or social control factors. We feel that these provide only partial understandings of EE and are primarily useful for intracultural analyses differentiating low and high profiles of EE. We believe the general cross cultural utility of the component element of the EE index should be considered in ways similar to any other research construct.

Substantial variations in EE profiles in different cultures and among different social classes is evidence against assumption of a universally shared, psychobiologically given human response to schizophrenic illness. Instead, variation in EE profiles is more properly understood within the context of psychocultural and social variation in relatives' responses to a family member who suffers from schizophrenia.

We argue that the nature of expressed emotion (in the form of verbal criticism and emotional overinvolvement) is clearly grounded in cultural conventions, that is, it is culture specific. EE consists of two principal factors. Critical comments and emotional overinvolvement. Without a doubt, the nature and meaning of criticism and emotional overinvolvement are culturally specific.

Our study indicates that positive emotions including for critical comments and emotional overinvolvement were high inspite of living with difficult schizophrenia patients. As such this is culture specific. This is not seen in other cultures especially those in the west and the utilization of EE as proposed in the west cannot be applied to our patients in order to reduce relapse. Another mode of treatment that is culture specific needs to be worked out and that requires another full scale research.

RECOMMENDATIONS

Expressed emotion, understood in cross cultural perspective, can contribute toward a reflective understanding based less on an assumption of autonomous sentiments and actions and more on a constellation of shared features.

It is recommended that psychiatrists in Malaysia be well versed with the culture of the patients as it has a very positive bearing on the expressed emotions of patients relatives especially in Kelantan so that they can formulate their psychosocial treatment more appropriately.

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APPENDIX

Appendix 1

- 1) Adakah anda memarahi atau mengkritik pesakit setiap waktu dan masa?
- 2) Adakah anda memberi tumpuan kasih dan sayang yang berlebihan kepada pesakit?
- 3) Adakah anda bangkang (jawab-mulut) pesakit secara berlebihan?
- 4) Adakah anda rasa tersangat rungsing/risau terhadap pesakit dan penyakitnya?
- 5) Adakah tingkahlaku/perangai pesakit diluar toleransi anda?
- 6) Adakah anda tidak menitikberatkan sangat terhadap tingkahlakunys yang tidak baik atau luar biasa itu?
- 7) Adakah anda memberi tekanan kepada pesakit supaya mengubah tingkahlakunya?
- 8) Adakah anda selalu memasukkan pesakit didalam hiburan keluarga?
- 9) Adakah anda selalu tidak puas hati dengan perangai/tingkahlaku pesakit?
- 10) Adakah anda menolong pesakit berlebihan daripada sepatutnya?
- 11) Adakah anda selalu menegur/mengkritik tingkahlaku (perangai) sipesakit?
- 12) Adakah anda memberi perhatian yang sedikit kepada apa-apa aktiviti yang dibuat oleh pesakit?

- 13) Adakah anda selalu sahaja rasa marah terhadap perangai dan tingkahlaku pesakit?
- 14) Adakah anda mempunyai perhubungan yang rapat/baik dengan pesakit pada kebiasaannya?
- 15) Adakah anda suka memaksa pesakit supaya menerima segala buah fikiran/pendapat anda?
- 16) Adakah anda selalu bertoleransi dengan pesakit walaupun dia tidak dengar cakap anda?
- 17) Adakah anda mempunyai sedikit sangat perasaan simpati terhadap pesakit?
- 18) Adakah anda biasa menghabiskan masa anda bersama pesakit?
- 19) Adakah anda cuba mengelak daripada memberi perhatian terhadap tingkahlaku pesakit setiap hari?
- 20) Adakah anda rasa sedikit tersinggung dengan tingkahlaku pesakit itu?
- 21) Adakah anda menunjukkan terlalu sedikit kemessraan apabila bercakap-cakap dengan pesakit?
- 22) Adakah anda jarang-jarang merengguh hadrat/permintaan pesakit?
- 23) Adakah anda mendenda pesakit supaya ia menghentikan kelakuannya yang tidak baik itu.
- 24) Adakah anda rasa menanggung sekecewa apabila berjauhan dengan pesakit?
- 25) Adakah anda meluangkan sedikit masa sahaja dari masa-masa penuh anda untuk pesakit?
- 26) Adakah anda bebas bercampur gaul bersama pesakit semasa berbual-bual dengannya?

27) Adakah anda memandang rendah terhadap pesakit berbanding dengan orang lain?

28) Adakah anda jarang-jarang menegur pesakit walaupun ia membuat kesalahan?

29) Adakah anda mempunyai kurang torelansi terhadap gejala-gejala pesakit?

30) Adakah anda sedia berkorban apa sahaja yang ada demi untuk merawat pesakit?

Appendix 2

	POSITIVE EMOTIONS	NEGATIVE EMOTIONS
CRITICAL COMMENTS	-	1, 11
HOSTILITY	-	3,5,7,15,23
DISSATISFACTION	20	9,13,27,29
WARMTH	26	-
EMOTIONAL OVER INVOLVEMENT	2,8,10,14,16,18, 22,24,28,30	4,6,12,17,19,21, 25

Scoring:

Yes answer scores - 2 points
 No - 0
 Indefinite - 1

Final Rating:

	NEGATIVE EE	POSITIVE EE
Low EE	0 - -10	0 - 10
Moderate EE	-11 - -20	11 - 20
High EE	-21 - -30	21 - 30