SCHIZOPHRENIC REHOSPITALISATION AND EXPRESSED EMOTION IN ZULU SOUTH AFRICANS: A PILOT STUDY

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ABSTRACT

The impact of the emotional climate in the home of the schizophrenic on relapse has been researched extensively through the construct of Expressed Emotion (EE). Most often patients from high EE homes have a higher relapse rate than those from low EE homes. This is a robust finding throughout many western and some non-western countries. However, no published research documents EE status and relapse in African countries. This study reports on the EE status and rehospitalisation rates of 29 Zulu-speaking schizophrenic patients in a South African sample. EE was assessed using a translated version of the Level of Expressed Emotion (LEE) scale, a 60 - item, self-report measure developed in Canada (Cole & Kazarian, 1988). A multistage translation procedure, comprising back-translation, the committee approach and decentering was employed. The Zulu SCL-90-R was administered as an indicator of psychological distress. Follow-up data on rehospitalisation was collected nine months after index admission.

Results indicated somewhat unsatisfactory internal reliabilities on some of the subscales of the Zulu LEE scale. High scores on the Zulu LEE scale were not significantly predictive of rehospitalisation at follow-up; however, they were significantly predictive of greater previous admissions. The psychometric properties of the Zulu SCL-90-R were found to be satisfactory, indicating the validity of using this instrument for the purpose of screening for psychiatric illness. Zulu schizophrenics were found to have a lower rehospitalisation rate (17% at nine month follow-up) than found in international studies. The course for female schizophrenics was better than that for male schizophrenics. Findings are inconclusive regarding the impact of EE on the course of schizophrenia in a Zulu sample.

DECLARATION

This thesis was undertaken at the School of Psychology, University of Natal, Pietermaritzburg, and, unless specifically indicated to the contrary in the text, is a product of the author's own work. This thesis has not been submitted to any other university.

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DEDICATION

Dedicated to the memory of my grandmother,

Jessie Ferguson Potter,

whose economic foresight made my studying possible,

and whose love of knowledge is an inspiration.

TABLE OF CONTENTS

LIST OF TABLES

CHAPTER 1

INTRODUCTION

Schizophrenia, characterised by delusions, hallucinations, disorganised speech and impaired insight (American Psychiatric Association (APA), 1994), continues to inflict incalculable suffering upon those who are affected by it - patients, their families, practitioners, as well as greater society. These costs are both material and emotional. In the United States of America (USA), it has been reported that direct costs of schizophrenia total $19 billion per annum, with indirect costs, due, for instance, to relapse, estimated at $2.3 billion per annum (Weiden & Olston, 1995).

In South Africa (SA) in the late 1980s, it was estimated that of all admissions to psychiatric hospitals, 62% were readmissions, of which 74% had a diagnosis of schizophrenia (Solombela & Uys, 1994). Macpherson (1995) reports on the ethnicity of individuals diagnosed within the schizophrenia spectrum in KwaZulu-Natal as being 73% black, 8% Asian, 4% coloured, and 12% white in 1991. While black people make up the majority population in SA, there is a paucity of psychological research with this population (Fischer, 1962; Gobodo, 1990; Hickson, Christie & Shmukler, 1990; Seedat, 1998). There is also a noted lack of suitable translated instruments for use with non-English speakers in South Africa, with which to carry out such research (John, 1996; Miller & Swartz, 1992; Shanahan, 1998).

There is a move to community and family care of the mentally ill in SA (Health Systems Trust, 1999; Joubert, 1997; Solombela & Uys, 1994; Swartz, 1998; Uys & Zulu, 1996). With relapse

prevention being one of the central ingredients of most treatment approaches for people with schizophrenia (Beels & McFarlane, 1982; Schooler, 1995), families will increasingly have the responsibility of caring for their schizophrenic relatives. Given the lack of research in this area, especially with majority users of psychiatric facilities, these families might well find it difficult to cope.

In this regard the impact of the emotional climate in the home of the schizophrenic on relapse has been researched extensively through the construct of Expressed Emotion (EE)[1]. Expressed emotion, as a measure of the quality of the social interaction between a carer and patient, is a significant predictor of relapse in individuals with schizophrenia (Bebbington & Kuipers, 1994; Butzlaff & Hooley, 1998). Most often, patients from designated high EE homes have a higher relapse rate than those from designated low EE homes (Brown, Birley & Wing 1972; King & Dixon, 1999; Leff, Kuipers, Berkowitz & Sturgeon, 1985; Leff & Vaughn, 1985; Tarrier et al., 1988). This is a robust finding throughout most western countries (e.g., Barrelet, Ferrero, Szigethy, Giddey & Pellizzer, 1990; Bertrando et al., 1992; Ivanovic, Vuletic & Bebbington, 1994; Vaughan et al., 1992a), as well as non-western and developing countries and cultures (e.g., Karno et al., 1987; Leff et al., 1987; Philips & Xiong, 1995; Tanaka, Mino & Inoue, 1995). However, no published research examines EE status and relapse in African countries.

Within the expressed emotion literature, however, a complete understanding of the mechanisms involved in the EE-relapse link has not been attained (Brown, 1985; Leff & Vaughn, 1985), with some researchers now calling for more cross-cultural investigations to be carried out as a means

[1] 'Expressed emotion' and 'EE' are used interchangeably in the literature. In this thesis the former is used to denote the underlying theoretical construct, the latter when discussing measurement thereof.

of better elucidating the construct (e.g., Hatfield, Spaniol & Zipple, 1987; Hooley, 1998; Koenigsberg & Handley, 1986; Leff & Vaughn, 1985; Weisman, Nuechterlein, Goldstein & Snyder, 1998). In the South African context, the need to examine expressed emotion variables in the treatment of schizophrenia has also been suggested (Joubert, 1997; Wassenaar, 1987).

This thesis attempts to contribute to both these concerns. There is a need for empirical studies with black psychiatric users in SA that could enhance treatment suggestions and correct past imbalances in psychological research, including test translation, as well as the need for a cross-cultural sample to explore further the underlying mechanisms in the expressed emotion construct. To this end the predictive validity of EE in a sample of Zulu-speaking schizophrenics was assessed, Zulu being the mother tongue of the majority population of KwaZulu-Natal.

The literature that this thesis draws upon falls into two parts. The first of these is the literature on expressed emotion. Chapter Two presents a brief history of the expressed emotion construct, including a discussion of the measurement of EE, as well as the scales that make it up. Chapter Three reviews published research on the construct, and Chapter Four reviews studies of expressed emotion carried out cross-culturally. Chapter Five presents an overview of current theories of what expressed emotion is, and is concluded with a cultural explanation of the construct.

This forms the basis of the literature review for part two of this thesis, which presents an account of aspects of the cultural meaning systems of Zulu South Africans with respect to mental illness. To introduce this section a brief review of empirical research on mental illness in Zulu South

Africans will be presented, which occurs in Chapter Six. In Chapter Seven, those aspects of Zulu culture deemed important to a cross-cultural understanding of the construct of expressed emotion will be presented, based on the cultural factors outlined in Chapter Five. From this the hypotheses of the present research are generated. Part three then presents the methodology (including instrument translation) of this study, followed by a presentation of the results, discussion, and critique.

CHAPTER 2

THE CONSTRUCT OF EXPRESSED EMOTION

This chapter serves as a brief introduction to the topic of expressed emotion. The historical context of the construct, the rating of relatives' EE and the scales making up the construct will be described. The early papers of Brown and his colleagues (Brown, Castairs & Topping, 1958; Brown et al., 1972) will be discussed, as these are considered seminal in expressed emotion research.

2.1. EXPRESSED EMOTION: EARLY RESEARCH

While quite obviously falling on the psychosocial end of the continuum of theories of schizophrenia and relapse (Zubin & Steinhauer, 1981); family environments[1] to which people with schizophrenia return was considered even by researchers in the late 1800s, as Ploog and Strian (1986) note, in discussing the work of Kahlbaum and Kraepelin:

> On the patient's return to his home environment, the avoidance of emotional conflicts was considered to be of vital importance. An atmosphere of understanding and patience would also help to prevent relapses (pp. 1-2).

[1] Expressed emotion research is neither unique nor original in looking at family environments and schizophrenia. However, it differs from other family environment research (e.g., that of G. Bateson, and R.D. Laing) in that its primary focus is on the course of the illness, and specifically *relapse* of the individual with schizophrenia.

They go on to discuss how the advent of medication became the mainstay in relapse prevention in the early part of last century. Indeed, while it remains part of the successful treatment regimen for all with such a diagnosis (Goldstein, Rodnick, Evans, May & Steinberg, 1978), it was not until the 1950s that interest in family environments and relapse became prominent.

This came about through the work of Brown et al. (1958), in the United Kingdom (UK), in assessing the post-hospital adjustment of a group of 229 male psychiatric patients (68% with a diagnosis of schizophrenia). They looked at the effects of a number of variables on outcome, of which three - clinical state on discharge, employment, and type of living group to which the patient returned - were related to successful outcome.

The finding that those patients who returned to live with a sibling or in lodgings had a better outcome than those who returned to live with their parents or wives stimulated much future research. Brown et al. (1958, p. 687) linked this finding to the possible detrimental effect that "the close emotional ties of a parental or marital household" may have on the course of the illness. This was further linked to the amount of time the patient spent with this significant other, with greater time spent resulting in a greater likelihood of relapsing.

Identifying just what it was about the type of living environment that affected relapse, Brown and his colleagues (Brown, Monck & Castairs, 1962, in Brown et al., 1972) found that it was relatives of schizophrenics who were "highly emotionally involved with them" (p. 241), with whom outcome was poor. Attempting to clarify this further, a rigorous interview technique (later named the Camberwell Family Interview, see below), of a key relative was developed (Brown &

Rutter, 1966, in Liberman, 1986). This was used to assess the behaviour and attitudes of the relatives of 101 recently discharged individuals with schizophrenia (Brown et al., 1972). This replication study, coining the term 'expressed emotion'[2] or 'EE', specifically assessed the causal impact that high levels of expressed emotion in relatives would have on the course of the illness. Findings were consistent with their earlier ones: the level of EE was an independent predictor of relapse, with previous work impairment and behavioural disturbance associated to relapse, because, according to the authors, of their association with EE. Overall, 58% of the patients from high EE families relapsed, compared to 16% of those from low EE families in the nine-month follow-up period.

From these early beginnings, research using the construct of expressed emotion has been prolific and multifaceted (Brown, 1985). The role played by mitigating factors such as medication, which has consistently been found to reduce the risk of relapse (Bebbington & Kuipers, 1994; Butzlaff & Hooley, 1998), was an initial finding. Also, more or less time spent with the high EE relative, with greater than 35 hours of face-to-face contact per week increasing risk to relapse, is still subject to scrutiny (ibid.). Finally, whether EE levels predict or cause relapse, whether there is a relationship between EE level and the course of other disorders, and, what is it about relatives that make them high EE; are all questions raised in Brown's seminal papers. As shall become evident in the pages that follow, these continue to receive empirical attention, and indeed do so because of the elusive nature of EE (Jenkins & Karno, 1992), an issue taken up more fully in

[2] Although later authors agree that this is a misnomer - it is not expressiveness of emotions by the relatives per se that is being measured, rather the amount of critical comments, degree of emotional overinvolvement etc., i.e. the operational definition of the construct. For further discussion of this see Mintz, Liberman, Miklowitz and Mintz (1987), Nuechterlein, Snyder and Mintz (1992), or Miklowitz (1994), who offers the alternative term 'negative affective relationships' for 'high expressed emotion'.

Chapter Five. Of major importance to the construct of expressed emotion though, is an understanding of the rating of EE, which shall be discussed below.

2.2 RATING FAMILIES' EXPRESSED EMOTION

The most common method for rating EE in families is done using the Camberwell Family Interview (CFI), a semi-structured interview technique, the original version of which was developed by Brown and Rutter (1966, in Hooley, 1985). Leff and Vaughn (1985) provide a detailed account of the CFI, and the following summary of the salient parts is drawn from this.

As noted, the CFI is a semi-structured taped interview, undertaken by a trained clinician with a key relative of the index patient. The key relative is usually a spouse or parent, and occasionally a sibling or child. The CFI is concerned with two domains of family functioning: events/activities and attitudes/feelings. The interviewer elicits information pertaining to these domains through acquiring a detailed account of the circumstances in the home in the three months prior to hospitalisation. This account covers such areas as symptomatology, course of illness, relationships in the home, household tasks, and money matters. Not only are frequencies of events elicited but also feelings of the relatives towards their ill member, most especially noted by observing how the relative recounts these events. The interviewer maintains a neutral and non-judgmental stance, and has flexibility with regards to phrasing and question sequence. The interview is then analysed, and relatives' attitudes and feelings are rated, upon which they are classified as having high or low levels of EE.

The 4-5 hour administration time, requiring at least two visits to the family, which resulted in lengthy rating time (Brown et al., 1972), rendered this form of the CFI too cumbersome to be widely used in clinical practice (Kavanagh, 1992; Kazarian, 1992). Thus Vaughn and Leff (1976, in Leff & Vaughn, 1985), in developing an abbreviated form of the CFI, isolated those elements of the interview that were considered most contributive to the prediction of relapse accuracy of the overall EE index.

Of the five EE variables (see 2.3 below), the number of critical comments made by the relative about the patient appeared to have the highest predictive value. Further, these predominated in the first hour of the interview, usually pertaining to topics of psychiatric history, symptomatology and quarrelling in the home. Focus on these areas constitute the shortened form of the CFI. While retaining concurrent and predictive value, it requires a shortened administration (1-2 hours) and rating time (ibid.). This form does still however require that the raters be experienced clinicians, having also undergone at least a one month training in the analysis of the EE scales (Hooley, 1985), where high levels of inter-rater reliability (Pearson *r* values of 0.80 or greater) are usually achieved (e.g., Hooley, 1986; McFarlane et al., 1995).

Studies by Wig et al. (1987a) and Vaughan et al. (1992b), however, attest to the difficulties in becoming a proficient CFI rater. In the former study a member of the team, despite three training attempts, was unable to achieve acceptable reliabilities on two of the scales when the CFI was administered in Hindi. Thus while this form of the CFI has been most often used in the EE studies mentioned below (e.g., Bertrando et al., 1992; Brewin, MacCarthy, Duda & Vaughn,

1991; MacMillan, Gold, Crow, Johnson & Johnstone, 1986), it remains arduous to administer, and rating requires comprehensive training.

Further, it requires the presence of a relative at the research site, which in some settings is difficult, for instance in developing countries, where relatives may reside at great distances from these sites, and transport is problematic. In multi-lingual countries, where differing languages are spoken, different versions of the CFI would need to be developed, rendering EE measurement using the CFI difficult, to say the least. Indeed, of the approximately 20 countries where EE research studies have been done, it appears that only one has been done in conditions similar to these, the Chandigarh study in India (Leff et al., 1987; Leff et al., 1990; Wig et al., 1987a; Wig et al., 1987b).

Difficulty in administration and rating, and the necessity of having a relative present, appear to have determined the direction of research with ensuing measures (for a review of these, see Kazarian, 1992; for a review of family risk indicators see Miklowitz, 1994). At least ten simplified measures of family functioning are reported on in the literature (e.g., Buchkremer, Schulze-Mönking, Lewandowski & Wittgen, 1986; Docherty, Serper & Harvey, 1990; Hooley & Teasdale, 1989; Magaña et al., 1986; Miklowitz, Goldstein & Falloon, 1983; Spiegel & Wissler, 1986). These are discussed in the Methodology section below, where the Level of Expressed Emotion (LEE) scale (Cole & Kazarian, 1988) is identified as the most suitable instrument for use in the South African context.

One further critique of the CFI is pertinent. In all studies reviewed, where the CFI has been used to measure EE, either Julian Leff or Christine Vaughn have actually been involved as one of the raters (e.g., Leff et al., 1987; Parker, Johnston, & Hayward, 1988); have directly trained the raters (usually CV; e.g., Barrelet et al., 1990; Bertrando et al., 1992; Ivanovic et al., 1994; Montero, Gómez-Beneyto, Ruiz, Puche & Adam, 1992; Philips & Xiong, 1995; Nuechterlein, et al., 1992); or the raters have been trained by someone trained under one of these researchers (e.g., Ito & Oshima, 1995; Mozný & Votýpková, 1992). In one study (MacMillan et al., 1986) the raters were trained by another researcher (L. Kuipers) from the same institute where these researchers conduct their work. While this may augment well for the research methodology of the EE studies, in that there has been consistency in measuring techniques, it also points to the fact that there has been no independence of observations. The possibility, therefore, that the CFI is not in fact objective, as Kanter, Lamb and Loeper (1987) suggest, cannot be ruled out.

Overall then, despite the limitations of the CFI, it remains one of the most widely used research tools in the EE paradigm. The remainder of this chapter will review the scales of EE - those elements of family interactions that the CFI is tapping.

2.3 SCALES OF EXPRESSED EMOTION

Leff and Vaughn (1985) note that the development of these scales is the result of over 10 years of research, the original scales being revised and updated and only those most salient measures of relatives' attitudes and behaviours retained. Thus, for instance Brown et al. (1972) initially included a scale called dissatisfaction, but which in later studies was found to contribute little to the overall index of EE and was thus subsequently dropped (Leff & Vaughn, 1985; Hooley,

1985). Scores on these scales are judged by raters trained in the CFI method, who analyze the audiotaped interviews, and categorize relatives as high or low EE if at least one scale threshold is reached in at least one relative - either parent, spouse or sibling (Barrowclough & Tarrier, 1997).

2.3.1 Critical Comments (CC)

Critical comments are the total number of critical remarks made by the relative about the patient during the interview. Remarks are judged to be critical if their content shows clear and unambiguous disapproval, dislike or resentment; or if inflection indicates these, through tone, pitch, speed, or loudness. While Brown et al. (1972) originally chose seven or more CCs to judge a relative as being high EE, more recently Leff and Vaughn (1985) adopted the use of six or more CCs to differentiate EE status. This cut-off becomes salient when viewing cross-cultural studies, as large differences in the mean number of CCs observed in relatives of schizophrenics have been reported in different cultures. For instance, relatives in the UK have scored a mean of 7.5 CCs (Leff & Vaughn, 1985); in the USA, 6.8 CCs (ibid.); in Spain, 3.1 CCs (Montero et al., 1992); while in India the mean number was 1.8 CCs (Leff & Vaughn, 1985). Note that these are mean scores, and say nothing of the differences in the distribution of CCs between high and low EE families, as the differentiation is based on median scores, a point not made by Leff and Vaughn (1985) when discussing these, which could otherwise lead to confusion. Of all the scales, the CC scale is considered most predictive of relapse (Brown et al., 1972; Barrelet et al., 1990; Kavanagh, 1992), and as such has received most empirical support.

2.3.2 Hostility (H)

Hostility is related to CCs, and was originally measured simply as present or absent (Brown et al., 1972). Now it is most often measured on a four-point scale (although three-point scales have also been used), with a score above naught resulting in a high EE designation (Leff, Kuipers, Berkowitz, Eberlein-Fries & Sturgeon, 1982). The rating is global - decided upon by taking all the interview material into account. Criticism generalised, as when the patient is attacked for what s/he is, rather than what s/he does, is what is referred to here, rather than situation-specific criticism, as measured by CCs (Hooley, 1985).

2.3.3 Emotional Overinvolvement (EOI)

This dimension was designed to measure unusually marked concern, such as exaggerated emotional response to the patients' illness, and self-sacrificing or over-protective behaviour towards the patient (Hooley, 1985). Measured on a six-point global scale, EOI is detected from both actual behaviour at the interview, as well as relatives' reports of their behaviour toward their ill relative and, like H, is judged considering all interview material (Leff & Vaughn, 1985). A score of 3 (sometimes 4) or more designates the family as high EE (Leff et al., 1982).

This scale raises difficulties from a cross-cultural perspective, as the following case example shows. Leff and Vaughn (1985) discuss a low EE designated mother, from London or Los Angeles (they do not say which), who scored '0 = none' on the EOI scale:

> "... no evidence of unusually self-sacrificing, devoted, or overprotective behaviours. The mother had friends and a life of her own. *She was prepared to*

have her daughter return to her after discharge only if [she] contributed to the household ..." (p. 48, emphasis added).

The authors maintain that "[a score of] 'none' should be seen as 'normal', as the scale is designed to measure emotional overinvolvement"(ibid., p. 47).

Considering that what is normal and abnormal is culturally defined (Matsumoto, 1994), the above response may just receive a completely different rating in another culture. For instance, Philips and Xiong (1995), note that "most Chinese consider 'self-sacrificing and devoted behaviour' the *responsibility* of parents with ill children" (p. 56, emphasis in the original). Add to this the differences found in EOI in differing cultural studies (e.g., Leff et al., 1987; Mino et al., 1995; Nunley, 1988), as well as evidence that EOI is possibly not predictive of psychotic relapse (Bentsen et al., 1996), and the complexity of this particular scale, and indeed the construct of expressed emotion, becomes evident.

2.3.4 Warmth (W)

The warmth scale is based on the amount of warmth demonstrated by the relative when talking about the patient at the interview, but is not a measure of the warmth of the relative's personality (Leff & Vaughn, 1985). It is measured on a six-point global scale. As in the case of CCs, inflections such as tone, pitch, speed, or loudness are used to identify this scale (Hooley, 1985), as well as non-verbal behaviours such as facial expressions (Leff & Vaughn, 1985). As in H and EOI, all the interview evidence is taken into account in rating.

2.3.5 Positive Remarks (PR)

Although not included in Brown et al.'s (1972) original index of EE, positive remarks were included by Vaughn and Leff (1976, in Leff & Vaughn, 1985). This is the sum total of all remarks made in the interview, the content of which expresses praise, appreciation, or approval. Again, inflection is a modulating variable (ibid.).

There is debate about the utility of including all five scales in a global index of EE. Some authors argue that they may reflect separate underlying constructs (e.g., Chambless, Bryan, Aiken, Steketee & Hooley, 1999; Kanter et al., 1987; Koenigsburg & Handley, 1986); while others suggest they represent a single underlying construct (e.g., Hooley, 1985).

The cut-off for the division of samples into high and low EE relative groups has also been discussed, with the division usually occurring along the median scores (Leff & Vaughn, 1985). Overall, CCs, H and EOI tend to occur together in high EE relatives, with W and PRs in low EE relatives, and sometimes EOI and PR occurring together (ibid.). However, some researchers have found CCs and EOI independently related to EE (e.g., Bentsen et al., 1996; Brewin et al., 1991). W and PR have generally not been included in the later studies, as these have been found less predictive of relapse (Bebbington & Kuipers, 1994). Some authors, however, argue for their inclusion in the overall index of EE, as they may represent mediating factors that delay relapse in schizophrenics from low EE families (e.g., Bertrando et al., 1992; Hatfield et al., 1987).

It would appear that results from differing cultural groups support the inclusion of all five scales when deciding EE status, mainly because each of these scales has been found to be better

predictors of relapse depending on the location. For instance, H has been found most predictive of relapse in India (Leff et al., 1987), EOI in Japan (Tanaka et al., 1995), and CCs in a French-speaking Swiss sample (Barrelet et al., 1990). Further, unlike the UK studies (Brown et al., 1958; Brown et al., 1972; Leff & Vaughn, 1985), where high CCs are associated with low W, in an Indian sample high CCs were as likely to be related to high or low W (Wig et al., 1987b). Further difficulties with these subscales have been noted by Jenkins, Karno, de la Selva and Santana (1986). They report, in their study of Mexican-Americans, that the frequency with which the expression of sadness pervaded the interviews was more than in the Anglo-American and British studies.

It is evident from the above discussion that expressed emotion appears to take on a different form when exploring the construct from cross-cultural perspectives. It does not appear to be homogenous across cultures, a point mentioned in the proceeding chapter, and discussed more fully in Chapter Five below.

CHAPTER 3

EXPRESSED EMOTION: LATER RESEARCH

There are a number of ways of categorizing the expressed emotion literature. For instance, Leff and Vaughn (1985) and Parker et al. (1988) discuss different *epochs* in expressed emotion research, where from 1950-1970 the first explorations of the construct occurred, as well as the development of the scales of EE and the CFI. The 1970s and 1980s saw many replication and intervention studies occurring, as well as cross-cultural explorations of EE, including confirmation of the original findings. The 1990s saw the export of EE to other clinical disorders, as well as more in-depth research into patient characteristics and family attributes related to high EE. Throughout, attempts at elucidating what exactly EE is have also dominated much of the research.

To aid a cross-cultural exploration of expressed emotion, the following categorization has been employed in this study: *replication* studies here called are those in which an attempt has been made to replicate the original British studies and their finding that patients from homes classified as high EE are likely to relapse sooner than those from low EE designated homes. This includes replication studies done in countries other than the UK, and are mentioned briefly in the next section and discussed more fully below under cross-cultural studies done (the term *non-replication* refers to replication studies in which EE was *not* found predictive of relapse). Finally, *intervention* studies are then discussed; where the treatment of families is undertaken to reduce the EE levels of high EE relatives.

3.1 REPLICATION STUDIES

The aforementioned studies were carried out in the UK, subsequent to which further replication studies were carried out, all appearing to confirm the EE-relapse link (e.g., Leff et al., 1985; Tarrier et al., 1988; Vaughn & Leff, 1976). These findings have been replicated in at least 13 other countries and cultures, on all continents, bar Africa (where no published findings occur). For instance, there have been studies in a number of Western and Eastern European countries (e.g., Barrelet et al., 1990; Bentsen et al., 1996; Bertrando et al., 1992; Huguelet, Favre, Binyet, Gonzalez & Zabalan, 1995; Ivanovic et al., 1994; Mozný et al., 1992); the USA (e.g., Leff & Vaughn, 1985; Moline et al., 1985; Nuechterlein et al., 1992); Asia (e.g., Leff et al., 1987; Mino et al., 1995; Tanaka et al., 1995) and Australia (e.g., Vaughan et al., 1992a, 1992b). In all cases, patients of relatives who scored high levels of EE relapsed significantly sooner than did those whose relatives scored low levels of EE.

Some researchers, however, have failed to replicate this finding, for instance in the UK (MacMillan et al., 1986; McCreadie & Philips, 1988, in Kavanagh, 1992; Stirling et al., 1991), China (Philips & Xiong, 1995), Australia (Parker et al., 1988), and Germany (Köttgen, Sönnischen, Mollenhauer & Jurth, 1984, in Butzlaff & Hooley, 1998). These authors are circumspect of the significance given to the expressed emotion construct, as discussed below.

3.2 CRITIQUE OF EXPRESSED EMOTION RESEARCH

Some reviewers have argued critically against generalizations of the EE replication findings (Liberman, 1986). For instance Kanter et al. (1987) and Hatfield et al. (1987) argue that the expressed emotion construct has tended to place blame on families, in that high EE relatives are

led to believe they communicate in a way that is deleterious to their ill family member, a wrong which can be righted with the correct professional help. Similarly, Mari and Streiner (1994), following a meta-analysis of family interventions aimed at reducing EE, conclude that as a consequence, the needs of low EE families have been neglected. While this may be true of some of the intervention studies mentioned below, it was certainly not part of Brown and his colleagues' original thinking about families (see Brown, 1985).

Kanter et al. (1987) also assert that the criteria for judging EE are highly subjective (e.g. EOI), but hidden behind a veneer of objective scientific methodology. Nunley (1988) highlights this subjectivity when applying expressed emotion concepts cross-culturally. Kleinman (1988, in Matsumoto, 1994) warns against applying the construct cross-culturally, especially with those cultures that emphasize non-verbal communication.

Kanter et al. (1987), Parker et al. (1988), and Bebbington and Kuipers (1995) argue against the use of arbitrary cut-off points for the scales, which are chosen to generate statistically significant findings in small samples, but which may lead to spuriousness. Kanter et al. (1987) further maintain that evidence does not support the linking of the scales of CC, H, and EOI into a global index of EE. Others, for instance Hogarty et al. (1986) and Hogarty, Anderson and Reiss (1987), argue that high EE is more often limited to prediction of relapse in male patients living at home, than any other group.

That expressed emotion is not the cause of relapse, but only predictive thereof, is also subject to much debate, with some authors maintaining a causal link (e.g., Brown et al., 1972; Leff et al.,

1982; Leff et al., 1985; Tarrier et al., 1988). Other authors deny this possibility, citing the non-replicated findings mentioned above as evidence (e.g., Hogarty et al., 1986; Hogarty et al., 1987; Kanter et al., 1987; MacMillan et al., 1986; Parker et al., 1988). Lastly, expressed emotion researchers have also been criticized as being more committed to confirmation than falsifiability (Kanter et al., 1987; Stirling et al., 1991).

Further critique of expressed emotion studies focuses on the methodology employed in the research. For instance Stirling et al. (1991) cite weaknesses in the design, procedures and/or statistical methods employed in the replication studies. However, these authors do not mention a single example of such a flaw to lend credence to their argument. On the other hand, Koenigsburg and Handley (1986) give similar reasons why the non-replication studies may not have had significant results, again based on methodological errors.

Ultimately, what has concerned critics has been the question of what exactly EE is purporting to measure, and the mechanism of action of EE (e.g., Hatfield et al., 1987; Kanter et al., 1987; Stirling et al., 1991). Not limited to critics of the construct though, proponents too call for an attempt to identify what it is exactly that is being measured (e.g., Chambless et al., 1999; Bebbington & Kuipers, 1998; Hooley, 1985; Miklowitz, 1984).

In summary, despite some studies not replicating the original findings, and the critique against the construct, EE reportedly constitutes one of the most researched psychosocial variables in schizophrenia (Kanter et al., 1987; Brown, 1985; Jenkins & Karno, 1992). Final evidence for its

predictive ability is provided by two studies that employed secondary analyses of data, which shall be looked at below.

3.3 REVIEWS WITH SECONDARY DATA ANALYSIS

Bebbington and Kuipers (1994) conducted an aggregate analysis of data from 25 worldwide studies. Receiving data from the authors (17 studies), or reconstructing the data from the published works, they had a total number of 1 346 cases. Terming it an aggregate analysis, they argue that this method allows for individual cases to be the unit of analysis, rather than the study, which would occur in the more often used meta-analysis. They chose this to allow them to standardize the data format, and thereby permitting the analysis of interactions between variables at the individual level. The variables under scrutiny were: whether EE is predictive of relapse, whether gender or geographical location differences emerge, and the effects of medication and amount of face-to-face contact on risk for relapse.

Their results were overwhelmingly in favour of the predictive capacity of EE. Of the 1 346 subjects, 52.4% were rated as living in high EE households. Some 50.1% of these subjects (N = 705) relapsed, compared to only 21% of those who lived in low EE households (N = 641). It is important to note that the period of follow-up in the majority of studies was nine months to one year. These are thus indications of the *short-term* predictive power of EE. With regard to the other variables, while there was a higher overall relapse rate in males, EE was significantly predictive of relapse in both females and males. Medication was independently related to relapse; and more contact (>35 hours per week) in high EE relatives increased the risk for relapse, and in low EE relatives reduced the risk for relapse.

Significant for the present study were their mixed findings regarding geographical location. They examined differences in EE in differing parts of the world in two ways. Firstly, they divided the studies according to five geographical locations: Northern and Central Europe, Southern Europe, America, Australia and India. They found that non-replication studies were not restricted to geographical location. Secondly, they looked at the effect of location on the ability of EE to predict relapse and found that, while significantly connected to relapse in the first three areas, EE was not significantly predictive of relapse in India and Australia. They point out, however, that the trend is in the right direction for these areas, and the Indian sample had very few families who were rated high EE, using the standard cut-off. Taking this into consideration, they did further multivariate log-linear analyses on the data, and found that the model of best fit was an interaction between location and EE, and between EE and relapse, but not between location and relapse. The conclusion they drew is that while levels of EE vary around the world, it remains a significant predictor of relapse independent of location.

Caution needs to be drawn when considering this result, on two counts. Firstly, the equal distribution of negative findings can hardly result in confirmation of the phenomenon in all locations. Secondly, the analysis was confined to locations around the world where EE studies had been carried out. To argue from this that 'EE is likely to be predictive in all locations' (ibid., p. 714) is an overgeneralization. Apart from the Chandigarh study, all other locations were predominantly white, egocentric, western, industrial and Christian. There is a dearth of research in many other socio-cultural groups such as African or Islamic cultures. The reason for mentioning this is simply that the construct of EE remains to be fully elucidated, and, as shall

become clear in the discussion in Chapter Five on the nature of the construct, EE may be one or many things (e.g., traits, states, attributions). All, however, will be influenced more by cultural upbringing and values, than by geographical location per se. Thus the critique here is an incremental one: geographical location has little to add to our knowledge of EE, without the accompanying explanation for why, in this case, it is found in all locations.

The second analysis of combined results of individual EE studies was a meta-analysis using data from 27 studies carried out by Butzlaff and Hooley (1998). The results of this were similar to those above: EE was found to be a robust and significant predictor of relapse in schizophrenia. Further analyses revealed more specific effects of EE. In patients with longer standing illness it is more predictive of relapse, and EE is potentially more predictive of relapse in mood and eating disorders than schizophrenia[1].

An interesting finding occurred, however, when they looked at geographical location. Grouping their data along the lines suggested by Bebbington and Kuipers (1994), but employing more narrow geographic boundaries, they had: UK, Northern Europe, Southern Europe, Eastern Europe, North America, Australia and Asia. Examination revealed that the effect sizes for Eastern Europe and Australia were unusually high and unusually low for the two areas respectively.

[1] Evidence that EE predicts outcomes in various other disorders has been forthcoming, but inclusion of this is beyond the scope of this study. For examples of these see Brewin et al. (1991), Chambless et al. (1999), Hooley and Hoffman (1999), Hooley and Licht (1997), Hooley and Teasdale (1989), and Vaughn and Leff (1976).

That is, EE appears to be extremely predictive of relapse in Eastern Europe, and unpredictive in Australia, when compared to the predictive ability of EE in other parts of the world. They offer no suggestions as to why these differences occur, however.

In summary, it appears that EE has been well established as predictive of relapse in schizophrenia, despite some non-replication studies, and criticisms. One other area of research is worth a brief mention here, as it has gained in importance in recent years, this being family intervention studies.

3.4 INTERVENTION STUDIES

A number of randomized control trials have been carried out to assess the impact of various treatment programs, with families of schizophrenics, on the course of the illness. In this section, selected articles containing the types of treatment and the main findings are briefly summarised[2]. Goldstein et al. (1978) assessed the impact of 6 weeks of crisis-oriented family therapy, with results showing reduced relapse in patients receiving both high doses of medication and therapy at six-week and six-month follow-up. A more recent study by Glick et al. (1985), also employing short-term inpatient family treatment, found that beneficial results at nine months were evident in those whose premorbid adjustment was good. At two years these results held mainly for females, especially those with affective disorder (Haas et al., 1988).

[2] For a more detailed account of the history of family interventions the reader is referred to Beels and McFarlane (1982); for a review of specifically EE-reducing interventions to Barrowclough and Tarrier (1997); and for a review of psychosocial treatments to Schooler (1995) and Dixon and Lehman (1995).

Similarly, Falloon et al. (1982), comparing medication and family therapy (composed of educative and behavioural components), to medication and individual supportive care in the community, found that at nine months six percent of the family therapy group relapsed, compared to 44% in the individual group. These benefits were sustained at two-year follow-up, despite less intensive intervention in the interim (Falloon et al., 1985).

Leff et al. (1982) developed a package of social interventions that included an education component, a relatives group, and family sessions, the intention of which was to lower the EE level in those designated high EE. Carried out with a group of high EE relatives, and compared to a matched high EE control group, both of which received neuroleptic medication, while the latter received routine outpatient care only. Follow-up at nine months revealed a significant treatment effect: 50% of the controls relapsed, while only nine percent of the experimental group did. This finding was less strong at two-year follow-up, when 78% of the controls had relapsed, which was significantly higher than the 14% relapse of the experimental group whose EE levels had previously been reduced (Berkowitz, Eberlein-Fries, Kuipers & Leff, 1984; Leff & Vaughn, 1985). Leff and his colleagues were optimistic following these results, stating initially that "the role of relatives' emotional attitudes has been firmly established in the causation of schizophrenic relapse" (Leff et al., 1982, p. 129). In the follow-up study they were more hesitant, entertaining the idea that causation could be bi-directional, that is, the patient's behaviour could elicit criticism or emotional overinvolvement in relatives (Leff & Vaughn, 1985). It needs to be added too that EE was not assessed at two-year follow-up, so whether these levels remained reduced is unproven.

Other studies, incorporating behavioural components (Tarrier et al., 1988, 1989), multifamily groups (McFarlane et al., 1995), and a combination of family treatment and social skills training (Hogarty et al., 1986; Hogarty et al., 1987), have also reported on the efficacy of psychosocial family interventions in the reduction of relapse. These latter authors suggest that while EE may delay relapse, it does not prevent it; and argue that causal inferences cannot be made, as it remains unclear whether the lowered EE preceded or followed upon the improved clinical state of the patient (ibid.).

Finally, Mari and Streiner (1994) carried out a meta-analysis on six randomised controlled trials (some of which have been discussed above) of the effects of family interventions on relapse, employing two analyses. In the first they included only those patients who completed the interventions (an efficacy analysis), the results of which showed that family therapy did reduce the probability of relapse. However, the significance was only moderate at nine-month follow-up, when a more stringent approach to handling drop-outs and withdrawals was employed (effectiveness analysis, the second analysis conducted). With regard to EE, they found no clear association between EE status change and family intervention. This finding is at odds with that of Leff and his colleagues (Leff et al., 1982; Berkowitz et al., 1984; Leff et al., 1985), although in line with Brown et al.'s early suppositions (Brown et al., 1972), as well as other interventions (e.g., Vaughan, 1992a, 1992b).

In the South African setting, Leaver (1998) attempted brief multiple family group psychoeducation with white and coloured families who had a member with schizophrenia. This consisted of four phases: a preparation phase, an assessment phase, a one-day workshop, and six

weekly focus group sessions. Aspects of communication looked at included expressed emotion variables. Although she reported some success for the programme, and specifically that EE had been reduced, a number of shortcomings limit the validity of her results. Firstly, her rate of attrition was high, resulting in only three participants completing the study. Secondly, EE was very simply defined and assessed: of 21 questions in her interview schedule, only seven dealt with EE variables. A change in response on these questions indicated in this study a change from high to low EE, despite no such differentiation being made from the start.

In summary, it appears that family interventions do have positive effects for patients and their families. However, results are mixed as to the exact role played by expressed emotion variables. A consistent finding is that high levels of expressed emotion are predictive of relapse, as shown above. The following chapter details the replication studies carried out around the world.

CHAPTER 4

EXPRESSED EMOTION AND CROSS-CULTURAL RESEARCH

This chapter summarises the studies on EE that have been carried out cross-culturally, highlighting the important findings. For the sake of brevity, the main results concerning divisions of EE and relapse rates are presented in a table format, following which individual findings of note are discussed. The differences in cross-cultural findings, as well as possible explanations for these, are then taken up in Chapter Five, where they are used to illustrate various theories put forward about the nature of the construct of expressed emotion.

4.1 STUDIES OF EXPRESSED EMOTION IN OTHER CULTURAL SETTINGS

The study of expressed emotion has reportedly been carried out on all continents (Jenkins & Karno, 1992), and EE research has been carried out in at least 20 countries around the world. Studies attempting a replication of the original high-EE-predictive-of-relapse finding have been carried out in at least 13 countries in Eastern and Western Europe, North America and Canada, Asia and Australia, the main results of which have been summarised in Table 1 (pp. 31-32 below; the studies are listed chronologically for ease of presentation). Further studies have been carried out in countries such as Greece and Brazil (both cited in Mino et al., 1995), Scotland and Poland (both cited in Bebbington & Kuipers, 1994), as well as Norway (Bentsen et al., 1996), Denmark (Wig et al., 1987b), and with Mexican-Americans (Jenkins et al., 1986). Reference is made by Jenkins and Karno (1992) to research on expressed emotion in Egypt; this is however a personal communication to these authors, with no mention made of the kind of research undertaken there, nor the results.

A further two studies of EE make mention of cultural classifications in presenting their results. Mueser et al. (1993) found that a higher proportion of white patients (53%) came from high EE homes, compared to 11% of African-Americans, who comprised 74% of the total sample. Moline, Singh, Morris and Yeltzer (1985) report that their black subgroup, which comprised 67% of the sample, did not demonstrate significant correlations between EE and relapse. These may be suggestive of differences in the manifestations of EE in African-Americans compared to Anglo-Americans. Only empirical research will clarify this.

In South Africa, as far as the author is aware, no published research concerning the construct of expressed emotion has occurred. Mention is made of the construct in an unpublished masters dissertation (Leaver, 1998), although methodological problems with the measurement of EE render this study incomparable with the research reviewed (see Section 3.4 above). It is thus safe to state that the predictive validity of EE in the relapse of schizophrenic patients in the African context remains unknown.

Table 1 shows that there are clearly far fewer non-replication studies (26% at 9-month follow-up), indicating that EE is a robust predictor of relapse in many countries. On average, it appears that 54% of patients' relatives are designated high EE, of which 49% relapsed within 12 months of the index admission, compared to 20% of those designated low EE.

Dividing these studies into developing and industrial countries then this figure drops to 33% high EE for developing countries (China and India). The higher representation of low EE families in

these countries may account for the more benign course of schizophrenia found in the WHO (Sartorius et al., 1986) international study of schizophrenia, a point suggested by Leff et al. (1987). This is purely speculative however, as two countries are not representative of all developing countries.

Further dividing the studies along cultural lines, into egocentric and sociocentric cultures (Castillo, 1997), then it appears that 50% are designated high EE on index admission in more sociocentric cultures (China, Czechoslovakia, India, Italy, Japan, Mexican-Americans, Spain, Yugoslavia). Compared to 60% in more egocentric cultures, this trend is in the direction suggested by Jenkins and Karno (1992). Of the former, 53% high EE relapsed within the first 12 months following index admission, compared to 17% of those from low EE homes. Of the latter, 48% high EE relapsed within 12 months of index admission compared to 23% from low EE homes. As these differences are slight, it is not apparent that egocentric as opposed to sociocentric cultures manifest differing effects on relapse, in contrast to suggestions made by Jenkins and Karno (1992).

In sum then, despite large similarities in the findings of EE and their effects on relapse cross-culturally, certain important cross-cultural differences also occur, which are not immediately apparent in a summary of this nature. To gain a better understanding of these, and why they occur, the construct of expressed emotion is more critically examined in the following chapter.

TABLE 1

EXPRESSED EMOTION AND RELAPSE DATA FROM OUTCOME STUDIES

STUDY	COUNTRY (City)	SUBJECTS			EXPRESSED EMOTION			RELAPSED				SIGNIFICANCE
					MEASURE	HIGH EE(%)	LOW EE(%)	HIGH EE (%)		LOW EE (%)		
		N	DIAGNOSIS	DETAILS				9/12	24/12	9/12	24/12	
Köttgen et al. (1984)[a]	Germany (Hamburg)	34	Schizophrenia	Urban?	CFI?	41	59	50		55		n.s.
Vaughn et al. (1984)[b]	North America (California)	54	Schizophrenia	Urban	CFI	67	33	56		17		$p < 0.05$
Moline et al. (1985)	North America (Chicago)	24	Schizophrenia	-Inner city -67% black -33% Caucasian	CFI[c]	54	46	91[d]		31[d]		$p < 0.01$
Karno et al. (1987)	North America (California)	44	Schizophrenia	-Mexican Americans -unacculterated -Spanish speaking -low SES	CFI[c]	39	61	59		26		$p < 0.05$
Rostworowska et al. (1987)[e] Budzyna-dawidowski et al. (1989)[e]	Poland (Crakow)	36	Schizophrenia		CFI	69	31	60[d]	72	9[d]	18	$p < 0.01$ $p < 0.01$
Wig et al. (1987) Leff et al. (1987) Leff et al. (1990)	India (Chandigarh)	70 60[f]	Schizophrenia	-Urban (30% high EE) -Rural (8% High EE)	CFI[c]	23	77	31[d]	50	9[d]	33	$p < 0.05$ n.s.
Cole et al. (1988) Cole et al. (1993)	Canada (London, Ontario)	43	Schizophrenia	Urban	Level of EE scale	51	49	27[d]	50 68[g]	5[d]	10 24[g]	n.s. $p < 0.05$ $p < 0.01$
Gutiérrez et al. (1988)[e]	Spain (Galicia)	32	Schizophrenia	?	?	34	64	54[d]		10[d]		$p < 0.05$
Parker et al. (1988)	Australia (Sydney)	57	Schizophrenia 8 unknown	-Parental EE -Urban	CFI	74	26	48		60		n.s.
Arevalo et al. (1989)[a]	Spain (Madrid)	31	Schizophrenia	Urban	CFI	58	42	44		38		n.s.
Barrelet et al. (1990) Huguelet et al. (1995)	Switzerland (Geneva)	30	Schizophrenia	-French speaking -Urban	CFI[c]	63	37	32	50[g]	0	30[g]	$p < 0.05$ n.s.

NOTES:

[a] Cited in Butzlaff and Hooley (1998)
[b] Cited in Leff and Vaughn (1985)
[c] Authors note a translated (and modified) version used
[d] 1-year follow-up
[e] Cited in Kavanagh (1992)
[f] Subjects lost to attrition
[g] 5-year follow-up
[h] Deviated from standard cut-off scores
[k] 3-year follow-up
[l] DSM III-R diagnoses

TABLE 1 (continued)

STUDY	COUNTRY (City)	SUBJECTS			EXPRESSED EMOTION			RELAPSED				SIGNIFICANCE
					MEASURE	HIGH EE(%)	LOW EE(%)	HIGH EE (%)		LOW EE (%)		
		N	DIAGNOSIS	DETAILS				9/12	24/12	9/12	24/12	
Buchkremer et al. (1991)[e]	Germany (Munster)	99	Schizophrenia	?	?	66	44	37		28		n.s.
Bertrando et al. (1992)	Italy (Milan)	42	Schizophrenia 3 unknown	Urban	CFI[c,h]	76	24	58		22		p < 0.05
Montero et al. (1992)	Spain (Valencia)	59	Schizophrenia	Urban and rural	CFI[c,h]	53	47	31	55	18	57	p < 0.05 n.s.
Mozny et al. (1992)	Czechoslovakia (Kromeriz)	125	80% schizophrenia 20% schizoaffective		CFI	55	45	59[d]		23[d]		p < 0.01
Niedermeier et al. (1992)[a]	Germany (Konstanz)	49	Schizophrenia		CFI	57	43	57		29		p < 0.05
Nuechterlein et al. (1992)	North America (Los Angeles)	43	Schizophrenia and schizoaffective	Urban	CFI	72	28	39[d]		0[d]		p < 0.01
Vaughan et al. (1992)	Australia (Sydney)	88	Schizophrenia	Urban	CFI	53	77	53		24		p < 0.01
Ivanovic et al. (1994)	Yugoslavia (Belgrade)	60	50% paranoid 50% hebephrenic	Urban	CFI	48	52	66		7		p < 0.01
Ito et al. (1995)	Japan (Tokyo?)	72	Schizophrenia, schizoaffective and schizophreniform	Urban and peri-urban	CFI[c]	48	52	46		8		p < 0.01
Philips et al. (1995)	China (Shashi)	57 25[j]	32% paranoid 11% disorganized 5% catatonic 4% residual 59% undifferentiated	Urban	CFI[c]	42	58	46	77 85[k]	17	67 67[k]	n.s. n.s. n.s.
Tanaka et al. (1995)	Japan (Kochi)	52	Schizophrenia	Urban and rural	CFI[c]	46	54	58		21		p < 0.01
Linszen et al. (1997)	Holland (Amsterdam)	85	58% schizophrenia 20% schizoaffective 10% schizophreniform 11% other psychotic disorders	Urban	CFI[h]	62	38	21[d]		6[d]		p < 0.05
King et al. (1999)	Canada (Montreal)	69	Schizophrenia	Urban	CFI	39	61	50		17		p < 0.01

NOTES:

[a] Cited in Butzlaff and Hooley (1998)
[b] Cited in Leff and Vaughn (1985)
[e] Cited in Kavanagh (1992)
[c] Authors note a translated (and modified) version used
[f] Subjects lost to attrition
[h] Deviated from standard cut-off scores
[i] DSM III-R diagnoses
[j] Subjects in control group only
[d] 1-year follow-up
[g] 5-year follow-up
[k] 3-year follow-up

CHAPTER 5

TOWARDS AN UNDERSTANDING OF EXPRESSED EMOTION

Expressed emotion is operationally defined as the extent to which relatives express criticism, hostility, or emotional overinvolvement when discussing their ill relative and their home life with an interviewer (Koenigsberg et al., 1986). This definition gives little theoretical background as to what expressed emotion actually is. Thus, while calls for theoretical explanations of the construct have been widespread (e.g., Bebbington & Kuipers, 1995; Hooley, 1985, 1986; Miklowitz, 1994; Nuechterlein et al., 1992), attempts at elucidating the expressed emotion 'black box' have been delayed (Jenkins & Karno, 1992). The generally accepted understanding has been that EE contributes to heightening a level of arousal that induces high amounts of stress in schizophrenics, which may, in turn, lead to their relapse[1] (ibid.).

Some specific attempts at examining the EE black box have been made, however, and these will be presented within four domains, as each is seen as giving a unique contribution to an understanding of the construct[2]. Firstly, aspects related to characteristics of the patient will be discussed, then, secondly, aspects related to characteristics of the relatives, and thirdly, a combination or interaction between the two. Finally, a broader, less dualistic conception of patient/relative interaction will be explored - a cultural understanding of expressed emotion.

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[1] Arousal has been studied through the measurement of fluctuations in physiological variables of patients in the presence of their relatives, providing further evidence for the impact of EE. Discussion of these is beyond the scope of this study; see Barrowclough and Tarrier (1997) and Koenigsberg et al. (1986).

[2] For ease of presentation and understanding the discussion proceeds in a dichotomous format. It is acknowledged though that these are more than likely continuous variables with much overlap between them.

5.1 PATIENT CHARACTERISTICS AND EXPRESSED EMOTION

One line of research that has contributed to understanding expressed emotion has been the exploration of patient characteristics as risk factors for psychotic relapse, and the interaction of these with expressed emotion. Brown and his colleagues (Brown et al., 1958; Brown et al., 1972) found few links between patients' demography and their rate of relapse, as was the case with regard to symptomatology and work impairment. They argued these were related to relapse, but only in their association with EE. Recent researchers, studying similar patient characteristics such as gender, appear to confirm this. However, explorations of more subtle patient characteristics such as subclinical psychopathology, have begun to find differential effects between these and EE. These will be examined in turn.

In terms of the former, Bebbington and Kuipers (1995), as part of their aggregate analysis of 27 studies of EE outlined above, examined the effects of gender on EE. Overall, they confirmed the poor outcome of the course of the illness in males, finding also that more males live with high EE relatives. Their main finding, however, was that while male gender and high EE were both associated with higher relapse rates, they are associated independently of each other, a finding refuting that of Hogarty and his colleagues (Hogarty et al., 1986; Hogarty et al., 1987). A further comprehensive study of patient attributes was carried out by Linszen et al. (1997), comparing 13 predictor variables, (such as demography, history of illness, gender, substance abuse etc.), and EE over a one-year period. Using Cox regression analyses, they found EE to be the major predictor of relapse in the total sample (hazard ratio 4.90; confidence interval 1.05-22.92). Interestingly, only one variable significantly predicted relapse in patients from high EE homes - cannabis abuse - although no interaction between this and EE was found. They explain these

findings in terms of the effects of the interaction between biological vulnerability and environmental stressors on the course of schizophrenia, rather than in terms of patient variables interacting with levels of EE. Taken together, these studies appear to show that general patient attributes and characteristics have little to do with EE. When, however, more subtle patient variables are examined, it appears that an interaction does indeed occur, as shown below.

Mueser et al. (1993) studied the interaction between schizophrenics' social skills, social perceptions and the EE status of their family. They employed a role-playing technique whereby patients enacted potentially affectively charged situations (e.g. the patient missed an appointment due to oversleeping). A research confederate played their relative or friend, being critical in one situation, and benign in the other. They found that patients with high EE relatives lacked the social skills needed to terminate, or manage effectively, emotionally charged conflict situations. They attribute this to two possible causes. Firstly, the patients may lack assertiveness (the ability to ensure one's personal rights in an appropriately direct and honest fashion) when faced with affectively charged situations, resulting in higher levels of negative affect in their close relatives. Secondly, they may have these assertive skills but have chosen, or learnt, not to express their personal rights in situations of charged affect because this has been ineffective in providing them with relief.

In possible support of this, Rosenfarb, Goldstein, Mintz and Nuechterlein (1995) studied schizophrenic patients' subclinical psychopathology observable when interacting with their relatives. Observing patients in a direct family interaction, and rating the behaviour on the Relatives Affective Style coding system (Doane, West, Goldstein Rodnick & Jones, 1981, in

ibid.), they found that relatives from high EE homes were more likely to respond with criticism to the first unusual thought expressed by the patient, compared to relatives from low EE homes. When this occurred, a second unusual thought was likely to follow. They also found these patients displayed more odd and disruptive behaviour with their family members. Rosenfarb et al. (1995) conclude from this that high levels of negative affect found in high EE homes may be present because these patients show more psychopathology in family interactions.

In an earlier study, Nuechterlein et al. (1992), found that patients living with their relatives prior to admission were more likely to have high EE relatives, than those who were not. Coupled with this is their finding that a younger age of onset of illness may be linked to high EE in relatives, a finding similar to that of Parker et al. (1988). Thus indications that greater exposure to the illness, as well as signs of poor prognosis (such as early onset), are suggestive that some patient facet interacts with EE.

Combining these findings, it may be postulated that patients from high EE homes, when criticized for disruptive behaviour, are unable to assert themselves to counter this criticism, which results in negative affect increasing. Put differently, patients' symptomatology, combined with their behavioural repertoire, possibly contributes to the lack of resolution in emotionally charged situations. Evident here may be an interaction between patient illness and patient personality, which together impact on EE, a hypothesis in need of testing, but which is not far from the vulnerability stress models of schizophrenic relapse postulated by Liberman (1986), Zubin and Steinhauer (1981), and Zubin, Steinhauer and Condray (1992).

Now, while schizophrenia as a disease entity is postulated to occur in a similar fashion cross-culturally (Sartorius et al., 1986; cf. Swartz, 1998), mention is made of this here because patient characteristics, such as social skills (e.g. assertiveness), are potentially cultural in nature. These may, therefore, differ according to appropriate communication strategies in different cultural settings (Castillo, 1997). For instance, relatives may react with more tolerance to unusual thoughts in certain cultures, so that patients would not need to be personally assertive, and negative affect would not arise, ensuring fewer high EE relatives in these settings. Partial evidence for this is the far lower number of CCs in an Indian sample of high EE relatives (Leff & Vaughn, 1985). Indeed there were far fewer high EE relatives in this Indian sample in comparison to British and American ones (ibid.). Likewise, an assertion of personal rights, may, in an interpersonal cultural setting, be meaningless. Thus a cross-cultural exploration of these factors may help to further our knowledge of EE, a point suggested by Jenkins and Karno (1992), and taken up more fully below.

One further study provides subtle evidence of the impact on EE of differing patient characteristics and the effects of these on relapse. Donat, Geczy, Helmrich and LeMay (1992) studied the effects of personality subtypes on, amongst other things, patients' perceived expressed emotion. Cluster analyzing personality scales of 195 psychiatric inpatients on the MCMI-II (Millon, 1987, in ibid.), these authors found that the five cluster subtypes differed in their perceptions of their significant others' EE. Here EE was measured using the Level of Expressed Emotion (LEE) scale (Cole & Kazarian, 1988), a self-report inventory assessing patients' perceptions of their most influential caregivers' expressed emotion, developed as an alternative to the more complex CFI.

Those patients who scored highest on the LEE scale were those who scored highest on the Passive-Aggressive, Borderline, Self-Defeating, Avoidant and Antisocial subscales (Donat et al.'s cluster IV), suggestive that these patients had a more critical evaluation of the interpersonal style of their most influential caregiver. Interestingly, at two-year follow-up (Donat, 1997), Cox regression analyses revealed that membership of this cluster was the greatest predictor of readmission to hospital. Donat (1997) also completed a stepwise regression to see which other variables (e.g. age, gender, Axis I diagnosis, subscales of the LEE, etc.) significantly predicted relapse. He found that the alcohol dependence scale of the MCMI-II, and the intrusiveness subscale of the LEE, were the only other two variables predictive of relapse at the end of the two-year follow-up. The predictive ability of substance use concurs with the finding of Linszen et al. (1997) mentioned above, and appears to be a fairly consistent finding. The links between the passive-aggressive, borderline, self-defeating, avoidant and antisocial personality traits, expressed emotion, and relapse, provide partial evidence for the effects of patient characteristics on expressed emotion. Such findings warrant further research.

Caution needs to be drawn when generalising these findings. The subjects in the Linszen et al. (1997) study were predominantly younger and first episode schizophrenics; while in the Rosenfarb et al. (1995) study only four patients from low EE families displayed unusual thoughts, therefore comparisons with high EE patients should be viewed tentatively. The Mueser et al. (1993) study employed role-playing tests and inferred results from these to what actually occurs in the family interactions. Finally, the studies by Donat et al. (1992) and Donat (1997) used a measure of the patients' perceived EE, not the more commonly used CFI, where it is the

perceptions of the raters that designate high EE. Thus limitations to these studies' generalisability are manifest.

Taken together, notwithstanding the limitations, these findings are suggestive of the role that subtle patient characteristics, such as personality, subclinical psychopathology, social skills, and assertiveness, play in eliciting negative affect from their relatives, and prolonging its presence, resulting in a home characterized by high EE. On the other hand, general attributes such as gender and education appear not to affect EE levels.

5.2 CHARACTERISTICS OF RELATIVES AND EXPRESSED EMOTION

The notion that EE is a characteristic of relatives has a long history within expressed emotion research. Indeed Brown's original hypothesis was that "the level of expressed emotion at the time of the patient's key admission will be taken to represent *an enduring potential characteristic of the relative's behaviour* towards the patient." (Brown et al., 1972, p. 246, italics added). Further, it was maintained that high EE, as a measure of the relatives' propensity to react to the patient, "is likely to cause a florid relapse of symptoms" (ibid., p. 242). From this perspective, characteristics of relatives that have been postulated as mediating EE levels include social control, attributions, as well as trait-state theories of what it is that makes a relative high EE. These will each be discussed in turn.

5.2.1 SOCIAL CONTROL

Hooley (1985) suggests that relatives' EE may also be conceptualised as measures of relatives' attempts to shape others' behaviour by means of *informal social control*. This is elaborated upon

in more detail by Greenley (1986), who argues that everyday disagreements, or other interactions such as "suggesting, nagging, threatening, arguing, criticising, playing on feelings of obligation and guilt [are] ... types of social control behaviours" (p. 25). Those behaviours rated on the CFI as critical, emotionally overinvolved or hostile, he argues, are manifestations of 'high-intensity, interpersonal social control behaviours'. These are argued to be specific coping mechanisms, employed by relatives made anxious and fearful by their schizophrenic family member, which, in turn, are unique stressors to the individual with schizophrenia, perhaps due to their lack of assertiveness as suggested above.

Analysing data from the Brown et al. (1972) study, Greenley found various relationships among EE and these types of interpersonally controlling behaviours. As hypothesised, he found that the more anxious and fearful relatives scored higher EE than those less anxious and fearful, evidence of the employ of a coping mechanism. He found that the anxious and fearful relatives were significantly more likely to be high EE if they viewed the patients as not being mentally ill. On the other hand, there was no association between EE status and anxiety and fear in relatives if they viewed their family member as being mentally ill.

Thus EE, seen as a coping mechanism that relies on informal social control behaviours, appears partly to depend on the attributions the relatives make about their ill relative. Other studies of relatives' attributions and expressed emotion are reviewed below.

5.2.2 ATTRIBUTIONS

Researchers applying attribution theory to expressed emotion have rested on Weiner's (1985) basic premises that the causal structure of the world is the primary determinant of behaviours and emotional reactions to events, and thus brief mention of these is warranted. Weiner (1985) argues that ascriptions to three universal types of causes (locus, controllability and stability) determine emotional experiences such as pity, anger, guilt, pride, hopelessness, gratitude and shame. The *locus* dimension refers to causal beliefs that actions are due to factors within the person (internal locus) or factors within the environment (external locus). The *controllability* dimension refers to causal beliefs that factors are subject to volitional control, like effort, or not, like fatigue. Finally, the *stability* dimension refers to causal beliefs that some factors fluctuate, such as mood, while others do not, for instance aptitude.

In ascribing attributions to negative outcomes, Weiner (1985, p. 262) postulates that pity, for instance, would result from attributions to uncontrollable causes, whereas anger would result from attributions to controllable causes. For example "my car had a flat tyre" would evoke pity as an excuse for not attending a social function, whereas "I decided to watch T.V." would more likely evoke anger at not attending. Taking his example further, attributions about the former are also external (the flat tyre was a result of a nail in the road), whereas the latter are internal (it was a personal decision), thereby increasing the likelihood that the emotions of pity or anger manifest.

Applying this to expressed emotion, researchers have explored a number of causal beliefs that high EE relatives express about the patients' illness, symptoms and related behaviours (Hooley,

1985). For instance, a study by Brewin et al. (1991) found that the type of attribution made was a powerful predictor of emotional attitudes. Greater hostility and criticism were related to relatives perceiving the causes of the illness behaviours as being internal and controllable by the patient. High emotionally overinvolved relatives and low EE relatives, on the other hand, tended to emphasize causal factors over which the patient had no control, consistent with Weiner's (1985) contention that uncontrollable attributions tend to lead to feelings of pity, a possible similarity between EOI and low EE. Overall, positive symptoms were seen as less controllable by the patient than were negative symptoms.

A similar study, undertaken by Weisman, López, Karno and Jenkins (1993) with Mexican-American families, confirmed that high EE relatives attributed the illness and related symptoms as being under the control of the patient more than did low EE relatives. They found that relatives who perceived the illness as within the patient's control expressed significantly more statements that were negatively charged than those who perceived it as being out of the patient's control. An interesting finding, and one which supports the basic dichotomous distinction between high and low EE, was that high EE relatives expressed many more negative statements than did low EE relatives, that is, a low EE level is equivalent to a low level of negative affective responses.

These findings regarding controllability of the illness symptoms and their relationship to expressed emotion with relatives of schizophrenics have also been replicated with spouses of depressed patients. Highly critical and hostile spouses were more likely to ascribe causes of

illness behaviours and problems as being internal, personal and controllable (Hooley & Licht, 1997).

Underlying this link between controllability and expressed emotion, and the latter's ability to predict relapse, is the assumption that relatives who perceive the illness and related behaviours as being under the control of the patient, are more likely to hold them responsible for their behaviours. They may thus become hostile or critical due to the perception that the patient does not try to become well. Partial evidence for this comes from recent studies with Anglo-Americans (Hooley, 1998; Weisman et al., 1998). Weisman et al. (1998) explored the association between attributions and positive (e.g. hallucinations, thought disorder, delusions) and negative (e.g. apathy, social withdrawal, limited communication) schizophrenia symptom dimensions. Consistent with the earlier findings, these authors found that high EE relatives viewed patients as having more control over their illness than did low EE relatives. Specifically, enduring personality traits, negative symptoms and other nonsymptomatic behaviours were more often the target of criticisms made by relatives, whereas few positive symptoms were targeted. Weisman et al. (1998) postulate that this may occur because the positive symptoms are more obvious aspects of a psychiatric illness, therefore held to be less controllable by the patient. The former, on the other hand, are held to be under the volitional control of the patient, thereby eliciting blame when these behaviours persist. This may come about, the authors suggest, because the relatives are unaware that these symptoms too form part of the core symptoms of schizophrenia. Alternatively, they argue, this may be an artefact of the interactive nature of EE - both relatives' characteristics and patients' personality traits playing a role.

One limitation of the attribution model applied to explanations of expressed emotion, is that while it explains determinants of emotions such as anger and pity in relatives, it does not give a full account of why these are expressed in the way they are, such as CC, H, and EOI. However, conceptualising expressed emotion less as an enduring propensity on the part of the relative to react to their ill member - a trait of the relative, and more as an artefact of living with an ill person - a state, may give a better explanation. This is reviewed more fully below.

5.2.3 TRAIT VS. STATE

Nuechterlien et al. (1992), looking at path analyses models of various predictors and their relation to relapse, found that the model of best fit was one which linked the development of high EE to living with the patient in the time prior to admission. This was more likely to occur if the age of onset of illness was earlier. A second supported model was one that linked greater severity of illness, as an underlying factor, to early age of onset, living with relatives, and high EE. They argue that this lends support to the notion that emotional overinvolvement and critical attitudes of family members "are partly a response to characteristics of the patient and living circumstances" (ibid., p. 94). These high EE attitudes, once developed, are then said to act as a mediating variable that may influence the likelihood of relapse.

A second study, more directly assessing whether EE was a response characteristic of the relative (trait) or a relative's response to the ill person's circumstances (state) was conducted by Schreiber, Breier and Pickar (1995). These authors studied ratings of EE responses of 17 parents to their schizophrenic children, and compared these to their ratings of EE responses to their non-schizophrenic children. Adapting the CFI for use with the well child, they found that the parent

showed significantly less warmth towards, and more overinvolvement with, the child with schizophrenia, suggesting that these are state related. Differences in critical comments, on the other hand, while higher towards the ill child, did not reach significance, suggestive that this scale possibly reflects a parental trait.

Several methodological issues warrant caution with these results, one being their use of total scores on the EE scales, rather than the traditional cut-offs. When the cut-offs were employed, the findings for EOI did not reach significance. Also, due to differences in the audiotaped material used (the ill child interviews focussed on the most severe episode, whereas the well child interviews focussed on a stressful period in the child's life, e.g., problems at home, work or school) the raters were not blind to the two groups. Finally, the CFI was developed for the assessment of relatives' EE towards their ill relative, and its validity and reliability with regard to the assessment of relatives' EE towards a well person has not been demonstrated.

The findings of Schreiber et al. (1995) are also at odds with those of Ivanovic et al. (1994), who found differential levels of EE scale scores in relatives, depending on the subtype of the patient's schizophrenia. Those diagnosed with the hebephrenic sub-type (DSM-III-R, APA, 1987) were significantly more likely to have relatives designated high EE due to elevated EOI scores, whereas those diagnosed with the paranoid sub-type (ibid.) were significantly more likely to have relatives designated high EE due to elevated CC scores. These results led the authors to conclude that both EOI and CC are state related.

One final piece of evidence for the responsive nature of expressed emotion is that it has not been found to be a stable quality over time. Brown et al.'s (1972) original suggestion that levels of EE decline over time from the index admission (30% of high EE relatives spontaneously changed to low EE at follow-up), in conjunction with the patient's improvement, has found support from a number of studies (e.g., Boye et al., 1999; Hogarty et al., 1986; Tarrier et al., 1988). For instance Leff et al. (1990) found that 79% of high EE relatives in their Indian sample had spontaneously dropped to low EE at one-year follow-up. Leff et al. (1990) account for this as being due to more tolerance expressed by the Indian relatives of their ill family member, an issue taken up more fully in Section 5.3.3 below. Thus it appears that as the patient's condition improves, so their relatives appear to become less critical, hostile and overinvolved, suggesting that EE may be a way of responding to the patient's condition, and hence state related.

In summary, it appears that expressed emotion may, in part, be explained by certain relative characteristics, such as their attempts at control and the attributions they make, which may be the result of the environment of living with an ill family member. However, another, overarching factor may in turn explain these. This is a broader, less dualistic conception of patient/relative interactions - a cultural elucidation of expressed emotion, which is discussed below.

5.3 A CULTURAL UNDERSTANDING OF EXPRESSED EMOTION

Jenkins and Karno (1992) argue that those features indexed by expressed emotion measures are "cross-culturally variable features of family response to an ill relative" (p. 9). Defining culture as "a generalised, coherent context of shared symbols and meanings that individuals dynamically create and recreate for themselves in the process of social interaction" (p. 10), these authors

argue that the subscales of EE: criticism, emotional overinvolvement and hostility, are essentially defined by culture. That is, culture provides individuals with a repertoire of behavioural and affective responses to experiences in living that they have to cope with. It provides models of how people might act and feel towards the illness of their loved ones, and how they might cope with living with their ill family member. In the expressed emotion context, they argue that culture would provide an elucidation of the construct, answering questions as to the variability that has been found in the nature, frequency, intensity and meaning of the construct in different cultural settings. They offer a further rationale for cross-cultural research with EE, arguing that "it would be a mistake to conclude that expressed emotion factors are a priori culture-bound to British or Anglo-American families. The family factors themselves are neither culture-bound nor ethnocentric: it is the cultural validity of their application that must concern us" (p. 10).

Drawing on the British (Brown et al., 1972; Vaughn & Leff, 1976) and Anglo-American (cited in Leff & Vaughn, 1985) studies, and comparing these to the cross-cultural studies of EE with Spanish-speaking Mexican-Americans (Magaña et al., 1986) and Hindi-speaking Indians (Leff et al., 1987; Wig et al., 1987a; Wig et al., 1987b), Jenkins and Karno (1992) provide the basis of a culturally constituted theoretical framework with which to understand EE. Ten such features of expressed emotion are identified and discussed: (1) cultural interpretations of the nature of the problem; (2) cultural meanings of kin relations; (3) identification of cultural rule violations; (4) vocabularies of emotion; (5) relatives' personality traits or predispositions; (6) degrees and kinds of patients' psychopathology; (7) family interaction dynamics; (8) attempts to socially control a deviant relative; (9) availability and quality of social support; and, (10) historical and political economic factors (ibid., p. 17).

Features 5-8 have been discussed above (Sections 5.1 and 5.2), and so no further mention of these will be made here. Minimal research documents feature 9, relating to the compositional properties of households, including kin type[3] and size, and may be relevant to the South African context of this study, considering the extended family networks prevalent among Zulu-speakers. Focus here will be on features 1-4 and 10, however, as these are considered particularly worthy of attention when discussing EE in the South African setting, and indeed guide the literature review in the second part of the present study.

5.3.1 CULTURAL INTERPRETATIONS OF THE NATURE OF THE PROBLEM

Jenkins and Karno (1992) question the extent to which the cultural focus of illness, be it a personality factor, an illness entity, or an external malevolent agent, determines how and when criticism may be expressed toward an ill relative. For instance, in their work with Mexican-descent relatives (Jenkins, 1988, in ibid.), they found that the cultural term *nervios*, when used to describe schizophrenia, serves to destigmatize the condition, rendering it not under the individual's control, therefore not blameworthy and more deserving of support, sympathy and special treatment.

This links well with the discussion of attributions above (Section 5.2.2). Higher levels of hostility and criticism in Anglo-American and British families were related to relatives perceiving the causes of the illness behaviours as being internal and controllable by the patient. High EOI relatives and low EE relatives, on the other hand, tended to emphasize causal factors

over which the patient had no control (Brewin et al., 1991; Weisman et al., 1998; Hooley & Licht, 1997). What is unclear from Jenkins and Karno's (1992) elucidation though, is their own similar finding among 'relatively unacculturated' (Karno et al., 1987 p. 147) high EE Mexican-Americans (Weisman et al., 1993). Although overall there were fewer designated high EE families in this study compared to Anglo-American and British families (see Table 1), the attributions that high EE relatives made were still consistent regardless of culture.

Thus it appears that while Jenkins and Karno (1992) argue that Anglo-American and British families were more likely to perceive the problem as psychiatric (presumably due to greater exposure to the medical model), and therefore a disease entity, they may also simultaneously believe their ill relative to be lazy - 'a cultural based personality attribution' (p. 18). They account for higher relapse rates in these cultures by suggesting that the attributions made by Mexican-Americans to uncontrollable factors are more salutatory on the course of the illness. They place the locus of this variation in cultural differences. However, it appears that the difference may lie in the designation of EE.

Whether this contradiction is an artefact of a poor research design (etic), or points to limitations in understanding EE through cultural specific features (emic), or points to similarities in high EE relatives *despite* differences in cultural conceptions of illness, are all worthy of further empirical attention, beyond the scope of this thesis. It may be added though that explorations of cultures which ascribe illness to external malevolent agencies (as yet unresearched in the EE paradigm),

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[3] EE may be higher among parents than spouses (Karno et al., 1987); and specifically, EOI has been found more often in mothers (Bentsen et al., 1996; Philips & Xiong, 1995), CCs and H more often in spouses (Philips & Xiong, 1995).

may contribute to an understanding of this. This is explored further in the second part of the present study.

5.3.2 CULTURAL MEANINGS OF KIN RELATIONS

Jenkins and Karno (1992) discuss cultural meanings of kin relations as occurring along a continuum, from egocentric to sociocentric orientated definitions of the person. Individualistic orientations, where individuals see family ties as being secondary to the pursuit of their own actions and goals, lie at the former end of the continuum, while individuals see themselves as members of a larger family-based social unit at the latter end. They continue that "the sense of self in relation to others is important in family settings in outlining cultural preferences for affective and symbolic distancing" (ibid., p. 18). This family orientation would influence relatives' responses with respect to involvement, identification and obligation, and the degree to which these are expressed. This would, in turn, impact on expressed emotion, and act as a possible mediator to this.

Elsewhere, these authors describe Mexican-American family bonds as being central and intense, the family being the single most important unit in social life (Karno et al., 1987). Within this culture the self takes second place, and the family is considered the central place from which thinking, behaviour and views of the rest of the world emanate. This is highlighted in the psychological support derived from extended families, family allegiances, and closeness to relatives. Respect shown to elders is also valued. This may explain one anomaly of their findings: whereas with Anglo-American and British participants, greater contact with high EE relatives results in more adverse effects of EE on relapse (Brown et al., 1958; Brown et al., 1972;

Leff & Vaughn, 1985); with Mexican-Americans the opposite was found. That is, greater contact with high EE relatives had little impact on the EE-relapse link. They account for this as being due to the buffer effects that other, possibly more supportive members of a larger kin-based household, would have on, say, the criticisms of a high EE relative (Karno et al., 1987). Indeed, they continue, low contact time with relatives generally may be adverse to ill Mexican-American's well being, in contrast to more egocentric family orientations.

Further to this, and more central to a cultural elucidation of EE, they suggest that Anglo-American families, by means of criticism, are better able to maintain the boundaries between the normal and sick family members. This entails the relatives distancing themselves from their ill relative, through denying personal experiences and knowledge of the patient's problem, and thus being unable to relate to or identify with the ill family member. Consequently, time spent together may be uncomfortable for them, and symbolically, they may construe the problem relative as being foreign or 'other'. What is unclear from this explanation though, is which comes first? The patient's illness may result in their families furthering the distance, or as Jenkins and Karno (1992) suggest, the more egocentric cultural systems may view their family members as distant, and with the advent of mental illness, the adaptation that occurs is for them to distance themselves even more. This is a subject worthy of empirical testing, which may impact adversely on the level of EE in these cultures.

In contrast, Jenkins and Karno (1992), argue that due to Mexican-Americans identifying the problem as *nervios*, a condition that in its mild forms may afflict everyone, the relatives are able to identify with, and minimise the problems associated with the illness, "by claiming that the ill

relative is 'just like me, only more so'" (Jenkins, 1988, in ibid., p. 18). This in turn would lead to lower levels of EE found in this culture, as well as more buffers from the effects of those who are high EE. Again the direction is unclear here. Does EE then increase when the member falls ill, or is it that *despite* the illness, the member is viewed as just like them, which allows for more tolerance towards the ill relative, hence the fewer high EE relatives found in sociocentric cultures (see Table 1)? Presumably, the sociocentric families view their ill relative as just like them by virtue of this shared cultural system, not because they may have experienced the condition, albeit in a milder form. This would be a stronger version of a cultural explanation of expressed emotion than Jenkins and Karno (1992) present, with possibly more predictive power when assessing prediction of EE and relapse cross-culturally[4]. On the other hand, it is not clear that all sociocentric cultures see schizophrenia in the same way, as an illness that in milder forms can afflict everyone. Again, further research with cultural systems that fall on the sociocentric end of the continuum would help to elucidate this, an endeavour this thesis goes part way to exploring.

5.3.3 IDENTIFICATION OF CULTURAL RULE VIOLATIONS

Behaviours associated with schizophrenia may go beyond certain acceptable limits of human conduct within a given culture. Jenkins and Karno (1992) explain critical comments, cross-culturally, as relatives' negative responses to these cultural rule violations. They argue that this formulation creates both problems and opens new areas for analysis of the CC component of EE. Just as the type of behaviour that is considered beyond cultural norms will differ from culture to culture, so too will the expression of these differ. In turn then, the coding of the content on the CFI should also be different when doing cross-cultural analyses. Jenkins and Karno (1992) cite

[4] Indeed one purpose of their paper is to provide a theoretical elucidation to "the problem of prediction without understanding" by looking at "the interface between anthropology and psychiatry" (op. cit. p. 10).

their difficulties in coding CCs with Mexican-Americans due to there being only two coding categories in previous CC analyses - symptom behaviours and enduring personality traits[5]. The former are far less frequently criticised by Mexican-Americans than their Anglo counterparts, but overall there are too few categories for the content analysis of CCs (Jenkins, 1984, in Jenkins et al., 1986). Further, Jenkins and Karno (1992) add that enduring personality traits, as targets of relatives' complaints about cultural rule violations, are more likely to occur in Anglicized families than Mexican-American families, due to the former's preoccupation with individual character traits.

Without taking these into consideration, Jenkins and Karno (1992) are wary that the reification of cultural categories may occur with the coding of CCs. For instance, they query the perspective from which the CCs are coded: from that of the analyst (etic), or from the perspective of the relatives who are motivated to express these (emic). Where the culture changes, so too will the motivations and targets of these change, and it is crucial that these are taken into consideration when analysing the interviews, and more importantly, when trying to understand expressed emotion. It is possible from this perspective that the large differences in the mean number of CCs expressed in different cultures may be better understood. For instance, in the UK the mean has been found to be 7.5 CCs (Leff & Vaughn, 1985); in the USA, 6.8 CCs (ibid.); in Spain, 3.1 CCs (Montero et al., 1992); while in India the mean number was 1.8 CCs (Leff & Vaughn, 1985). This may reflect the extent to which cultural rule violations differ in these cultures, and how complaints about these are expressed. Put differently, the lower levels in the Spanish and Indian samples may reflect a greater tolerance for cultural rule violations specifically, rather than tolerance for illness generally. The latter is the common explanation given for these cultural

[5] Philips and Xoing (1995) cite similar difficulties with adapting the EOI subscale for use with a Chinese sample.

variations (e.g., Leff & Vaughn, 1985; Montero et al., 1992; Sartorius et al., 1986; Wig et al., 1987a).

5.3.4 VOCABULARIES OF EMOTION

Jenkins and Karno (1992) further their cultural elucidation of expressed emotion by mentioning the implicit cultural knowledge upon which relatives base the expression and inhibition of affect in certain situations. For instance, Bertrando et al. (1992) mention that Italian culture is far more tolerant and encouraging of expression of emotions, whereas Tanaka et al. (1995) note that Japanese people are more likely to be reserved about publicly displaying their emotions. Likewise Philips and Xiong (1995) report that the culturally appropriate response to direct criticism in Chinese culture is one of passive acceptance. Wig et al. (1987b) note that Danes are possibly less inhibited in expressing criticism compared to North Indians. Differences such as these, Jenkins and Karno (1992) argue, may account for the observed variations in expressed emotion profiles found for Anglo-American, British, Mexican-American and Indian samples.

5.3.5 HISTORICAL AND POLITICAL ECONOMIC FACTORS

Finally, Jenkins and Karno (1992) offer a partial explanation for Leff and Vaughn's (1985) suggestion (in explaining differences between British and Anglo-American EE profiles) that expressed emotion profiles may change over time. Given that changing social and economic conditions may impact on the emotional climate of a society in general, which may be reflected in families' attitudes to dealing with those considered deviant (Warner, 1985, in Jenkins & Karno, 1992), differences found in EE levels may vary. The reason for mentioning this here is that the population under study in this thesis has experienced much change through factors such

as migrant labour, oppression, and acculturation, which may impact on the EE levels found in the participants of this study.

Thus at present, while EE has received attention from researchers around the world, the absence of EE studies in an African context is striking. Not only would such research contribute to a fuller understanding of the nature of the construct, but also help to direct interventions in such countries as South Africa, where the need for appropriate interventions is dire. Prior to embarking on the presentation of the particular research study, it is necessary to first provide background to the study context. Thus the second part of this thesis presents research on schizophrenia in Zulu speakers in the South African context, which is carried out in Chapter Six. In Chapter Seven the Zulu belief system with respect to mental illness will be briefly described, as applied to the cross-cultural factors (5.3.1- 5.3.5 above) outlined by Jenkins and Karno (1992).

CHAPTER 6

SCHIZOPHRENIA AND EXPRESSED EMOTION IN ZULU CULTURE

6.1 INTRODUCTION

The purpose of this section is to provide an overview of the culture under study, in which to ground an understanding of the results (Kleinman, 1987). It is a partial exploration of the Zulu health care system (Kleinman, 1980). The importance of comprehending the customs, value systems and ancestor belief systems for an understanding of illness among Zulu-speakers cannot be overemphasised (Cheetham & Griffiths, 1980, 1981; Hammond-Tooke, 1975; Sow, 1980). This discussion is carried out to support an exploration of the expression of emotions in Zulu families who have a family member with schizophrenia. It forms the basis of an understanding of how expressed emotion could be elucidated in Zulu culture.

Prior to embarking on this, however, a mention of the difficulties encountered in conducting cross-cultural research in South Africa is pertinent. This shall be presented first, followed by a presentation of research on schizophrenia with Zulu-speakers in the South African context. In Chapter Seven an application of the cross-cultural factors outlined by Jenkins and Karno (1992, 5.3.1- 5.3.5 above), as applied to Zulu cultural meaning systems, will then be attempted.

6.2 DIFFICULTIES ENCOUNTERED WITH CROSS-CULTURAL RESEARCH IN SOUTH AFRICA

A discussion of cross-cultural research on psychopathology is fraught with difficulties and limitations, as the study of mental illness is not culture free (Castillo, 1997). Of specific concern in taking a construct such as EE and assessing the extent to which it has predictive power in Zulu culture, is the danger of committing what Kleinman (1987) calls a 'category fallacy'. This is the reifying of a nosological category developed for a particular cultural group and applying it to members of another culture for whom it lacks coherence and validity[1]. This is not the case with EE, because, despite its origin in one (Anglicized) culture, it does appear to have predictive power in a number of other cultures, as is evident from section one of this thesis. Also, the discussion which follows attempts to give the construct cultural coherence, and the primary purpose is to assess the validity of the construct within Zulu culture.

Another difficulty in conducting research of this nature in the South African context deals with the psycho-historical context of South African psychological research (cf. Hickson et al., 1990; Retief, 1989; Seedat, 1998). The most prominent feature encountered being assumptions of inferiority of differing races which maintain social and political inequalities (Anonymous, 1986; Gobodo, 1990; Seedat, 1998; Swartz, 1995).

As a possible result of this specific South African psycho-historical context, and of note for the present study, is the lack of empirical studies dealing with mental illness in previously

[1] Further discussion of problems in cross-cultural research is too lengthy to include here. See Castillo (1997), Matsumoto (1994), Shweder and Sullivan (1993), and Sow (1980) for general discussions of these problems; and Cheetham and Griffiths (1980, 1981), Cheetham and Rzadkowolski (1980), Fischer (1962), Gobodo (1990), and Swartz (1998) for discussions of these in the South African context.

disadvantaged groups (Gobodo, 1990; Fischer, 1962). While many anthropological studies (e.g., Berglund, 1976; Krige, 1950; Ngubane, 1977) and psychological descriptions (e.g., Biesheuvel, 1959; Cheetham & Griffiths, 1981; Cheetham & Rzadkowolski, 1980; Fischer, 1962; Hammond-Tooke, 1975; Mokhuane, 1980) of differing cultural aspects of Zulu-speakers have been forthcoming, cross-cultural empirical research remains underrepresented in the literature.

Compelling evidence for this comes from the results of content analyses of articles published in South African psychological journals. Visser and van Staden (1990) found that black subjects made up only 10% of research subjects in the *South African Journal of Psychology* from 1979 to 1988. More recently Seedat (1998) found that in South African psychological journals from 1948 to 1988, of 62% of the articles that were empirical in nature, black subjects made up only 38% of the research subjects. Durrheim and Mokeki (1997), in a similar analysis, note that this trend appears to be changing, but add that the lack of significant cross-cultural studies found in South African journals may be attributed to the broader socio-political context of apartheid South Africa. On the other hand, not all South African research is published in South African journals (see Wesley, 1993, for a comprehensive bibliography of African research). Nevertheless, empirical studies dealing with mental illness in general, or schizophrenia in particular, in the Zulu population are scarce - hence the paucity of detail in this area.

This omission becomes all the more striking when one considers that black people, by sheer virtue of being the majority population, are among the largest users of psychiatric and psychological facilities, *and* that individuals with a diagnosis in the schizophrenia spectrum form the largest inpatient group in South Africa. For example, in 1991 (the most recent date for which

complete figures are available), the total patient population in all psychiatric hospitals, care and rehabilitation centres in South Africa is reported to have been 11 395 (Department for National Health and Welfare, 1993). Macpherson (1995) reports that the ethnic groupings of individuals diagnosed within the schizophrenia spectrum in KwaZulu-Natal (KZN) represent the demographic make-up of the province: being 73% black, 8% Asian, 4% coloured, and 12% white in the same year. Also, in the late 1980s, of all admissions to psychiatric hospitals, 63% were readmissions, of which 74% were schizophrenics (cited in Solombela Uys, 1994). Further, Uys and Zulu (1996) found that schizophrenia was the dominant diagnosis in a sample of black psychiatric outpatients attending clinics in a rural area of KZN. Thus, it would appear that black schizophrenics are among the majority users of psychiatric facilities in KwaZulu-Natal, and probably in South Africa, making the need for empirical research with this population of absolute importance if South African mental health services wish to be relevant to its' majority users.

Reasons for this lack of research may be many (cf. Durrheim & Mokeki 1997). One in particular, however, warrants brief mention. This pertains to the logistical difficulties encountered when conducting research programmes in South African state institutions. For instance, there are shortages of staff, finances, and facilities (Macpherson, 1995; Strebel, Msomi & Stacey, 1999; Uys & Zulu, 1996; Wassenaar, 1987), as well as translation and interpretation barriers (Cheetham & Rzadkowolski, 1980; Shanahan, 1998), and a shortage of western trained professionals prepared to undertake cross-cultural work (Lamont, 1988). Mention will be made of these as they relate to the present study in the Discussion section below.

One final area of difficulty deals with the drawing of conclusions from particular theories of culture and beliefs, where these are said to be changing (Biesheuvel, 1959; Gobodo, 1990; Seedat & Nel, 1989, in Perrot, 1992). The difficulty here arises due to most anthropological documentations of Zulu culture pertaining to 'traditional' Zulu culture, where, today, it is difficult to be sure how much tradition is still practised, and which parts are no longer salient (cf. Hickson et al., 1990).

Sow (1980) makes the point that "African societies are, and have been for centuries ... societies in transition" (p. 20). This questions the notion of a 'baseline' of that which is traditional, from which culture has moved. Sow (1980) further maintains that "in Africa today no one (chiefs of state, politicians, technocrats, and modern intellectuals included) can, in his everyday social practice, remove himself - other than verbally - from the essence of traditional structures" (p. 38). Supporting this view, a study by Edwards, Grobbelaar, Nene, Makunga, Kunene and Sibaya (1985, in Shanahan, 1998), reported that traditional beliefs regarding illness causality were held by a majority of rural and urban Zulus. More recently Gobodo (1990) made the observation that no matter how westernised African culture has become, it will still, in part, be regulated by the ethos of the original cultural structure.

Castillo's (1997) definition of cultural meaning systems and culture takes both these points of view into account. He defines culture as

> "the sum total of knowledge passed on from generation to generation within any given society. This body of knowledge includes language, forms of art and

expression, religion, social and political structures, economic systems, legal systems, norms of behaviour, ideas about illness and healing, and so on." (p. 20).

The traditional is that which is passed on from previous generations, which, in people's experiences such as migration, conflicts, oppression, and exposure to western frameworks, will impact on political structures and economic systems. The standpoint taken in this discussion, possibly the most expedient considering the lack of empirical data to the contrary, is to consider the Zulu culture as fluid, and thus influenced by exposure to other cultures, such as western medicine, yet retaining some adherence to traditional structures.

Of course just which areas have changed, and which remain traditional are no less clear using this framework, and this limitation is difficult to overcome. One suggestion in this regard is that in instances of extreme stress the tendency is for individuals to revert to traditional beliefs and practices (Cheetham & Griffiths, 1980). This is borne out in a study of Xhosa-speaking schizophrenics[2], where 90% consulted traditional healers prior to consulting a psychiatrist (Lund & Swartz, 1998). Also, Perrot (1992), in a study of Zulu children's conceptions of illness, found that traditional beliefs still held considerable influence on their conceptions of illness causality.

6.3 SCHIZOPHRENIA AND ZULU SPEAKERS: SOUTH AFRICAN RESEARCH

Despite the paucity of published empirical research dealing with mental illness and black people in South Africa mentioned above, this trend appears to be changing (Durrheim & Mokeki,1997), and more recently a number of useful studies have been published. These include research on

[2] Homogeneity of Xhosa- and Zulu- speakers' cultural meaning systems is not claimed here, although some overlap in conceptions of mental illness occurs (cf., Cheetham & Rzadkowolski, 1980; Fischer, 1962; Sow 1980).

cultural/indigenous expressions of mental illness with Xhosa-speaking children and adolescents (Robertson & Kottler, 1993); neuropsychiatric research with Bantu-speaking schizophrenics (Riley, Mogudi-Carter, Jenkins & Williamson, 1996); early manifestations of catatonic schizophrenia in rural Zulu-speakers (Campbell & Daynes, 1997); explorations of Xhosa-speaking schizophrenic patients' experiences of their condition (*amafufunyana*: Lund & Swartz, 1998); as well as cultural investigations of a stress-related Somatoform Pain Disorder (*Moriti wa letswele*: Mogale, 1999). These latter two studies make groundbreaking attempts at understanding a traditional African viewpoint of symptomatology, aetiology, and treatment of mental illness.

Cheetham and Griffiths (1981), in a sample of Xhosa, Zulu and Indian referrals to the psychiatric section of a general hospital in Durban, found that 'schizophrenia' was misdiagnosed or not identified in 60% of all referrals. They note that misunderstandings and misinterpretation of cultural phenomena were one source of error in these misdiagnoses. Solombela and Uys (1994) report on factors influencing relapse of schizophrenics in the Kentani region of the former Transkei. Of the 23% of readmissions to the hospital, 63% were schizophrenic. Factors relating to relapse were being single, living far from a clinic, substance use, and a negative affective response to illness and treatment. Family factors hypothesised to play a role were whether the family were supportive or not, whether the family believed in African (bewitchment) or western (medical) reasons for the illness, and the extent of family support.

Uys and Zulu (1996) report on the difficulties of implementing effective case management, in the clinic setting, when treating black psychiatric outpatients in a rural area of KZN. Their

sample, mostly schizophrenic, was found to have an improved functional status at one-year follow-up, however symptom reduction was not achieved. They note the assistance given to the families by the health care workers as being an integral part of the resource networking. It is possible that here an increased awareness of such factors as the impact of expressed emotion on relapse, should they be linked in a Zulu population, may have increased the efficacy of the treatment given.

As the above discussion indicates, empirical research on cultural conceptions of mental illness are few and far between. Further, in the South African literature, it appears that research regarding expressed emotion has not been undertaken. Thus the following chapter attempts a cultural elucidation of expressed emotion with Zulu-speakers.

CHAPTER 7

APPLICATION OF EXPRESSED EMOTION WITHIN ZULU CULTURE

This chapter attempts to integrate the elucidations of expressed emotion, presented in Chapter Five, with Zulu conceptions of mental illness, rule violations, kin relations, and vocabularies of emotion. An adequate understanding of these, however, is difficult to accomplish, and while much has been written on the topic of mental illness among Zulu-speakers (Ngubane, 1977), the following description is a summary of what is considered pertinent to the topic under investigation.

7.1 CULTURAL INTERPRETATION OF THE PROBLEM

This feature explores the extent to which cultural conceptions of the nature, cause and course of the illness mediates families' expressed emotion. Jenkins and Karno (1992) question the extent to which the cultural focus of illness, be it a personality factor, an illness entity, or an external malevolent agent, determines how and when criticism may be expressed toward an ill relative.

There does not appear to be a clear-cut conception of schizophrenia in Zulu cultural terms in the literature, nor a single aetiological explanation. To avoid reification (Kleinman, 1987) of the nosological term 'schizophrenia', it is deemed prudent to look at instances where more severe forms of mental illness are mentioned, and not just those where the nosological term is employed. This is done as there are reportedly no clear distinctions between illnesses of the body

and those affecting the mind in Zulu culture (Cheetham & Rzadkowolski, 1980; Mkhize, 1981). Also, Cheetham and Griffiths (1980) sum up the multi-aetiological view of mental illness in Zulu culture as being "primarily behavioural and interpersonally oriented, and is explained in biological, social, religious and magical terms" (p. 168). These explanations therefore cover all four areas outlined by Ngubane (1977) as being causes of illness in Zulu culture: natural causes (biological and ecological), sorcery, pollution (mystical), and ancestor related[1].

Other writers, however, place the dominant causal mechanism of severe mental illness in the realm of sorcery and/or spirit possession (Krige, 1950). Ngubane (1977) discusses pathological forms of spirit possession such as *indiki* and *ufufunyane*, which lead to 'mental derangement'. Mokhuane (1980) writes of the disordered cognitive functioning associated with schizophrenia as being interpreted in terms of bewitchment and sorcery within Zulu culture. Lund and Swartz (1998), in their investigation of Xhosa-speaking schizophrenics' experience of their condition, found that patients attributed their condition of *amafufunyana*[2] to different causal factors, including magic, spells, and jealous neighbours or relatives.

Sorcery (*ubuthakathi*), according to Ngubane (1977), occurs when a sorcerer intentionally attempts to harm others. This can occur through a variety of media, for instance by placing harmful substances in the paths of people, which are then absorbed when they pass by; by placing harmful substances in people's food; or by placing harmful substances on objects people

[1] Space constraints do not permit an exploration of these four causes of illness in Zulu culture, nor an explanation of Zulu cosmology. There are however numerous documentations of these, and the reader is referred to Berglund (1976), Cheetham and Rzadkowolski (1980), Fischer (1962), Hammond-Took (1975), Krige (1950), Mkhize (1981), Mokhuane (1980), Ngubane (1977), and Perrot (1992).

[2] Differences in spelling are used by different authors.

touch. Some sorcerers harm people for no apparent reason, simply because they are evil (e.g. night sorcerers), whereas others perform sorcerer acts due to competition, jealousy or rivalry (e.g. day sorcerers). Sorcerers can also cause mental illness by making a harmful concoction from the soil from graves and ants from graveyards, which, when put in the path of a victim, causes them to be possessed by many spirits of different racial backgrounds (*ufufunyane*). This type of spirit possession may also occur by chance, as does *indiki* spirit possession. This is where the spirits of dead people, due to the failure of their family to perform the requisite rituals, are unintegrated with the ancestral world, and thus roam the countryside taking possession of people and causing illness.

Thus, in terms of Jenkins and Karno's (1992) discussion, if schizophrenia (or psychosis, or severe mental illness) were the result of sorcery and/or pathological spirit possession in Zulu culture, then attributions relating to the illness behaviours of patients, made by their family members, may be seen to be external to and uncontrollable by the patient. Indeed Ngubane (1977) notes that Zulu people, in dealing with the mentally ill, do so in such a way that they are not made to feel responsible for their illness: "they are not made to feel that anything is wrong with their minds, but merely that they are victims of external forces" (p. 149). She continues that patients get sympathy, support, and attention, and, even after recovery, others still take special care not to annoy them or provoke a recurrence.

In sum then it would appear that relatives of a family member with severe mental illness, such as schizophrenia, would react in ways similar to those noted for Mexican-Americans (Jenkins & Karno, 1992). That is, they would attribute little blame for their behaviours to the patients

themselves, and thus possibly be less critical or hostile towards them. The apparent difference between the two cultures, in that in Zulu culture it is an external *malevolent* agent that is assigned cause of the illness, may lead Zulu patients to be treated differently. How this may express itself, in terms of relatives' reactions to the patient, however, is unclear, and further discussion of this lies beyond the scope of this thesis. Clearly this discussion would benefit greatly from elucidations of Zulu-speaking schizophrenics' conceptions of their illness similar to those carried out by Lund and Swartz (1998) and Mogale (1999).

7.2 CULTURAL MEANINGS OF KIN RELATIONS

In terms of cultural meanings of kin relations, those of Zulu-speakers fall on Jenkins and Karno's (1992) socio-centric end of the continuum. Mokhuane (1980) discusses the traditional social organization of the Zulu as being patriarchal, tribal, familial, and polygynous. Krige (1950) mentions that the bonds of kinship are extensive, allowing an individual to have a number of fathers, mothers, and siblings (or what in western culture would be termed uncles, aunts, and cousins respectively). Independence of men is gained through marriage, and independence of women through child-bearing and maintenance of her own home (ibid.). Mokhuane (1980) notes though that women remain subservient throughout life. Hickson et al. (1990) record that kin relations are authoritarian and hierarchical, and primacy is given to the goals and welfare of extended families.

These recordings of kin relations among Zulu-speakers appear similar to those mentioned by Jenkins and Karno (1992) with Mexican-Americans, certainly in terms of the socio-centric nature of the importance of extended families and family allegiances. The salutatory impact of

these on EE may well be similar in the two cultures (see 5.1.2 above). Somewhat different, however, is the hierarchical and patriarchal social organization that Zulu families conform to. The traditional order of the hierarchy is both age and gender related, with greater respect shown to those older, and with the father, or eldest male, holding positions of highest authority (Krige, 1950). The impact of these on expressed emotion variables in the advent of illness is difficult to assess, however, nothing having been documented in the literature in this regard. Further research regarding this factor may therefore be warranted.

7.3 IDENTIFICATION OF CULTURAL RULE VIOLATIONS

Ngubane (1977) and Mokhuane (1980) note that traditional Zulu thought is oriented towards the conservation of the already established socio-cultural order. This order is traditional, patriarchal, homogenous, collectivist, well-integrated and obligatory. Thus cultural rules are strong, and violations of these are strongly objected to. Violators are sometimes harshly punished (Berglund, 1976; Krige, 1950). What is unclear from the literature, though, and again indicative of the lack of research in this area, is how behaviours associated with severe mental illness go beyond those accepted in Zulu culture.

While it is consistently reported that behaviours associated with notions such as sorcery, bewitchment or spirit possession are deviant from normal behaviour (e.g., Berglund, 1976; Ngubane, 1977), central to the cross-cultural elucidation of expressed emotion is the extent to which these would be *criticized* by family members. That is, behaviour considered abnormal in Zulu culture would most certainly be remarked on, and treated if considered to result from illness, but the extent to which this would no longer be tolerated, and therefore be the subject of

criticism, is less clear. Put differently, it is precisely the identification of cultural rule violations that lead individuals to being designated as subject to external malevolent agencies. However, once this designation has been made, the behaviour then becomes culturally understandable, and while deviant from that which is considered normal behaviour, it is not deviant from what is expected from individuals with such an illness designation. This may reflect part of the Zulu health care system (Kleinman, 1980), whereby rule violations made by mentally ill people are given special status that make them more tolerable to those around them.

7.4 VOCABULARIES OF EMOTION

Jenkins and Karno (1992) furthered their cultural elucidation of expressed emotion by mentioning the implicit cultural knowledge upon which relatives base the expression of affect in certain situations, as well as the inhibition of these, when culturally appropriate. Again, little appears to have been written in the psychological literature on the topic of expression of emotion in Zulu culture (cf. Swartz, 1998). However, guidelines for how to carry out such research are offered by Schweder (1985, in Castillo, 1997, pp. 58-60).

He suggests a six-aspect procedure for the cultural assessment of emotions, as follows. Firstly, one should ascertain what types of emotions a cultural group experience (the taxonomic question). Secondly, which emotions are elicited by which situations (the ecological question). Thirdly, what do the emotions mean to indigenous observers (the semantic question). Fourthly, what are the means of expression for communication of emotions (i.e. verbal, physical etc.; the communication question). Fifthly, what emotions are improper or proper for a person of a

particular social status (the social regulation question). Lastly, there is the question of how unexpressed emotions are handled (the management question).

It is difficult to respond to these without research data. A few tentative suggestions, however, may be made. Cheetham and Griffiths (1981) note that Zulu-speakers, especially females, are traditionally discouraged from displaying emotions (e.g. anger) to older members of the family or to those in authority. This is an indication of the effects of hierarchical cultural structures (Castillo, 1997) on the expression of emotion, which corresponds to Schweder's (1985, in ibid.) social regulation question. In terms of EE, it may therefore be suggested that a patient, if of a higher social standing, might not be the target of criticism or hostility from relatives of lower standing, for instance a wife or younger brothers and sisters may not criticise a male patient.

Ngubane's (1977) mention of dealing with the mentally ill in such a way that they are not made to feel responsible for their illness may represent Schweder's (1985, in ibid.) taxonomic question. The patient is unlikely to be made to feel guilty for their illness, as would more likely occur in western cultures (cf. Jenkins & Karno, 1992). This in turn may lead to fewer expressions of criticism and hostility, and more expressions of warmth towards the patient on the part of their relatives.

Further research with regards to the other factors is necessary in order to make informed comments on how these may affect the vocabularies of emotion made by Zulu-speakers when communicating with their ill relative, which unfortunately lies beyond the scope of this thesis.

7.5 HISTORICAL AND POLITICAL ECONOMIC FACTORS

Jenkins and Karno (1992) suggested that expressed emotion profiles may change over time due to changing historical and political economic factors. This is due to the possibility that changing social and economic conditions may impact on the emotional climate of a society in general, which in turn may be reflected in families' attitudes to dealing with those considered deviant (Warner, 1985, in ibid.).

Transformations that Zulu culture has undergone due to changing social, economic and political factors have been suggested by Biesheuvel (1959), Gobodo (1990), Ngubane (1977), and Seedat and Nel (1989, in Perrot, 1992). It is quite probable that expressed emotion variables, should they have validity within Zulu culture, have undergone change. Again, the lack of empirical research on the subject of, for instance, the effects of migrant labour on extended families, renders discussion of these beyond the scope of this study.

In summary, the influence of the hierarchical structure of kin relations, and the causal role of malevolent external agencies, on expressed emotion, is difficult to assess. However, it appears that Zulu-speakers are more likely to attribute illness causality to factors external to and uncontrollable by, the patient. Also, the kinship system is one of sociocentrism, with support derived from extended families. These may result in cultural rule violations, when identified as due to mental illness, being treated with greater tolerance. Further, there may be instances where the expression of emotion is inhibited in Zulu culture. Taken together, these may indicate that the level of expressed emotion in Zulu-speaking families may be lower than that found in other

western cultures, which may, in turn, impact positively on the course of schizophrenia with Zulu-speakers. These are formalised into testable hypotheses in the next chapter.

CHAPTER 8

AIMS AND HYPOTHESES

8.1 AIMS

The broad aim of this research is a cross-cultural exploration of the concept of expressed emotion as applied to a South African Zulu-speaking sample of schizophrenics. Specific objectives include the identification of a suitable questionnaire for the assessment of EE status in Zulu-speaking schizophrenics (the Level of Expressed Emotion (LEE) scale, see below), as well as its translation and cross-cultural validation. A further objective is the thesis itself, which attempts empirical research with a previously under-researched population group in South Africa. This may form the basis of a motivation/ rationale for the introduction of EE-reducing therapy programs with Zulu-speaking schizophrenics in the South African context.

8.2 HYPOTHESES

1) More participants rated high on the LEE scale will be rehospitalised than those rated low on the LEE scale.

2) High scores on the LEE scale are predictive of higher previous hospitalisation rates in Zulu schizophrenics.

3) Scores on the LEE scale will be lower for the Zulu-speaking sample than for Anglicized samples.

4) Rehospitalisation rates for Zulu schizophrenics will be lower than for Anglicized samples.

Two additional hypotheses are set out below. These are based on findings presented above, however have less direct bearing on the EE-relapse link. These are included here for comparative purposes:

5) More males than females will be rehospitalised.

6) More participants who abuse substances will be rehospitalised than those who do not.

CHAPTER 9

METHODOLOGY

In this chapter the research design, sample under study and the procedure followed in conducting the research is described. The original language assessment instruments are discussed, and the translation process is presented.

9.1 DESIGN

The design replicates that in the Cole and Kazarian (1993) study, where participants were divided into two groups depending on their EE status at admission - a high EE group and a low EE group. This was determined by their scores on the Level of Expressed Emotion (LEE) scale. The participants' readmittance status was ascertained nine months later. Comparisons were made between their EE status (High-EE and Low-EE) and their readmission status (Readmitted and Non-readmitted).

9.2 SAMPLE

Permission was obtained for conducting the research with adult psychiatric inpatients from the Midlands Hospital Complex (Fort Napier and Town Hill hospitals), in Pietermaritzburg, South Africa. Patients were selected based on the following criteria: that they be Zulu speaking; have a DSM IV (APA, 1994) diagnosis of schizophrenia, schizophreniform or schizoaffective disorders (based on the psychiatric registrar's diagnosis[1]), and be between the age of 18 and 45 years. The

[1] Difficulties diagnosing schizophrenia within non-western cultures have been mentioned above, see also Cheetham and Griffiths (1981), Strebel et al. (1999), Sow (1980), and Swartz, (1998).

researcher had no control over the diagnosis, nor over the decision to readmit the patient, and likewise the psychiatric registrars, who also decided on whether to readmit the patients, were blind to EE status.

Patients were excluded from the study if there was evidence of possible organic brain impairment, e.g. mental retardation, history of head injury, epilepsy; or if their psychosis was substance induced. Of the initial 53 patients identified as meeting the inclusion criteria, only those who completed both assessment instruments comprise the sample (N = 31) reported on. Reasons for attrition are discussed below. Just over half (52%) of the participants were female, and the mean age of participants was 31.19 years (SD = 9.36).

9.3 PROCEDURE

Participants were identified for inclusion in the study, according to the above criteria, by reviewing their hospital files as well as engaging in discussion with their ward staff. In this way, the 53 possible participants were identified. Participants, in groups of two to five, were seated while the nature of the research was outlined by the researcher, through the use of a translator. In all cases this was a psychiatric nurse familiar with the participants, a native Zulu speaker, trained by the researcher to translate the instructions. S/he was present throughout administration, as was the researcher, monitoring progress and assisting where necessary.

Informed consent was obtained by advising the participants of the following: the nature and purpose of the research as well as the confidential nature of the questionnaires. They were told that the author would check the patient registers to see if indeed they have returned to hospital in

nine month's time, but that nothing would be required from them following the administration of the questionnaires. Also, they were told that they could refuse to contribute to this research, that it was not part of their treatment in hospital, nor would it influence their treatment or discharge. In addition, they were requested to read the instructions carefully, to answer each question honestly; and they were informed that there were no right or wrong answers, nor was this a test. It was during this time that the further selection process occurred, whereby those who refused consent (N = 4) and those unable to read or write (N = 4) were thanked and then allowed to leave.

Once consent to participate had been verbally elicited, administration occurred, with counterbalancing of instruments to minimize order effects. Participants were requested to answer the questions, for the SCL-90-R considering the problems and complaints they had had in the previous seven days, and for the LEE with respect to the most influential person in their life in the last three months. The LEE took between 15 minutes and 1½ hours to complete, while the SCL-90-R took between ½ hour and 2½ hours to complete. The nature of concentration difficulties, fatigue and amotivation associated with schizophrenia (APA, 1994) were controlled for by allowing for periods of rest between the tests, or at times when participants appeared to be affected by them. This accounted for further attrition through four participants being discharged between the instruments' administration, when this gap was a number of days. A further ten participants either did not return following this rest, or appeared sufficiently distressed while completing the task that they asked to discontinue.

9.4 FOLLOW-UP DATA COLLECTION

Two issues are prominent when executing follow-up data collection: the time frame between which initial and follow-up data are collected, and the outcome measure, that is, exactly which individuals constitute the relapsed group. These shall be examined in turn.

9.4.1 Time Frame

Of the expressed emotion research reviewed for this study, scant attention is given as to *when* to collect the follow-up data, and *why* a particular time frame is chosen. Thus while researchers report their findings from six months (e.g., Glick et al., 1985; Goldstein et al., 1978), nine months (e.g., Barrelet et al., 1990; Falloon et al., 1982), one year (e.g., Hogarty et al., 1986; Linszen et al., 1996; Stirling et al., 1991), and two years (e.g., Leff et al., 1985; McFarlane et al., 1995; Tarrier et al., 1989), following initial data collection, a concurrent rationale for why the particular time frame was chosen is usually not reported. It would appear, though, that the majority trend in expressed emotion studies for first-time reporting is nine months. This may be due to an average time-to-relapse that is apparent to some researchers working with schizophrenics (although the DSM-IV (APA, 1994), makes no reference to such a time frame); although pragmatic explanations are more likely, for instance, research-grant time limits. In this study, to keep in line with the initial Brown et al. (1972) research, and following the majority trend in expressed emotion studies, the time frame chosen was nine months. Thus, initial data collection was carried out over the period February to July 1999, and follow-up data nine months later, from November 1999 to March 2000.

9.4.2 Outcome Measure

Outcome measures at follow-up in the expressed emotion studies mentioned above have taken on differing forms, ranging from rigorous assessment of the psychological state of the individual, to simply observing admission status. Originally, Brown et al. (1972, p. 244) used *relapse* as the outcome measure, defined in two types: a change from a nonschizophrenic to a schizophrenic state (assessed on the Present State Examination and the CATEGO clinical classification system); and a marked exacerbation of persistent schizophrenic symptoms. This two-type system is used by most other researchers, with either the Brief Psychotic Rating Scale (e.g., Linszen et al., 1997; Tanaka et al., 1995), or the Research Diagnostic Criteria (e.g., Hogarty et al., 1986; Moline et al., 1985; Nuechterlein et al., 1992) used to ascertain the change in schizophrenic status.

Others, however, have simply taken *rehospitalisation* as the outcome measure, checking hospital and clinic records to ascertain whether patients had been readmitted to hospital (e.g., Bertrando et al., 1992; Donat, 1997; Mozný et al., 1992). In the South African context Solombela and Uys (1994), in their study on schizophrenia and relapse in the Transkei area, used the same method of ascertaining relapse status - auditing of hospital records.

The former outcome measure, whereby the individuals themselves are examined at follow-up, obviously allows for more rigorous control. There are, however, difficulties with these outcome measures, the greatest being problems with relapse definition, and assuming that readmitted patients have, in fact, relapsed. For instance, Hooley (1985) notes that readmission may reflect a tendency on the part of high EE relatives seeking hospitalization more readily than low EE

relatives, and not a function of relapse per se. On the other hand, authors such as Liberman (1986) and Parker et al. (1988) note that relapse does not necessarily involve a readmission to hospital. Others argue that there is as yet no acceptable definition of relapse for schizophrenia, which is a major difficulty encountered within expressed emotion research (Mari & Streiner, 1994; Parker et al., 1988). Indeed Bebbington and Kuipers (1994), in their aggregate analysis of 25 expressed emotion studies, note that no uniform definition of relapse was evident across the studies[2].

The latter outcome measure, rehospitalisation, was employed in this study. This was carried out by the researcher scrutinizing the hospital records to ascertain whether or not the participant had been readmitted. If the participant was readmitted, the reasons for this were ascertained, as well as the diagnosis received.

9.5 ASSESSMENT INSTRUMENTS

Two instruments comprise the tests used in this study, the Symptom Checklist-90-Revised (SCL-90-R; Derogatis, 1983), and the Level of Expressed Emotion (LEE) scale (Cole & Kazarian, 1988). The former was included as an independent measure of symptomatology, as other studies (e.g., Parker et al., 1988) have been criticized for relying solely on clinical judgment in the diagnosis of schizophrenia. The latter is a measure of perceived expressed emotion. These shall be discussed in turn.

[2] The significance of these problems is noted in this study. However, further discussion is beyond the scope of this thesis. See Liberman (1986) for a further discussion of relapse definitions.

9.5.1 Global Psychological Distress

The SCL-90-R (Derogatis, 1983) was used to assess global psychological distress. This is a 90-item self-report symptom inventory, compiled to measure symptomatic psychological distress, and which has been translated into 24 languages (Derogatis & Lazarus, 1994, in Shanahan, 1998). Derogatis (1983) notes that an advantage of the self-report method of inquiry is that it gleans information from the 'experiencing self' (p. 1), the person immediately involved in the experience. In this regard the two instruments used in the present study are similar, in that the SCL-90-R elicits the participant's own experience of their symptoms, while the LEE elicits the participant's own experience of their familial expressed emotion. Thus the two instruments exhibit a certain internal consistency with each other, in that they both elicit the person's own perceptions of their experiencing self. The SCL-90-R was chosen because of its ease of administration, the fact that it has previously been used in cross-cultural EE studies (Gerlsma, van der Lubbe & van Nieuwenhuizen, 1992), and, importantly, because of the existence of a rigorously translated Zulu version (Shanahan, 1998).

The SCL-90-R measures psychological distress on a five-point Likert scale, ranging from 0 ('not at all') to 4 ('extremely'), depending on how much the symptom has distressed the respondent in the last seven days. The 90 items comprise nine primary symptom dimensions, which represent the following constructs:

I. Somatization (SOM): reflects distress arising from perceptions of bodily dysfunction, and includes symptoms such as headaches, fatigue, and nausea.

II. Obsessive-compulsive (O-C): reflects symptoms that are highly identified with the clinical syndrome of the same name, and includes symptoms such as repeated unpleasant thoughts and repeating actions.

III. Interpersonal sensitivity (INT): focuses on feelings of inferiority and inadequacy, particularly in comparison to others, and includes symptoms such as feeling critical of others or feeling inferior, shy and uneasy.

IV. Depression (DEP): reflects a broad range of somatic and cognitive symptoms that correlate with depression, including feeling lonely, worrying and having suicidal thoughts.

V. Anxiety (ANX): reflects symptoms that are associated clinically with manifest anxiety, and includes trembling, fearfulness and nervousness.

VI. Hostility (HOS): reflects feelings, actions or thoughts characteristic of the affective state of anger, including irritability, rage and resentment.

VII. Phobic anxiety (PHOB): focuses on the more pathognomic and disruptive manifestations of phobic behaviour, most especially agoraphobic symptoms, including the avoidance of frightening situations, places and persons.

VIII. Paranoid ideation (PAR): reflects paranoid thinking such as centrality and grandiosity, and includes symptoms such as feeling others are to blame, or having beliefs others do not share.

IX. Psychoticism (PSY): represents a range of severity of the construct, from interpersonal isolation to first-rank symptoms of schizophrenia, including symptoms such as thought broadcasting and hallucinations.

The raw symptom dimension score is arrived at by dividing the summed distress score on each dimension by its respective number of items, that is, the dimension's mean. A further three aspects of psychological distress are calculated: the Global Severity Index (GSI), which combines information from intensity of perceived distress with numbers of symptoms, and is regarded as the best single indicator of current level of psychological distress, to be used when a single summary measure is required (Derogatis, 1983); the Positive Symptom Distress Index (PSDI), which measures intensity only; and the Positive Symptom Total (PST), which counts only the number of symptoms. These indices combined serve also to provide information on the response style and clinical picture of the respondent. Shanahan (1998), however, notes that the lack of formal validity scales within the SCL-90-R renders cautious interpretation of results necessary.

Reliability of the SCL-90-R is reported by Derogatis (1983) to be satisfactory, with internal consistency ranging from 0.77 to 0.90, and test-retest reliability ranging from 0.78 to 0.90. He further reports convergent, divergent, discriminant and concurrent validities, with various populations, including those exhibiting sexual disorders, stress syndromes, depression, and schizophrenia; to be satisfactory. Derogatis (1983) further reports construct validity to be adequate. Shanahan (1998), however, following a review of factor structure studies done with the SCL-90-R, suggests a lack of empirical support for the nine-dimensional structure, and that it best be conceptualised as a unidimensional measure of psychological distress.

9.5.2 Zulu Version of the SCL-90-R

The SCL-90-R was translated into Zulu using a multistage translation procedure involving back translation, decentering and the committee approach (Shanahan, 1998). Pretesting with Zulu farmworkers was undertaken (N = 12), as well as investigation of the psychometric properties by administering both the original English version, and the translated Zulu version to a group of bilingual Zulu students (N = 61). Finally, preliminary validation of the translated instrument was investigated by administering it to male psychiatric inpatients (N = 23) and nonpatients (N = 26).

Results indicated that, for the Zulu SCL-90-R, internal consistency was satisfactory, with reliability coefficients ranging from 0.63 to 0.88 for the nine scales, with seven of these above 0.75. Of note for this study was the coefficient for the Paranoid Ideation scale at 0.74. Shanahan (1998) notes that this less than satisfactory result could be due to the items comprising the scale not being cross-culturally valid, as traditional African belief regards illness causality as attributable to another's malevolence (Ngubane, 1977). Thus "feeling others are to blame for most of your troubles" (item 8), may not be indicative of paranoid thinking in a Zulu sample, but rather an indication of the respondent's adherence to traditional beliefs.

Item subscale correlations were all positive, and reported to be at acceptable levels. Test-retest reliability coefficients ranged from 0.46 for Paranoid Ideation (again an indication that this scale may be culturally inappropriate) to 0.90 for Phobic Anxiety, and are reported to be at acceptable levels.

Factor analysis revealed that both versions of the SCL-90-R loaded on a single large factor, which accounted for most variance encountered, and on which all nine subscales loaded strongly. Shanahan (1998) indicates that this suggests the Zulu SCL-90-R best be used as a global measure of psychological distress, and that interpretations based on subscale scores be executed cautiously. Test-retest results are reported as being satisfactory, with correlations ranging from 0.63 (Paranoid ideation) to 0.82 (Interpersonal Sensitivity). Overall Shanahan (1998) notes that the psychometric evaluation of the Zulu SCL-90-R provides evidence for the adequacy of the translation, indicating that internal consistency and test-retest reliability are satisfactory. He does however question the bilingual technique as a means of assessing translation equivalence, primarily because of test-retest effects and bilingual response sets, indicating that this may not be a valid means of assessing translation equivalence.

It should be noted, however, that these reliabilities were tested on a group of nonpatients' responses to the Zulu SCL-90-R. Thus inferences drawn from these results in assessing the reliability of the instrument when used with psychiatric patients should be made with caution.

Finally, Shanahan (1998) attempted a preliminary validation study comparing the scores of adult male psychiatric inpatients with healthy Zulu men. Detailed findings of the study are presented in the Results section below, where comparison with the present study is elaborated on. In summary, his results indicate that the Zulu psychiatric inpatients scored significantly higher on the Zulu SCL-90-R than did the nonpatients on all nine symptom dimensions and the three global scores. This suggests the concurrent validity to be acceptable, in turn indicating that the instrument may be validly utilised for screening for mental illness with Zulu-speaking people.

9.5.3 Expressed Emotion

The original method for measuring EE levels in relatives of patients with schizophrenia, as discussed above (see 2.2 above), is the Camberwell Family Interview (CFI), developed by Brown and Rutter (1966, in Brown et al., 1972), and abbreviated by Leff and Vaughn (1985). However, difficulty in administration and rating, and the necessity of having a relative present, renders the CFI too cumbersome to be widely used in clinical practice (Miklowitz, 1994).

At least ten simplified measures of family functioning and expressed emotion are reported on in the literature, each exploring the association between family interactions and relapse prediction in a variety of ways. Kazarian (1992) notes that the concurrent validity of these measures is assessed by establishing associations with the CFI, and the predictive validity by means of their ability to predict outcome.

The majority of these measures assess relatives' EE directly. These include measures similar to the CFI, whereby interviewers rate relatives on a number of scales, for instance the Five Minute Speech Sample (Magaña et al., 1985) or the Münster Family Interview (Buchkremer et al., 1986).

Relatives' self-report measures have also been developed, such as the Family Environment Scale (Spiegel & Wissler, 1986); the Questionnaire Assessment of Expressed Emotion (Docherty et al., 1990); the Relatives Expressed Emotion Adjective Checklist (Friedman & Goldstein, 1993); and

the Relatives Affective Style questionnaire (Doane, West, Goldstein, Rodnick & Jones, 1981, in Rosenfarb et al., 1995).

A less cumbersome approach adopted in the expressed emotion paradigm is the assessment of patients' perceptions of family functioning and EE through the use of self-report measures with the patients themselves, thereby eliminating the necessity of assessing relatives. These include the Parental Bonding Instrument (Parker, Tupling & Brown, 1979, in Leff & Vaughn, 1985); the Perceived Criticism Scale (Hooley & Teasdale, 1989); the Influential Relationships Questionnaire (Baker, Helmes & Kazarian, 1984, in Kazarian, 1992) and the Level of Expressed Emotion (LEE) scale (Cole & Kazarian, 1988).

Kazarian (1992), reviewing seven of these measures, concludes that where concurrent validity has been assessed the association is not perfect. This author further notes that the predictive validity of many of these instruments has not been empirically demonstrated. Of the available alternative measures, Kazarian (1992) recommends the use of the Five Minute Speech Sample (Magaña et al., 1985) or the Level of Expressed Emotion (LEE) scale (Cole & Kazarian, 1988) as the screening tools of choice.

For the present study the latter instrument, the LEE scale (Cole & Kazarian, 1988), was chosen as the measure of EE, a copy of which is given in Appendix A. Written permission was requested, and granted, from the authors of the LEE scale for its translation and administration to a Zulu-speaking population.

The LEE scale was chosen due to its ease of administration - it is a paper and pencil test, it does not require that the scorer be trained in the CFI method, and, importantly for this study, does not require the presence of a relative of the participant (Cole & Kazarian, 1988, 1993; Donat, 1996). This is important due to the demographic characteristics of the sample. It is difficult to contact the relatives of the participants due to their residing in rural areas difficult to access by telephone, many do not visit their ill relatives in hospital, and, importantly, using translated scripts for rating analysis would seriously jeopardise internal validity.

The LEE scale provides a rating of the perceived emotional climate in a person's influential relationships. Cole and Kazarian (1988) report that it was constructed on the basis of the conceptual framework provided by expressed emotion theorists. It is a self-report measure comprising 60 items in a True/False format. Respondents must choose the most influential person in their lives in the last three months and rate that person on the four dimensions of the EE construct that the LEE scale assesses. These are:

a) high levels of intrusiveness (e.g. "Is always interfering", item 13);
b) highly emotional response to the patient's illness (e.g. "Gets angry with me for no apparent reason", item 42);
c) negative attitude towards the patient's illness (e.g. "Accuses me of exaggerating when I say I am unwell", item 39); and
d) a low level of tolerance and high expectations of the patient (e.g. "Gets angry with me when things don't go right", item 36).

Cole and Kazarian (1988, p. 392) report that the LEE scale underwent extensive psychometric development, which included theoretically based item generation, pilot testing with normal and psychiatric populations, and construct validation within a schizophrenic population. They report that the LEE demonstrates adequate test- retest reliability (Pearson r = 0.82) and internal consistency (KR-20 = 0.95). Also, concurrent validity has been shown to be adequate by comparing the LEE scale with the abbreviated form of the CFI (Kazarian, Cole, Malla & Baker, 1990). Further, validation studies support the predictive validity of the LEE scale for two years (Donat, 1996, 1997)and up to five years (Cole & Kazarian, 1993)

Further rationale for using the LEE scale in this study is that it has been translated into French and Spanish, although publication of these versions has not been forthcoming (Kazarian, personal communication). It has also been translated into Dutch (Gerlsma et al., 1992). Factor analysis of results from their healthy non-psychiatric participants indicated three slightly different factors from those in the original LEE scale; these being lack of emotional support, intrusiveness/control and irritability. Predictive power of this version remained low; however Gerlsma and Hale (1997), in a follow up study to this, and using a modified version of the LEE scale with clinically depressed outpatients, demonstrated adequate construct and predictive validity. These authors point out however that very few items assess criticism, a limitation of the instrument given the importance of this variable to the expressed emotion construct as mentioned above.

9.6 TRANSLATION OF THE LEE SCALE INTO ZULU

The process of translation[3] is a necessary important first step in cross-cultural research, however, as Brislin (1970) points out, researchers often do not use rigorous methods in translating instruments, fail to report on the method they used in the translation, and do not discuss problems they encountered while translating. This renders translation problems as a source of data contamination unidentifiable in much cross-cultural research (ibid.). In not compounding this error, the translation of the LEE scale into Zulu was based on the rigorous methods recommended in the literature for attaining translation equivalence. It is reported on here in such a manner that these are stated explicitly, and problems that were encountered in the process are also outlined. The first half of this section outlines those problems in the translation process worthy of attention. This is followed by a description of the actual method for translation used, and includes how those problems encountered were overcome.

9.6.1 Problems of Equivalence

According to Sechrest et al. (1972), of most import to the translation procedure is maximising *equivalence* of the target version from the source language version. They offer a list of differing aspects of item equivalence which need to be considered when translating an instrument. These are:

1) Vocabulary equivalence: probably the most obvious kind, this involves equivalence of the actual words used. Here attention needs to be paid to the level of education of the translator

[3] A body of research exists pertaining to problems, methods and studies of translation issues in cross-cultural research. Cognisance of these issues was maintained in translating the LEE scale. However, as many authors point out, translation is an extremely complex process which involves compromising differing forms of equivalence and translation methods. For further information on translation problems and procedures the reader is referred to Brislin (1970), Kleinman (1987), Nell (1994, 1999), Sechrest, Fay and Zaidi (1972), and Sow (1980). For examples of these techniques in the South African situation, see John (1996) and Shanahan (1998).

compared to that of the target language group, so that where possible the vernacular be used when the target group is expected to be less well educated. In this study a member of the translation team had many years of experience in working with the population for whom the instrument was intended, and thus was able bear this in mind. Further, as Shanahan (1998) notes, where exact words do not exist in the target language, a brief description conveying the concept intended is an acceptable means of overcoming such difficulties. As pointed out below, this was indeed on occasion necessary.

2) Idiomatic equivalence: this refers to the conveying of idioms from one language to another, a procedure that is rarely directly possible. Thus the use of target specific, but semantically equivalent, idioms is suggested as a means of overcoming this difficulty.
3) Grammatical-syntactical equivalence: as languages differ in their sentence construction, so difficulties arise when attempting to retain such grammar and syntax equivalence when translating. Here, greater import is given to having maximally understandable questions, such that non-equivalence in this domain may result in a better translated target version.
4) Experiential equivalence: while no longer purely linguistic, this type of equivalence refers to obtaining the use of experience-near terms for the target language group, such as objects, animals, terrain features, cultural arrangements and the like. Indeed this may be of utmost importance for this study, for one is wanting to explore the respondent's experience and perceptions of their home life, from within the theoretical framework of expressed emotion. Thus of utmost importance is the equivalence of such things in Zulu culture as emotional overinvolvement, and the experience of this.
5) Conceptual equivalence: this refers to achieving equivalence in the concepts underlying the words used in the two language versions. Sechrest et al. (1972) point out that while

vocabulary equivalence may have been achieved, the underlying concept may well differ in its intensity or frequency of use in the two languages. Here decentering may be employed, where the source language word is altered to allow for better translation.

9.6.2 Types of Translation Problems

Sechrest et al. (1972) identify four problem areas in cross-cultural research: three relate to translation problems, one to administration difficulties. The latter involves adequately orienting the participants to the research, that is, giving them a rationale for participating in the research. While they note that no one has offered a solution to this problem, it is not endemic to cross-cultural studies - the adequate *translation* of this rationale however, is. As discussed in Section 9.3 above, this was addressed by training the psychiatric staff in the administration of the instruments, as well as the purposes of the study. However, as Sechrest et al. (1972) note, no formal method of evaluating the adequacy of this method exists.

Related to this, the second type of translation problem deals with the translation of the actual instructions on how to complete the instrument. This is an important component, especially with regards the LEE scale, as its accurate completion relies on the respondents having understood that they answer with respect to their most influential relative. In the testing situation itself, the instructions were given verbally, and assistance rendered where necessary. Indeed the method adopted in this study, of the researcher remaining present during administration, going through the instructions with respondents and assisting where necessary, may be a step in the direction of overcoming this difficulty mentioned by Sechrest et al. (1972).

The third type of translation problem deals with the phrasing of the actual questions or items in ways that are comparable across the two languages. This refers to the equivalence of the language and meaning of the translated version and has been discussed in detail in Section 9.6.1 above.

The fourth type of translation problem concerns the adequate translation of the responses the participants give to the questions being asked. While greater difficulty arises where the response is of the open ended variety, the dichotomous response format of True/False of the LEE is somewhat less arduous to translate. It is interesting to note here that John (1996), in translating the General Health Questionnaire into Zulu, opted for a simplified dichotomous response format of Yes/No, instead of the original Likert scale, because the latter was considered by the translators to be confusing to the Zulu respondents. Shanahan (1998), on the other hand, chose to retain the Likert scale for the Zulu version of the SCL-90-R due to this being a measure of intensity. Gerlsma et al. (1992) in translating the LEE scale into Dutch, opted for a four-point Likert scale, ranging from 'not true', 'more or less untrue', 'more or less true' to 'true'. They did this, however, to enhance the reliability of the factor analysis they were undergoing on the LEE scale, and not to increase translation equivalence per se. In the case of the present study, to retain concurrent validity with the majority of published results of the LEE scale, and for parsimony, the dichotomous format was preserved. Thus the Zulu words *Qiniso/Phutha* were regarded by the translation team as best representing the True/False response format.

9.6.3 The Multi-Stage Process of Translation

Following Brislin (1970) and Sechrest et al.'s (1972) recommendations for maximising translation equivalence, a multi-stage process of translation, back-translation, item equivalence assessment, decentering and the committee approach were adopted. This process is outlined below. The bilingual technique of translation equivalence assessment was not employed, as this requires resources beyond the scope of the researcher, and also has been shown to be ineffective in assessing translation equivalence (e.g. Shanahan, 1998).

9.6.3.1 Translation

Two bilingual Zulu language experts, lecturers in the Zulu Department of the University of Natal at Pietermaritzburg, were contracted to translate the English language version of the LEE scale into Zulu. Both had had previous experience in translating psychological tests into Zulu, which is of benefit as Brislin (1970) notes that translation improves with practice. They were informed about the nature and purpose of the research and the intended use of the LEE scale. Also, they were provided with guidelines on the important areas of translation equivalence mentioned above, as well as ideas to overcome these. As in the Shanahan (1998) study, they were requested to rate each item according to the difficulty encountered in translation, for later use in identifying problematic items of the LEE. In this way six items were considered by them to have questionable equivalence in the translated version, and are discussed below (see 9.6.3.4).

9.6.3.2 Back-translation

The first Zulu version was then given to a bilingual, native Zulu-speaking clinical psychologist, who had had a number of years experience working in the psychiatric hospital setting, for back translation. He did this 'blind', i.e. he had not seen the original version of the LEE scale. His participation in the study was on a favour basis.

9.6.3.3 Comparison for Item Equivalence

As per recommendations by Brislin (1970), that several raters examine the original and back-translated versions for differences in meaning, both the English language versions of the LEE scale were then compared for item equivalence. The author and his supervisor did this individually, and each item was rated according to whether the intended meaning of each item was retained in the back-translated version. Here more import was given to experiential and conceptual equivalence, than to vocabulary and grammatical-syntactical equivalence (ibid.). Similar to the John (1996) study, each item was rated on a four-point scale where:

1 = equivalent in meaning

2 = equivalence not sure, distortion possible

3 = equivalence not sure, distortion likely

4 = non-equivalent in meaning

The scores across the two raters were averaged for each item, and 40 of the 60 items received a rating greater than one. These were then examined by the committee to ascertain the source of

the error (either translator or back translator error, see Brislin, 1970), as well as the problem of equivalence. Where necessary, decentering was practised. This is discussed in the next section.

9.6.3.4 Committee

A committee, consisting of the two bilingual Zulu language experts, the bilingual Zulu-speaking clinical psychologist and the researcher reviewed all 60 items, as well as instructions and response categories. Specific attention was paid to:

a) those items the translators found particularly difficult to translate;
b) those items that were rated as non-equivalent by both supervisor and researcher, and included those items with a rating greater than one; as well as
c) the instructions - the term 'influential person' was considered most thoroughly due to the importance to the LEE scale of it being adequately understood by the respondent.

9.6.3.5 Results of Translation Process

Six items (numbers 24, 26, 30, 31, 35, and 49) required almost complete revision by the committee as they were regarded as non-equivalent in meaning (they had received an average rating above three). Here the source of translation error or problem of equivalence was identified, and through discussion the committee decided on the best possible translation for these. For many items receiving an average rating of between two and three, errors were minor and required such corrections as the insertion of a word to qualify the concept meant in the original to promote equivalence. Thus for instance item 10 "loses his/her temper when I'm not feeling well" was back translated as "becomes irritated if I am unwell". Here the Zulu word *casuka* is

closest to the English word 'temper', but is less forceful, thus the qualifier *kakhulu* (much, a lot) was added to the item, such that it read: *Ucasuka kakhulu uma ngingaphilile-* becomes very irritated if I am unwell.

Conceptual equivalence proved difficult on some items, for instance item 20 "Puts me down if I don't live up to his/her expectations". This was back-translated as "Blames me if I fail to do what s/he expects me to do". The term 'puts me down', connotes humiliation, which was not captured in the Zulu word *-sola* (blames), and after discussion in the committee the word *-gxeka* (belittle, runs down) was chosen as the closest semantic equivalent.

Difficulties with experiential equivalence were encountered on a few items, such as item 35: "Says it's not OK to seek professional help". Here, the word 'professional' was translated into the Zulu word *lobuchwepheshe.* This was back translated as 'technological', and as referring to one who has professional knowledge. This is clearly the intention of the original item, intended for a target population who have some experience of professional as referring to doctors, or those with knowledge in a particular field. For the target population in this study, however, the word *lobuchwepheshe* would exclude reference to such practitioners as sangomas or inyangas, because their knowledge is seen as natural rather than technological. Here decentering was employed, whereby a more descriptive term was used to replace the original word professional. In this case the term *lwabawufundele lowomsebenzi,* meaning 'those who have been trained for their particular job/profession', was chosen.

With respect to the instructions, the term 'influential' (in the instruction: 'Please identify the person who has been most influential in your life during the past three month's) has no direct equivalent in Zulu. Thus the term *nomthelela omkhulu* was decided as most adequately conveying the intended meaning, and is translated as 'a major influence'.

In this way all those items requiring revision were dealt with by the committee. It is hoped that through this multi-stage process of translation, back-translation, item equivalence assessment, decentering and the discussions in the committee, that the Zulu version of the LEE scale is semantically equivalent to that of the original. Field testing with monolingual Zulu speakers, as in the John (1996) and Shanahan (1998) studies, was not carried out, as this involved resources not available to the researcher. This may form the basis of a further study. Further, despite psychometric evaluation of this version of the LEE scale not having been carried out, assessment of the predictive validity of the instrument forms a part of this study.

The Zulu translation of the LEE scale is presented in Appendix B. The LEE scale is fully protected by copyright and may not be reproduced in any manner without written permission from the authors, J.D. Cole and S.S. Kazarian.

CHAPTER 10

RESULTS

The results of the study are presented in this chapter in three sections. The demographic characteristics of the sample are presented first. Analyses of the Zulu SCL-90-R, and then an analysis of the Zulu LEE scale, follow. Incorporated at relevant points in this presentation is the testing of the formal hypotheses of the study. Data was analysed using the Statistical Package for the Social Sciences (Norusis, 1990), and is available from the author. Mann-Whitney *U* tests were used to test significance since their power compares well with the *t*- test while making fewer assumptions about the data (ibid.).

10.1 DEMOGRAPHIC DATA

Thirty-one inpatients of the Midlands Hospital Complex participated in this study. Just over half (52%) were female. Twenty-one per cent of the participants were married, one participant was divorced, and the remainder were single. The mean age of participants was 31.19 years (SD = 9.36). The mean number of years spent in education was eight years (SD = 3.17), ranging from one year (n = 1) to 15 years (one participant had completed tertiary education). Fifty-five percent of the participants resided in urban areas, the remainder in rural or peri-urban areas. Occupations reported by participants varied[1], with some working in skilled support services (26%, e.g. police services, nursing, teaching); fewer in skilled trade occupations (16%, e.g. bricklaying, hairdressing); while one third were domestic employees (32%, e.g. household domestic work,

[1] Four participants did not respond to this item, therefore totals do not sum to 100.

gardening, cleaning), and two participants were still in training. Just under half (48%) were employed prior to admission. Seven participants (24%) admitted to using substances, three of these to marijuana use, two to alcohol use, and two to both.

Twenty-six participants had a diagnosis of Schizophrenia as per DSM IV (APA, 1994), five of these with the Paranoid subtype, two with the Disorganized subtype. Two participants had a diagnosis of Schizoaffective Disorder, one a diagnosis of Schizophreniform Disorder. During follow-up scrutiny of hospital files it was ascertained that two participants had their diagnosis changed prior to discharge, one from Schizoaffective Disorder to Bipolar Disorder, while another was diagnosed with epilepsy; both were subsequently dropped from further analysis. This further reduced the number in the sample to 29.

The mean number of prior admissions was 1.73 (SD =1.6); ranging from this being their first admission (n = 8), to five previous admissions (n = 2). The average time spent in hospital for the index admission was 39.4 days (SD = 25.95).

10.2 OUTCOME

Six participants were readmitted to hospital in the nine-month follow-up period, four male and two female participants. However, one female participant was readmitted for one night due to social reasons, and did not have an exacerbation of symptoms. While outcome in this study was defined as rehospitalisation, an assumption of symptom exacerbation does underlie this definition. Thus with the other five participants, where hospital records did indicate an exacerbation of symptoms and relapse, it is more likely that they did relapse. This was obviously

not the case for this female participant, who was subsequently included in further data analysis in the non-readmitted group. The number of readmissions due to relapse in the present study is thus five (17%).

It was hypothesised that the rehospitalisation rates for Zulu schizophrenics will be lower than that of Anglicized samples (Hypothesis 4). An overall relapse rate of 17% for this sample is half of the 36% average relapse rate reported in the aggregate analysis of twenty-five EE studies carried out by Bebbington and Kuipers (1994). Hypothesis 4 is thus confirmed.

It was hypothesised that more males than females will be readmitted to hospital (Hypothesis 5). Of the five participants who were readmitted, four were male, thus despite these being too few cases to run a significance test with, the result is in the expected direction.

It was also hypothesized that participants who use substances will have a greater readmission rate than participants who do not (Hypothesis 6). Of the seven participants who admitted to using substances, only two were readmitted to hospital at follow-up. At the same time, three of the participants who were readmitted did not report using substances. These being too few cases to run a significance test, this hypothesis remains unconfirmed. However, the trend is in the direction opposite to that hypothesised.

10.3 SCL-90-R

10.3.1 Internal Reliability

The internal-consistency reliabilities (coefficient alpha) for the nine symptom dimensions of the Zulu SCL-90-R are presented in Table 2. For comparative purposes those achieved by Shanahan (1998) in the validation study are included (61 bilingual students). Three scales (Obsessive-Compulsive, Paranoid Ideation and Psychoticism) were below 0.80, and the majority are similar to those found in the Shanahan (1998) study.

TABLE 2

INTERNAL- CONSISTENCY COEFFICIENTS FOR THE ZULU SCL-90-R

Symptom dimension	Number of items	Coefficient α	
		Present study	Shanahan (1998) study
Somatization	12	.87	.77
Obsessive-Compulsive	10	.79	.80
Interpersonal Sensitivity	9	.86	.88
Depression	13	.89	.84
Anxiety	10	.88	.81
Hostility	6	.82	.83
Phobic Anxiety	7	.80	.63
Paranoid Ideation	6	.77	.74
Psychoticism	10	.64	.76

10.3.2 Concurrent Validity

The mean scores for all Zulu SCL-90-R scales are presented in Table 3. For comparative purposes the Zulu psychiatric inpatient (N = 23 males) mean scores found in the Shanahan (1998) study, as well as the American psychiatric inpatient (N = 313) mean scores (Derogatis, 1983), are included. The Zulu mean scores in both the present study and Shanahan's (1998) study were similar, and higher than the American mean scores (except in the case of the Depression scale). Although *t* tests could have been run to test the differences between these and the American scores, for the sake of brevity these were not undertaken.

TABLE 3

ZULU SCL-90-R MEAN SCORES

Scale	Present study	Shanahan (1998) study	Derogatis (1983) study
Somatization	1.50	1.50	0.99
Obsessive-Compulsive	1.78	1.87	1.45
Interpersonal Sensitivity	1.77	1.61	1.32
Depression	1.72	1.88	1.74
Anxiety	1.76	2.02	1.48
Hostility	1.41	1.46	0.94
Phobic Anxiety	1.44	1.60	0.96
Paranoid Ideation	1.68	1.78	1.26
Psychoticism	1.67	1.96	1.11
GSI	1.67	1.77	1.30
PSDI	2.72	3.13	2.15
PST	53.80	49.65	50.03

10.3.3 Predictive Validity

The Zulu SCL-90-R mean scale scores for readmitted and non-readmitted participants are compared in Table 4. As is evident from Table 4, four of the symptom dimensions, the Global Severity Index and the Positive Symptom Total significantly predicted whether participants would be readmitted to hospital. Surprisingly, the readmitted participants had lower scores on the Zulu SCL-90-R.

TABLE 4

COMPARISON OF ZULU SCL-90-R MEAN SCORES FOR READMITTED AND NON-READMITTED PARTICIPANTS

	Readmitted (N = 5)		Non-readmitted (N = 24)		
Scale	Mean	SD	Mean	SD	Significance[a]
Somatization	0.63	0.54	1.68	0.96	*
Obsessive-Compulsive	1.04	0.78	1.93	1.00	NS
Interpersonal Sensitivity	1.04	1.24	1.91	1.10	NS
Depression	0.94	1.16	1.87	0.96	NS
Anxiety	0.86	0.79	1.94	1.18	*
Hostility	0.17	0.29	1.67	1.13	***
Phobic Anxiety	0.57	0.61	1.62	1.16	NS
Paranoid Ideation	0.90	1.09	1.84	1.14	NS
Psychoticism	0.90	0.69	1.83	0.82	*
GSI	0.80	0.67	1.88	0.90	*
PST	26.40	21.41	59.28	24.28	*

[a]Mann-Whitney *U* Test *p < .05 ***p = .001

10.4 LEE SCALE

Participants completed the Zulu LEE scale in response to the most influential person in their life in the preceding three months. Forty-five percent rated a parent, 26% rated a sibling, 7% rated a spouse, 3% rated a child, 3% rated a friend, and 16% rated another family member such as an aunt, sister-in-law or grandmother. Seventy-one percent of the participants were living with this influential person at the time of the index admission. The LEE scale also provides for the participant to record the amount of contact, in hours per weekday and weekend, they have with this influential person. Unfortunately, a large number of participants did not complete this item, thus estimated hours of face-to-face contact was not obtained for this sample.

10.4.1 Internal Reliability

The internal-consistency reliabilities (coefficient alpha) for the four subscales and scale total of the Zulu LEE scale are presented in Table 5. For comparative purposes the Kuder-Richardson 20 coefficients of those achieved by Cole and Kazarian (1988) in the validation study are included (46 schizophrenic outpatients). The coefficients for the present study are lower than those in the validation study, and render the internal reliability of the Zulu LEE scale somewhat unsatisfactory.

TABLE 5

INTERNAL CONSISTENCY COEFFICIENTS FOR THE ZULU LEE SCALE

Scale	Present study coefficient α	Cole and Kazarian (1988) Kuder-Richardson 20
Intrusiveness	0.65	0.88
Emotional Response	0.68	0.86
Attitude Toward Illness	0.76	0.84
Tolerance/ Expectation	0.79	0.89
Overall LEE scale	0.90	0.95

This poor result may be due to a number of reasons, to be explored in detail in the Discussion below. However, one possibility may be that the original English version of the LEE scale lacking internal reliability. To explore this the literature on the LEE scale was reassessed.

The factor analyses of the Dutch version of the LEE scale by Gerlsma et al. (1992) were re-examined, particularly with a view to assess their method of scoring the LEE scale. With a sample of 345 healthy adults, they found that only 33 of the original items of the LEE scale had adequate factor loadings, with a three-factor solution most appropriately explaining the variance. They called these factors: 'lack of emotional support', 'intrusiveness/control', and 'irritability'. These differed from the structure designed by Cole and Kazarian (1988), in that, for instance, the 'lack of emotional support' factor they found consisted of items originally belonging to the expectancy/tolerance, attitude towards illness, and emotional responsivity scales.

A further literature search revealed a more recent study using these 33 items of the English version of the LEE scale, in factor analysis with healthy adults, which confirmed these factor analytic results (Startup, 1999). The 33 items comprising these three factors were then obtained

from the latter author (Startup, personal communication), and the data were reanalysed. These results are presented in Table 6, with the internal reliabilities of the Dutch version (Gerlsma et al., 1992) and the English version (Startup, 1999) included for comparison.

TABLE 6

INTERNAL CONSISTENCY COEFFICIENTS FOR 33 ITEMS OF THE LEE SCALE

Scale	Zulu version coefficient α	Dutch version[a] coefficient α	English version[b] coefficient α
Lack of emotional support	0.86	0.89	0.88
Intrusiveness/control	0.73	0.78	0.83
Irritability	0.46	0.79	0.84
Overall 33-item LEE scale	0.87	0.91	0.92

[a]Gerslma & Hale(1992) [b]Startup (1999)

These results indicate that the English version attains the highest level of internal reliability, followed by the Dutch and the Zulu versions. As the results do not indicate a substantially better reliability for this method of scoring the Zulu LEE scale, the predictive ability of both methods was assessed.

10.4.2 Predictive Validity

Due to the lack of empirical evidence to determine cut-off points for the LEE scale, the convention of taking the median score as suggested by Cole and Kazarian (1993) was employed. Analysing the 60-item LEE (Cole & Kazarian's method of scoring, 1988), the median for the sample was 22, while analysing the 33-item LEE (Gerslma & Hale's method of scoring, 1992),

the median for the sample was 12. The high/low LEE split, as well as the admission status of the participants at nine-month follow-up, are shown in Table 7. Despite their being too few cases in each group, significance tests (Mann Whitney *U*'s) were carried out to see if the LEE scale, both 60-item and 33-item versions, as well as the subscales of each, predicted relapse. Despite being in the right direction, none of these approached significance.

TABLE 7

HIGH/LOW LEE SCALE MEDIAN SPLIT AND

ADMISSION STATUS AT 9-MONTH FOLLOW-UP

	60- ITEMS		33- ITEMS	
LEE SCORE	Not readmitted	Readmitted	Not readmitted	Readmitted
HIGH LEE	13 (45%)	3 (10%)	12 (41%)	3 (10%)
LOW LEE	11 (38%)	2 (7%)	12 (41%)	2 (7%)

It was hypothesised that more participants rated high on the LEE scale would be rehospitalised than those rated low on the LEE scale (Hypothesis 1). As is evident from Table 7, although in the right direction, this hypothesis was not statistically confirmed.

In some expressed emotion studies the cut-off scores on the CFI (see sections 2.2, 2.3 and 3.2 above) have been lowered, when the traditional cut-offs do not generate statistical significance (e.g., Bertrando et al., 1992; Linszen et al., 1997; Moline et al., 1985; Montero et al., 1992). The predictive ability of the LEE scale did not improve when this cut-off score was lowered, as a cut-off score of 14 on the 60-item version (the lowest score attained by a rehospitalised participant), led to a high/low LEE split of 24/5 participants. Thus five of 24 high LEE participants were rehospitalised, compared to none of five low LEE participants, a spurious finding.

Socio-demographic data on the three high LEE participants and the two low LEE participants were broadly similar, except for domicile. On this variable, the three high LEE participants were all urban dwellers, whereas the two low LEE participants were both rural dwellers. Domicile on its own was not a predictor of rehospitalisation, nor was it a predictor of high/low LEE status.

It was also hypothesised that high scores on the LEE scale were predictive of higher previous hospitalisation rates in Zulu schizophrenics (Hypothesis 2). Participants who scored 22 and above on the LEE scale averaged 2.25 previous hospitalisations, whereas participants who scored less than this median cut-off averaged 1.08 previous hospitalisations. This difference was significant ($U = 52.5, p < 0.05$), thus confirming Hypothesis 2.

It was also hypothesised that scores on the LEE scale would be lower for the Zulu-speaking sample than for an Anglicized sample (Hypothesis 3). Cole and Kazarian (1988) report a median LEE scale score of 12 for their Canadian sample. This being almost half that found for the Zulu sample (median = 22), this hypothesis was not confirmed.

Further analyses were done on the data to see if any other variables (e.g. age, education, occupation, employment status prior to admission, domicile, etc.) were predictive of rehospitalisation. None of these variables approached significance.

CHAPTER 11

DISCUSSION

11.1 SAMPLE PROFILE

The small sample size (n = 29) reported on in this study renders caution necessary when considering the results. The demographics of this sample are broadly similar to the profile of the average black schizophrenic inpatient found in the Macpherson (1995) study, thus the sample can be considered to be typical of hospitalised black schizophrenic patients. Twenty four percent of participants admitted to using substances, which was higher than the 8% reported by Macpherson (1995). This may be due to an under-reporting of substance users in her sample, as she used hospital records to ascertain patient information, whereas in the present study participants were questioned directly. Alternatively, it may represent a higher proportion of substance users in the present sample. The average time spent in hospital for the index admission was 39.4 days (SD = 25.95), only slightly lower than the average (41.54 days) reported by Macpherson (1995).

Also of note in the present sample was the mean number of years spent in education (8 years), with 58% of the sample having some high school education (excluding matric). This is considerably higher than the national South African average: 32.8% of blacks have some high school education (Statistics South Africa, 1998).

Just under half of the sample (48%) were employed prior to admission, making the unemployment rate of this sample almost 20% lower than the provincial average for KZN (Wilkins & Hofmeyer, 1994, in Macpherson, 1995). Unfortunately, due to missing data, it was impossible to establish meaningful socio-economic status information for the sample.

With regard to length of illness, Butzlaff and Hooley (1998), in their meta-analysis of expressed emotion studies, categorized studies in terms of patient chronicity into three groups. The first group, *recent onset*, included those studies with over 50% of participants experiencing a first admission. The second group, *mixed*, included those studies with 30% of participants experiencing a first episode, and an average number of prior hospitalizations not exceeding 2.8. The third group, *chronic*, included those studies with participants experiencing three or more prior hospitalizations. The present study, with a mean of 1.73 prior admissions for the entire sample, and 28% experiencing their first admission, would fall into this mixed category. Butzlaff and Hooley (1998) found that the magnitude of the EE-relapse link was greatest in studies comprising the chronic group.

11.2 OUTCOME

Difficulties with the definition of outcome in this study were similar to those with expressed emotion studies generally (e.g., Bebbington & Kuipers, 1994; Liberman, 1986; Mari & Streiner, 1994). Six participants were readmitted to hospital in the nine-month follow-up period, however, patient files reflected that only five of these had had an exacerbation of symptoms/ relapse. The sixth participant was readmitted for one night due to social reasons, and did not have an exacerbation of symptoms. While outcome in this study had been defined as rehospitalisation, it

was decided to exclude this participant from the readmitted group in data analysis as it was clear that no relapse had occurred. This was because an assumption of symptom exacerbation does underlie the definition of rehospitalisation. Thus simply assessing admittance status as an indication of relapse, without ascertaining the reasons for this, would result in a high number of false positives, and indicates the inadequacy of this technique in assessing relapse status.

At the same time, although the admitting psychiatric registrar had diagnosed the other five participants as having undergone a schizophrenic relapse, independent verification of this did not occur. Other reasons, such as patients being admitted due to violent behaviour (Macpherson, 1995), or high EE relatives seeking readmission for their schizophrenic member more readily than low EE relatives (Hooley, 1985), may account for their being readmitted. This difficulty is intensified in view of the surprising result that those participants who reported lower levels of psychological distress at index admission were more likely to be readmitted. This is discussed further in Section 11.3.3 below, but again highlights the difficulties when researchers themselves do not interview participants to assess symptom status.

It will be appreciated that a rehospitalisation rate as low as this (17%) reduces the likelihood of demonstrating significant associations of any factor with rehospitalisation.

These limitations notwithstanding, an overall relapse rate of 17% for this sample is far lower than the 46% relapse rate reported by Cole and Kazarian (1993) in the initial LEE scale validation study. It is also half of the 36% average relapse rate reported in the aggregate analysis of twenty-five EE studies carried out by Bebbington & Kuipers (1994), thus confirming

Hypothesis 4. This result is similar to that found for expressed emotion studies in developing countries, for instance Leff et al. (1987) report a 14% relapse rate in their Indian sample at one year follow-up. Indeed, this also lends tentative support to the findings of the WHO Collaborative Study on Schizophrenia, which found that schizophrenic patients from developing countries have a better prognosis than those from developed countries (Sartorius et al., 1986).

The trend was for more males than females being readmitted to hospital (Hypothesis 5), which lends tentative support in the South African setting to the international finding that the course of schizophrenia is better for females (APA, 1994). That participants who use substances did not have a greater readmission rate (Hypothesis 6) is surprising, considering that this variable has been found to be highly predictive of relapse (Donat et al., 1992; Donat, 1997; Linszen et al., 1996; Linszen et al., 1997). This may be due to the course of schizophrenia, despite debilitating variables such as substance use, being better in this sample. Alternatively, this finding may be due to too few cases.

11.3 SCL-90-R

11.3.1 Internal Reliability

The reliability coefficients of the Zulu SCL-90-R, shown in Table 2, were all satisfactory, ranging from 0.77 (Paranoid Ideation) to 0.89 (Depression, Anxiety); with the exception of the Psychoticism scale, which had a coefficient alpha of 0.64. A possible explanation for this poor result on the Psychoticism scale may be a lack of criterion validity of this scale, as some of the items of the scale may not be representative of psychotic behaviour with Zulu-speakers (Shanahan, 1998). For instance, No. 87: "the idea that something serious is wrong with your

body", is likely to be endorsed by many participants, given that mental illness is often somatized in Zulu culture (Ngubane, 1977).

The fact that it was lower than the 0.76 found in the Shanahan (1998) study (see Table 2), may be an artefact of the particular population of the present study. Shanahan's (1998) sample was made up of bilingual students, whereas this was a psychiatric inpatient sample. A further explanation for this low result may be that the original English scale itself lacks internal validity, as this scale has been found to be insensitive to the diagnosis of psychosis (Wetzler & Marlowe, 1993, in Shanahan, 1998).

11.3.2 Concurrent Validity

The mean scores for all Zulu SCL-90-R scales, presented in Table 3, were similar to the Zulu psychiatric inpatient mean scores found in the Shanahan (1998) study, indicating the concurrent validity of the test. A cross-cultural comparison, with American psychiatric inpatient population mean scores (Derogatis, 1983), also included in Table 3, show that the Zulu inpatients scored higher on all symptom dimensions (except for the Depression scale). This confirms Shanahan's (1998) previous findings that Zulu-speakers report higher rates of psychological distress than their American counterparts. Additional analyses testing the statistical differences between these scores could have been carried out. However, for the sake of brevity, and due to the SCL-90-R not being a major part of this study, these were not undertaken. These results indicate cross-cultural differences in the reporting of psychological distress, and, as suggested by Shanahan (1998), support the need for full-scale renorming and standardisation of the Zulu SCL-90-R for use with this population.

Overall however, despite administrative differences between the two studies (Shanahan's inpatient sample was administered the SCL-90-R verbally), the internal reliability and concurrent validity of the Zulu SCL-90-R appears to have been confirmed with psychiatric inpatients in the present study. This confirms, as Shanahan (1998) suggests, that this test may be validly utilized in the screening for mental illness in a Zulu-speaking population. Due to the Zulu SCL-90-R mean scores being consistently higher, it is suggested that renorming be undertaken.

11.3.3 Predictive Validity

The Zulu SCL-90-R mean scale scores for readmitted and non-readmitted participants are compared in Table 4. The scores are lower for the readmitted participants on all nine symptom dimensions, and significantly so for four of these (Somatization, Anxiety, Hostility, and Psychoticism). Further, the global psychological distress score (GSI) is also significantly lower for the readmitted group. This rather surprising result indicates that lower scores on the Zulu SCL-90-R, and lower reports of psychological distress at index admission, significantly predict whether participants would be readmitted to hospital at nine-month follow-up.

In explaining this finding, it is possible that those who reported less psychological distress (as reflected in low SCL-90-R scores) were in denial of their psychological state. Considering that lack of insight is a defining feature of schizophrenic symptoms (APA, 1994), it is possible that those participants who underreported symptomatology on the Zulu SCL-90-R, may have been unaware of the severity of their illness. Those participants who scored higher on the Zulu SCL-90-R may have been giving a realistic account of their psychological state, of which they were aware, and thus possibly engaged in preventive actions (such as medication compliance) to

ensure the illness did not return/exacerbate. This could account for their remaining out of hospital.

Overall, lower scores on the SCL-90-R were significantly predictive of participants who would be readmitted to hospital nine months after index admission. Further analyses of individual items on the checklist would possibly reveal additional reasons as to why this is the case, and contribute to the use of this instrument in the hospital setting, as a predictor of readmittance if necessary.

11.4 LEE SCALE

11.4.1 Internal Reliability

Shaw and Wright (1967, in Shanahan 1998) recommend reliability coefficients of at least 0.75 for psychological scales. Two of the coefficients for the Zulu LEE scale were below this recommended level: the Intrusiveness and Emotional Response scales, attaining coefficients of 0.65 and 0.68 respectively (see Table 5). The remaining two scales, Attitude Toward Illness and Tolerance/ Expectancy, as well as the overall LEE scale, all attained satisfactory coefficients, at 0.76, 0.79, and 0.90 respectively. The poor result attained with the first two scales renders the internal reliability of the Zulu LEE scale somewhat unsatisfactory, and may be due to a number of reasons.

One possibility is that the participants may have been too unsettled, due to being in the active phase of their psychosis, to answer the test coherently. Alternatively, due to limited exposure to tests, the participants may have had a low degree of test-wiseness (Nell, 1999), rendering their

responses on the Zulu LEE scale non-uniform. These possibilities are unlikely though, as the internal reliabilities of the Zulu SCL-90-R were satisfactory, indicating that the participants were able to respond to the tests adequately and coherently. Further, the higher than average level of education (8 years) reported in this sample, indicate that some degree of test-wiseness can be expected of the participants.

A third possibility is that the translation of the LEE scale into Zulu was poor. Despite an experienced team of bilingual Zulu experts being employed in the translation process, no field testing/ pretesting with monolinguals of the target population was carried out, due to these being beyond the resources of the researcher. Also, factor analysis was not carried out with results from a non-schizophrenic Zulu sample. Thus, some items of the Zulu version of the LEE scale may not be equivalent across the two languages, which would account for some of the scales having lower than acceptable reliabilities. Indeed, a few items correlated negatively with their subscale totals, indicating that these are likely to be poor measures of the construct that the subscale is measuring. One source of this could be poor translation.

For instance item 14, "Doesn't panic when things start going wrong", from the Emotional Response scale, was one such negatively correlating item. This was translated as "*Akethuki uma izinto ziqala ukonakala*". The Zulu word '*-thuki*', while conveying a sense of panic as intended in the English item, also means 'shocked, startling, of sudden fear, sudden fright' (Doke, Malcolm, Sikakana & Vilakazi, 1990). These synonyms do approach the meaning of panic, but, would not be used in the same context as that of the English word. Thus, for instance, in Zulu, one would express *uyathuka* on hearing of the death of a loved one. In English, shocked or

startled would be the likely terms used, not panic. At the same time, one would not express *uyathuka* when under pressure to meet a deadline, however, one would express panic. Thus subtle semantic differences in the two languages, and how words are used in the two languages, appear to have caused this item to correlate negatively with the item subscale total. In this instance it appears that conceptual equivalence (Sechrest et al., 1972) was not achieved in the target language item. Decentering may overcome this difficulty (Brislin, 1970).

A fourth possible reason for the poor internal reliability of the Zulu LEE scale may be that the English version lacks internal reliability. To explore this the literature on the LEE scale was reassessed. Factor analysis of the Dutch version of the LEE scale by Gerlsma et al. (1992) revealed that with a sample of 345 healthy adults, only 33 of the original items of the LEE scale had adequate factor loadings. They found that a three-factor solution most appropriately explained the variance, which differed from the original four scales developed by Cole and Kazarian (1988). They called these factors: 'Lack of emotional support' (19 items), 'Intrusiveness/control' (7 items), and 'Irritability' (7 items). Further confirmatory factor analysis for this 33-item form, using the English version of the LEE scale has been forthcoming (Startup, 1999).

The 33 items comprising these three factors were then obtained from the latter author (Startup, personal communication), and the data were reanalysed to see if the internal reliability of the Zulu LEE scale could be improved.

Only one of the three scales, the Lack of Emotional Support scale, and the Overall Scale Total, had satisfactory coefficient alphas of 0.86 and 0.87 respectively (see Table 6). The Intrusiveness/control scale was almost satisfactory at 0.73, however the Irritability scale had a very poor coefficient alpha of 0.46. Comparing the reliabilities of the Zulu version to the Dutch (Gerlsma et al., 1992) and English (Startup, 1999) versions, it appears that the latter has the most satisfactory internal reliability (see Table 6). The less favourable reliabilities of the Dutch and Zulu versions are possibly due to translation errors, or differences between the source cultures (English-speaking Canadians and Britons) and target cultures (Dutch and Zulu-speakers) to whom the test was administered.

Given that both methods of scoring the LEE scale failed to result in satisfactory reliabilities for all the subscales, it is probable that the third reason, translation inadequacies, is one likely source of this finding. This indicates that the LEE scale requires field-testing, as suggested by Brislin (1970), in order to ascertain the reasons why items contribute negatively to the internal reliability of the scales. At the same time, Gerlsma et al. (1992) found it necessary to discount almost half of the LEE scale items in order to attain adequate factor loadings. This indicates that the LEE scale itself requires revision. Further, as Gerlsma et al. (1992) and Startup (1999) indicate, the lack of a subscale measuring perceived criticism on the LEE scale, where this variable is considered one of the most important expressed emotion predictors of relapse (Leff & Vaughn, 1985), constitutes a shortcoming of the instrument.

In summary, the internal reliabilities of the Zulu LEE scale could be improved, possibly through the implementation of field testing and factor analysis. In addition, the original English scale

(either the 60-item or the 33-item versions) could be improved such that one method of scoring could be consistently recommended for use as an alternative to the more complex CFI. The insertion of items assessing criticism (Gerlsma et al., 1992; Gerlsma et al., 1997; Startup 1999) to this improved version, is suggested.

11.4.2 Predictive Validity

Due to the overall LEE scale totals having high reliabilities (0.90 for the 60-item, and 0.87 for the 33-item versions, see Tables 5 and 6), the predictive validity of these were assessed. Using the median score as the cut-off for high/low LEE scores (Cole & Kazarian, 1988), the cut-off for the 60-item version was 22, and the cut-off for the 33-item version was 12. For both versions of scoring the LEE scale, three of the five rehospitalised participants were in the high LEE group (Table 7). The differences in the numbers of participants in the high LEE and low LEE groups, and their readmittance status, while in the expected direction, are too small to generate meaningful results.

Lowering the cut-off score, as has been done in some expressed emotion studies (e.g., Bertrando et al., 1992; Linszen et al., 1997; Moline et al., 1985; Montero et al., 1992), to see if a score other than the median could significantly predict rehospitalisation, yielded nonsignificant results. This confirms the spuriousness of changing cut-offs in attempting to generate statistically meaningful results (Bebbington & Kuipers, 1994; Kanter et al., 1987; Parker et al., 1988). Thus, for this sample, participants rated high on the LEE scale were not rehospitalised significantly more than those rated low on the LEE scale (hypothesis 1). A number of factors may explain this result.

As mentioned above, the Zulu version of the LEE scale lacks satisfactory internal reliability on some of its subscales. This may mean that it is not able to predict rehospitalisation with Zulu schizophrenics due to a poor translation. Related to this, and central to Kleinman's (1987) discussion of reification, is that it is possible that perceived expressed emotion, the underlying construct which this test is purporting to measure, is not predictive of rehospitalisation. At the same time, expressed emotion may not be a construct that has explanatory power in the course of schizophrenia with Zulu speakers due to its lacking cultural validity with this sample. This may account for it being predictive of rehospitalisation with a Canadian sample, but not with a Zulu sample.

On the other hand, Cole and Kazarian (1993) found that the LEE did not significantly predict relapse at 12-month follow-up. In their study, the LEE scale was able to significantly predict rehospitalisation from the second year of follow-up onwards. Similarly, Donat (1997) found that only the Intrusiveness subscale of the LEE scale was predictive of relapse at the end of a two-year follow-up period. Thus it is possible that the LEE scale is not predictive of relapse within the shorter follow-up time period of nine months employed in this study.

Also, the sample was very small in the present study, with a low rehospitalisation rate, which renders the generation of meaningful results extremely difficult. Had the sample been larger, and had there been more rehospitalisations, more certainty could have been gained as to the nature of the factors causing this lack of predictive ability of the LEE scale.

At the same time, the finding that high scores on the LEE scale are significantly predictive of higher previous hospitalisation rates in Zulu schizophrenics (Hypothesis 2), is interesting in light of the above. This would suggest that the Zulu LEE scale, despite its shortcomings, does evidence some kind of predictive validity in the course of schizophrenia with Zulu-speakers.

Analysis of socio-demographic trends, of the three high LEE participants and the two low LEE participants who were readmitted, revealed only one consistent difference between the two groups. The three high LEE participants were all urban dwellers, whereas the two low LEE participants were both rural dwellers. At the same time domicile was not a predictor of rehospitalisation, nor was it a predictor of high/low LEE status. These results suggest the possibility that there may be an interaction between being readmitted and being a high-LEE urban-dweller.

Despite these being too few cases to run analyses with, and the lack of a significant high/low LEE status and domicile interaction, this bears similarity to the trend found in cross-cultural expressed emotion studies, that urban dwellers are more likely to be rated high EE (see Table 1). For instance, in an Indian sample, Wig et al. (1987a) found that urban dwellers had significantly higher mean scores on the Critical Comments and Hostility scales of the CFI than did their rural counterparts. They suggest that this may be due to rural dwellers, living in extended families, having high EE levels diluted among more relatives, a cross-cultural difference highlighted by Jenkins and Karno (1992). Further studies with a greater sample size may bring clarity to this finding with Zulu schizophrenics.

The finding that scores on the Zulu LEE scale were substantially higher for the Zulu-speaking sample than for the Canadian sample reported by Cole and Kazarian (1988) is perplexing from a cross-cultural perspective. It was expected, based on the discussion in Chapter Seven above, that Zulu schizophrenics might report lower levels of perceived expressed emotion than Anglicized schizophrenics. This may represent a de facto higher level of perceived EE in Zulu speakers, or it may be due to other underlying factors. For instance, Shanahan (1998) suggests that Zulu-speakers may have a more augmentative style of responding. If this is the case, participants would then have more likely ticked the True box than the False box of the LEE scale, due to an augmentative style of responding, rather than due to their believing their influential relative to be more intrusive, more emotionally responsive or have a lower level of tolerance towards their illness. Alternatively, deficiencies of the Zulu LEE scale, mentioned above, may account for this finding. This finding is discussed further below.

In summary, high scores on the LEE scale were not significantly predictive of rehospitalisation in Zulu schizophrenics. However, high scores were significantly predictive of a greater number of previous admissions. This discrepant finding may be due to poor internal reliability, or due to the LEE scale only being predictive at longer follow-up time periods. Also, Zulu-speakers, on average, scored higher perceived expressed emotion scores than did their Canadian counterparts.

11.5 GENERAL DISCUSSION

In the Introduction to this thesis it was stated that this research project would attempt to contribute to two areas of psychological interest: an understanding of expressed emotion through a cultural elucidation of the construct on the one hand, as well as attempting an empirical study

with Zulu schizophrenics, a previously under-researched yet majority user of psychiatric facilities, on the other. This section evaluates and discusses the findings from the study in relation to these topics.

11.5.1 Expressed Emotion

Suggestions about the contribution of this research to an understanding of expressed emotion is necessarily limited by a number of factors. Uncertainty about the psychometric properties of the Zulu LEE scale, a small sample size with low numbers of rehospitalisations, as well as paucity of detail on Zulu expressed emotion factors outlined in Chapter Seven above constituting some of these. Bearing these in mind, a few tentative suggestions follow.

High scores on the Zulu LEE scale were not predictive of rehospitalisation at nine-month follow-up, however, they were predictive of greater previous admissions. This suggests that expressed emotion, the underlying construct the LEE scale purports to measure, may have explanatory power in the course of Zulu schizophrenics' illness. At the same time, contrary to expectations, Zulu schizophrenics reported higher levels of perceived EE than did their Anglicized counterparts.

Operationally, this indicates that Zulu schizophrenics may perceive their relatives as being more intrusive, more emotionally responsive to their illness, have a more negative attitude toward their illness, and have a lower level of tolerance and higher expectations of them, than their Anglicized counterparts. Also, despite expectations based on expressed emotion theory, that this would contribute to greater rehospitalisations at follow-up, the opposite in fact occurred. The low

rehospitalisation rate of the present sample was similar to that of an Indian sample, who have among the lowest levels of EE reported (Leff et al., 1987), and half the expected rehospitalisation rate of the average expressed emotion studies (Bebbington & Kuipers, 1994).

This suggests that higher levels of expressed emotion, in Zulu schizophrenics' relatives, has a salutatory effect on the course of the illness. This finding is unique, and difficult to reconcile with expressed emotion theory, which would suggest the opposite should occur. Explanation of this may be found on a number of levels.

This finding may be representative of a category fallacy (Kleinman, 1987). That high levels of EE have a salutatory effect on the course of schizophrenia, contrary to expressed emotion theory, is evidence that the construct has no cultural validity with Zulu schizophrenics, and further discussion implies reification. This is the most conservative conclusion that can be drawn, however, mention of other factors that could explain this finding may prove useful in understanding the nature of expressed emotion.

It may be that the LEE scale is predictive of previous admissions in this sample, and of relapse in the Canadian sample, not because of its relationship to EE, but due to some third factor. Recalling that the LEE scale measures patients' perceptions of their relatives' EE, it may well be possible that what the participants report as their experiences of their relatives' behaviour does not reconcile with how their relatives do in fact behave towards them. Thus, for instance, it may be that a more pessimistic view of relatives' behaviour is what high scores on the LEE scale

represent, and that it is this trait of the participants that in some way impacts on a greater rate of relapsing.

Partial evidence for this is provided by the studies of personality types carried out by Donat et al. (1992) and Donat (1996, 1997). Those patients who scored highest on the LEE scale were those who scored highest on the Passive-Aggressive, Borderline, Self-Defeating, Avoidant and Antisocial subscales, suggestive that these patients had a more critical evaluation of the interpersonal style of their most influential caregiver. At two-year follow-up, membership of this cluster was the greatest predictor of readmission to hospital.

This finding may be representative of an aspect of patient characteristics that impact on relapse. How this relates to expressed emotion though is unclear, and an explanation is beyond the capability of the present author. At the same time, this finding may indicate that what the CFI purports to measure is something wholly different from that which the LEE scale purports to measure, and that both may predict relapse, but for different reasons. This issue needs to be borne in mind by researchers working with these instruments.

Another explanation for this finding may lie in some factor unique to Zulu culture. For instance, the effects on EE of mental illness being a malevolent agency to which responsibility is ascribed are unknown. Also, despite the socio-centric nature of Zulu kin relations being understood as salutatory within the expressed emotion framework, the impact on expressed emotion of the hierarchical and patriarchal nature of the traditional Zulu order is unknown. Further, and crucial

to a discussion of expressed emotion, is knowledge of the vocabulary of emotions and the expression and inhibition of these in Zulu culture.

One, a combination of some, or all of these factors may render the understanding of expressed emotion in Zulu culture something quite different to that found in previous expressed emotion studies. This may, in turn, indicate a possible different relationship between EE and relapse in Zulu culture. Discussion of these ideas is beyond the capability of the present author.

In summary, the nature of the relationship between expressed emotion and relapse in Zulu schizophrenics remains unclear. Further studies with this population are needed, most importantly an assessment of Zulu schizophrenics' experience of their condition. Further, administration of the CFI with this sample may render results more easily comparable to previous findings. Finally, it is possible that a longer follow-up period will render clarity to these findings.

11.5.2 Empirical Research, Schizophrenia, and Zulu South Africans

An anecdotal finding from the present study, confirming reports in the literature on empirical research in the South African setting, relates to the difficulty encountered in conducting this research. Logistical difficulties were encountered, such as shortages of staff, finances, and facilities, as well as translation and interpretation barriers (Cheetham & Rzadkowolski, 1980; Macpherson, 1995; Shanahan, 1998; Strebel, et al., 1999; Uys & Zulu, 1996; Wassenaar, 1987). In addition to this, great difficulty was encountered in attempting to formulate Chapter Seven, without the requisite studies and data to draw on. The paucity of detail found in this chapter is

testimony to the lack of empirical studies undertaken with black schizophrenic participants (Durrheim & Mokeki, 1997; Seedat, 1998; Visser & van Staden, 1990).

Due to this deficiency, Macpherson (1995, p. 7), in her Global Information Systems (GIS) survey of the prevalence of schizophrenia in KZN, had to *estimate* the relapse rate of black schizophrenics. She estimated that those patients who were readmissions constituted less than one percent of her sample of 1 661 patients. In the present study, with a sample largely similar to hers on socio-demographic data, 79% were readmissions, of which 17% were readmitted within nine months. This discrepancy may be due to this sample including more chronic schizophrenics than Macpherson's (1995). Nevertheless, discrepancies such as these need to be addressed by empirical research. Policy makers cannot be expected to allocate resources based on estimates such as those made by Macpherson[1] (1995), when the data upon which these estimates are based are quite possibly grossly incorrect.

11.6 CRITIQUE AND RECOMMENDATIONS FOR FUTURE RESEARCH

Critique as well as recommendations for further research have been made at various points in this study, most notably in Chapter Seven, where there appears to be a great deficiency in empirical data on Zulu-speakers and severe mental illness. Over and above these, a number of shortcomings of the present study need to be addressed in future research in this area. In addition, the present design could be improved upon. These constitute the theme of the remainder of this chapter.

[1] Indeed, one objective of the GIS study is to augment policy making.

11.6.1 Methodology

One limiting factor in the design of the study involves the measurement of outcome by means of scrutiny of hospital files, rather than assessment of participants personally to ascertain symptom or readmission status. It would have been, however, extremely difficult to contact the patients as many of them reside in rural areas more than 100 km from the research site, and many of which are not accessible by telephone (cf. Macpherson, 1995). Thus, it is possible that some subjects relapsed without the researcher being aware of this, if they remained at home or were not admitted to the psychiatric hospitals in Pietermaritzburg. For the purposes of this research this was considered unlikely as many of the subjects had had more than one admission to the hospital, and it is not unreasonable to presume that their families, or the examining doctor, having had previous experience of their illness, would refer them back to the hospital if they re-presented with their schizophrenic symptoms. Also, the province of KwaZulu-Natal, where the research site is located, is served by only two specialist psychiatric hospitals - those that comprise the research site, thus it is unlikely also that had they relapsed, they would have been sent to another hospital outside the province. These presumptions notwithstanding, caution is still needed when examining the results as there may have been relapsed but not readmitted participants in the sample. Future studies may need to assess the feasibility of conducting the follow-up in a way less open to this difficulty, such as contacting the participants.

Related to this is the presumption that rehospitalisation is due to a schizophrenic relapse, and in turn a florid psychotic episode. As the readmitted participants were not independently assessed, the extent of their symptom exacerbation cannot be commented on. Similarly, due to the difficulties involved in diagnosing mental illness cross-culturally (Cheetham & Griffiths, 1981;

Strebel et al., 1999; Swartz, 1998), it is possible that some participants did not actually suffer from schizophrenia. These could have accounted for the discrepant finding that participants who reported less psychological distress were readmitted sooner. Again, future studies may do well to have an independent assessment of clinical state at index admission and rehospitalisation.

Finally, an assessment of drop-outs was not undertaken in the present study, thus the possibility exists that the participants in the sample reported on differed from these in some way, suggesting that the sample may not have been representative of hospitalised Zulu schizophrenics.

11.6.2 Instruments

A major limitation of the translation process was the lack of resources to conduct field testing/pretesting of the Zulu LEE scale with monolinguals of the target population. This would have enabled a more thorough analysis of the Zulu LEE scale such that misunderstood items could have been corrected. Additionally, factor analysis could then have been carried out to further assess the internal reliability of the Zulu LEE scale. Thus further validation studies are crucial before the Zulu LEE scale is utilised with Zulu speakers. Prior to this, though, it is suggested that the original version be reworked, such that the internal reliability is improved, and an assessment of perceived criticism is included.

The present study could benefit from a more thorough evaluation of the individual LEE subscales, and their relation to rehospitalisation, to assess which factors were more likely to predict rehospitalisation in Zulu-speaking schizophrenics. The present analysis revealed no relationship between the subscales and rehospitalisation, however, item analysis may have. This

in turn would have aided the cross-cultural understanding of expressed emotion with a Zulu sample. In addition, the LEE scale could have been scrutinised, item by item, to see which contributed well to reliability, and which not. Then the translations of these, with the collaboration of a Zulu language expert, could also have been scrutinised, to ascertain which contributed negatively to the reliabilities measured. Having isolated these and possibly corrected them, further analysis may have resulted in more significant results.

Additional research with the LEE scale could also investigate and control for the person that the participant rates. Differences may be found when this is a mother, father, partner etc., as has been found with the CFI.

Similarly, the SCL-90-R subscales could have been analysed to ascertain which items were predictive of rehospitalisation. Knowledge of the content of these may contribute greater insight into the finding that low scores on this checklist were predictive of rehospitalisation. Future research could focus on establishing norms for this instrument, drawing on the present studies and Shanahan's (1998) work.

In addition, further information could have been elicited from the participants, for instance the composition of their households could have revealed information about the extent to which participants resided in extended or nuclear families.

This study could also have benefited from drawing on literature from a wider field. Within psychology, topics such as acculturation remained unaddressed; and local masters theses, where

such cross-cultural work is undertaken, could have been more widely reviewed. More literature from other disciplines, such as sociology and anthropology, would possibly have beneficially affected the study.

A limiting factor with regards to comparison of the present findings with those of other expressed emotion studies, is that studies employing the CFI administer this shortly after admission with parents of the participants. The LEE scale, on the other hand, is administered to the participants directly. Thus the perception of EE status is that of the schizophrenic themselves (i.e. we ask a psychotic person for a valid and reliable diagnosis of his/her family's functioning), not a trained rater. In addition, the participants complete the LEE scale once stabilized, and thus presumably a longer time elapses between the two measurements.

Additional areas of future research could focus on eliciting Zulu-speaking schizophrenics' experience of their condition, in a similar vein to the studies of Lund and Swartz (1998) and Mogale (1999). This knowledge which would greatly enhance our understanding of the nature and course of schizophrenia with this culture, and in turn could enhance treatment with this population. Indeed, this entire discussion could have been greatly improved upon had such research been in evidence. Also, future studies concentrating on the EE-relapse link in Zulu culture would possibly benefit from assessing the six aspects of expression of emotion outlined by Schweder (1985, in Castillo, 1997; detailed in Section 7.4 above).

Finally, the relating of the present findings to the theory of expressed emotion presented in the literature review could have been carried out in more detail. In many instances, though, the lack

of data on Zulu schizophrenics and the complexity of the findings, coupled with minimal personal experience with Zulu culture on the one hand, and severe mental illness on the other, rendered the present author somewhat out of depth in this regard.

11.7 CONCLUSIONS

This study has attempted a cross-cultural exploration of the impact of expressed emotion on the course of illness with a sample of Zulu schizophrenics. To this end a translated version of the LEE scale and the Zulu SCL-90-R were administered. Rehospitalisation rates were assessed nine months later. The major findings of the present study may be summarized as follows:

1) Satisfactory internal reliability on the Zulu SCL-90-R confirms the validity of this instrument for purposes of screening for psychiatric illness.

2) Somewhat unsatisfactory internal reliabilities on some subscales of the Zulu LEE scale indicate the necessity of further work being carried out with this instrument. Both a thorough evaluation of the translated version, as well as a reworking of the original version, is suggested.

3) Zulu schizophrenics are rehospitalised at a lower rate than schizophrenics in more developed countries, consistent with the international finding of a better course of illness in developing countries.

4) Male schizophrenics are rehospitalised at a higher rate than female schizophrenics, consistent with the international finding of a better course of illness in female patients.

5) A most conservative conclusion concerning expressed emotion is that the possibility that expressed emotion has an impact on the course of schizophrenia in Zulu culture has not been ruled out. Further studies would therefore be needed to exclude it as a mediating

factor, or indeed to find out whether it does influence the course of schizophrenia with Zulu-speakers.

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APPENDIX A: THE LEVEL OF EXPRESSED EMOTION SCALE

The following pages contain copies of the Level of Expressed Emotion (LEE) scale and a Zulu translation of the Level of Expressed Emotion (LEE) scale. The LEE scale is fully protected by copyright and may not be reproduced in any manner without the prior written permission of the authors, John D. Cole, Department of Psychology, 205 Behavioural Science Building, York University, 4700 Keele Street, Downsview, Ontario, Canada M3J 1P3; or Shahe S. Kazarian, Ministry of Health, London Psychiatric Hospital, 850 Highbury Avenue, P.O. Box 2532, Station A, London, Ontario, Canada, N6A 4H1.

LEE
LEE
LEE

LEVEL OF EXPRESSED EMOTION SCALE

Client Version

John D. Cole, Ph.D.
Shahe S. Kazarian, Ph.D.

Instructions:

The following are a number of statements that describe the way in which someone may act towards you. Please identify the person who has been most influential in your life during the past three months. Examples of influential persons could be: mother, father, brother, sister, husband, wife, relative (e.g., aunt, grandfather) and friend. Then, read each statement and indicate whether this person has acted in these ways towards you over the past three months.

Mark your answers on the separate Answer Sheet provided. Simply circle the (T) box if you feel that the item is TRUE. Circle the (F) box if you feel the item is FALSE. It is important to make sure that the statement number agrees with the number of your response on the Answer Sheet.

1. Understands if sometimes I don't want to talk.
2. Calms me down when I'm upset.
3. Says I lack self-control.
4. Is tolerant with me even when I'm not meeting his/her expectations.
5. Doesn't butt into my conversations.
6. Doesn't make me nervous.
7. Says I just want attention when I say I'm not well.
8. Makes me feel guilty for not meeting his/her expectations.
9. Isn't overprotective with me.
10. Loses his/her temper when I'm not feeling well.
11. Is sympathetic towards me when I'm ill or upset.
12. Can see my point of view.
13. Is always interfering.
14. Doesn't panic when things start going wrong.
15. Encourages me to seek outside help when I'm not feeling well.
16. Doesn't feel that I'm causing him/her a lot of trouble.
17. Doesn't insist on doing things with me.
18. Can't think straight when things go wrong.
19. Doesn't help me when I'm upset or feeling unwell.
20. Puts me down if I don't live up to his/her expectations.
21. Doesn't insist on being with me all the time.
22. Blames me for things not going well.
23. Makes me feel valuable as a person.
24. Can't stand it when I'm upset.
25. Leaves me feeling overwhelmed.
26. Doesn't know how to handle my feelings when I'm not feeling well.
27. Says I cause my troubles to occur in order to get back at him/her.
28. Understands my limitations.
29. Often checks up on me to see what I'm doing.
30. Is able to be in control in stressful situations.
31. Tries to make me feel better when I'm upset or ill.
32. Is realistic about what I can and cannot do.
33. Is always nosing into my business.
34. Hears me out.
35. Says it's not OK to seek professional help.
36. Gets angry with me when things don't go right.

37. Always has to know everything about me.

38. Makes me feel relaxed when he/she is around.

39. Accuses me of exaggerating when I say I'm unwell.

40. Will take it easy with me, even if things aren't going right.

41. Insists on knowing where I'm going.

42. Gets angry with me for no reason.

43. Is considerate when I'm ill or upset.

44. Supports me when I need it.

45. Butts into my private matters.

46. Can cope well with stress.

47. Is willing to gain more information to understand my condition, when I'm not feeling well.

48. Is understanding if I make mistakes.

49. Doesn't pry into my life.

50. Is impatient with me when I'm not well.

51. Doesn't blame me when I'm feeling unwell.

52. Expects too much from me.

53. Doesn't ask a lot of personal questions.

54. Makes matters worse when things aren't going well.

55. Often accuses me of making things up when I'm not feeling well.

56. "Flies off the handle" when I don't do something well.

57. Gets upset when I don't check in with him/her.

58. Gets irritated when things don't go right.

59. Tries to reassure me when I'm not feeling well.

60. Expects the same level of effort from me, even if I don't feel well.

THE LEE SCALE (Client Version): ANSWER SHEET

YOUR NAME: _____ **AGE:** ____ **SEX: (circle one)** Male Female **DATE:** _____

MARITAL STATUS: (circle one)

Single Married/Common-Law Separated Divorced Widowed

Indicate who has been the most influential person in your life over the past three months: (circle one)

Mother Father Brother Sister Spouse
Other relative (e.g., Aunt, Grandfather) Friend
Other (Please Specify) _____

Have you been living with your influential person during the past three months? (circle one) Yes No

How many waking hours on a typical weekday have you been spending with your influential person during the past three months? ___ hours per week day

How many waking hours on a typical weekend have you been spending with your influential person during the past three months? ___ hours per weekend

Instructions for each item:
Circle the "T" box if you feel the item is TRUE
Circle the "F" box if you feel the item is FALSE

1	T	F	16	T	F	31	T	F	46	T	F
2	T	F	17	T	F	32	T	F	47	T	F
3	T	F	18	T	F	33	T	F	48	T	F
4	T	F	19	T	F	34	T	F	49	T	F
5	T	F	20	T	F	35	T	F	50	T	F
6	T	F	21	T	F	36	T	F	51	T	F
7	T	F	22	T	F	37	T	F	52	T	F
8	T	F	23	T	F	38	T	F	53	T	F
9	T	F	24	T	F	39	T	F	54	T	F
10	T	F	25	T	F	40	T	F	55	T	F
11	T	F	26	T	F	41	T	F	56	T	F
12	T	F	27	T	F	42	T	F	57	T	F
13	T	F	28	T	F	43	T	F	58	T	F
14	T	F	29	T	F	44	T	F	59	T	F
15	T	F	30	T	F	45	T	F	60	T	F

APPENDIX B: ZULU TRANSLATION OF THE LEE SCALE

LEE
LEE
LEE

LEVEL OF EXPRESSED EMOTION SCALE

Zulu-speaking Client Version

John D. Cole, Ph.D.
Shahe S. Kazarian, Ph.D.

Imiyalo:

Lokhu imisho embalwa echaza indlela umuntu angaziphatha ngayo uma ukhuluma naye. Yisho umuntu obe nomthelela omkhulu empilweni yakho ezinyangeni ezintathu ezedlule. Izibonelo zabantu ababe nomthelela kungaba: umama, ubaba, umfowenu, udadewenu, umyeni, umkakho, isihlobo (njengo-anti, umkhulu) nomngani. Funda umusho ngamunye bese usho ukuthi lo muntu uziphathe ngalezi zindlela lapho ekhuluma nawe ezinyangeni ezintathu ezedlule.

Beka uphawu lwezimpendulo zakho ePhepheni lweziMpendulo elithasiselwe elihlinzekiwe. Vele ukokelezele u-Q ebhokisini uma ubona ukuthi iphuzu liyiQINISO. Kokelezela u-P ebhokisini uma ubona ukuthi iphuzu liyiPHUTHA. Kubalulekile ukuthi ube nesiqiniseko sokuthi inombolo yomusho iyavumelana nenombolo yempendulo yakho ePhepheni leziMpendulo.

1. Uyabona uma ngingafuni ukukhuluma ngesinye isikhathi.
2. Uyangiduduza uma ngiphatheke kabi.
3. Uthi ngiyehluleka ukuzibamba.
4. Uyangibekezelela ngisho noma ngehluleka ukwenza akulindele kimi.
5. Akagaxeli engxoxweni yami.
6. Akangenzi ngibe novalo.
7. Uthi ngifuna ukunakwa uma ngithi angiphilile.
8. Ungenza ngizizwe nginecala ngokwehluleka ukwenza akulindele kimi.
9. Akangitotosi angenzele konke.
10. Ucasuka kakhulu uma ngingaphilile.
11. Uyangizwela uma ngigula noma ngiphatheke kabi.
12. Uyakubona engikushoyo.
13. Uhlala engena izindaba zami njalo.
14. Akethuki uma izinto ziqala ukonakala.
15. Ungikhuthaza ukuba ngifune usizo engxenye uma ngingaphilile.
16. Akathathi sengathi ngiwuhlupho olukhulu kuye.
17. Akangiphoqeleli ukuba ngenze izinto naye.
18. Uyadideka uma izinto zingahambi kahle.
19. Akangisizi uma ngiphatheke kabi noma ngingaphilile.
20. Uyangigxeka uma ngehluleka ukwenza akulindele kimi.
21. Akangiphoqeleli ukuba ngibe naye zikhathi zonke.
22. Usola mina uma izinto zingahambi kahle.
23. Ungenza ngizibone ngibalulekile.
24. Akangibekezeleli uma ngiphatheke kabi.
25. Ungishiya ngikhungathekile.
26. Akazi ukuthi angangiduduza kanjani uma ngingaphilile.
27. Uthi ngidala izinkinga ukuze ngimcasule.
28. Uyazi lapho ngehluleka khona.
29. Uvamise ukuzohlola ukuthi ngenzani.
30. Uyakwazi ukumelana nezimo ezinzima.

31. Uyazama ukwenza ngizizwe ngingcono uma ngiphatheke kabi noma ngingaphilile.
32. Ukwemukela njengoba kunjalo engingakwenza nengingakwazi ukukwenza.
33. Uhlala engena ezindabeni zami.
34. Uyangilalelisisa.
35. Uthi akulungile ukufuna usizo lwabawufundele lowo msebenzi.
36. Uyangicunukela uma izinto zingahambi kahle.
37. Uhlala efuna ukwazi yonke into ngami.
38. Ungenza ngizizwe ngikhululekile uma eseduze nami.
39. Ungisola ngokuthi nginehaba uma ngithi angiphilile.
40. Uyangibekezelela ngisho noma izinto zingahambi kahle.
41. Uhlala efuna ukwazi ukuthi ngiyaphi.
42. Ungicunukela ngaphandle kwesizathu.
43. Uyangicabangela uma ngigula noma ngingaphathekile kahle.
44. Uyangisekela uma ngikudinga.
45. Ugxambukela ezindabeni zami zangasese.
46. Uyamelana nezimo ezinzima.
47. Uzimisele ukuthola eminye imininingwane ukuze aqonde isimo sami, uma ngingaphilile.
48. Uyazwelana nami uma ngenza amaphutha.
49. Akagaxeli ezindabeni zami.
50. Akangizweli uma ngingaphilile.
51. Akalibeki kumina iphutha uma ngingaphilile.
52. Ulindela okukhulu kakhulu kumina.
53. Akabuzi imibuzo emininginingi eqondene nami ngqo.
54. Wenza isimo sibe sibi kakhulu uma izinto zingahambi kahle.
55. Uvamise ukungisola ngokuthi ngisho izinto ezingekho uma ngingaphilile.
56. Ucasuka kakhulu uma ngingenzi utho kahle.
57. Uphatheka kabi uma ngingamtsheli ukuthi sengibuyile.
58. Uyacasuka uma izinto zingahambi kahle.
59. Uzama ukungiqinisa uma ngingaphilile.
60. Ulindele ukuba ngenze ngendlela efanayo ngisho noma ngingaphilile.

THE LEE SCALE (Zulu-speaking client version): IPHEPHA LEZIMPENDULO

IGAMA LAKHO: _____ **UBUDALA:**_____

UBULILI: (kokelezela okukodwa) Isilisa Isifazane **USUKU**_____

MAYELANA NOMSHADO: (kokelezela okukodwa)

Awushadile Ushadile / oweSintu Anihlali ndawonye Nihlukanisile Umfelwa/Umfelokazi

Yisho ukuthi yimuphi umuntu obe nomthelela omkhulu empilweni yakho ezinyangeni ezintathu ezedlule: (kokelezela okukodwa)

Umama Ubaba Umfowenu Udadewenu Oshade naye
Esinye isihlobo (isb. u-anti, umkhulu) Umngani
Omunye (cacisa) _____

Bewuhlala naye lowo muntu obe nomthethela empilweni yakho ezinyangeni ezintathu ezedlule? (kokelezela okukodwa) Yebo Cha

Mangaki amahora osukwini olujwayelekile owachithe nalo muntu obe nomthelela empilweni yakho ezinyangeni ezintathu ezedlule? _____amahora ngosuku

Mangaki amahora ngempelasonto ejwayelekile owachithe nalo muntu obe nomthelela empilweni yakho ezinyangeni ezintathu ezedlule? _____amahora ngempelasonto

Imiyalelo ngephuzu ngalinye:
Kokelezela u-Q ebhokisini uma ubona ukuthi iphuzu liyiQINISO
Kokelezela u-P ebhokisini uma ubona ukuthi iphuzi liyiPHUTHA

1	Q	P
2	Q	P
3	Q	P
4	Q	P
5	Q	P
6	Q	P
7	Q	P
8	Q	P
9	Q	P
10	Q	P
11	Q	P
12	Q	P
13	Q	P
14	Q	P
15	Q	P

16	Q	P
17	Q	P
18	Q	P
19	Q	P
20	Q	P
21	Q	P
22	Q	P
23	Q	P
24	Q	P
25	Q	P
26	Q	P
27	Q	P
28	Q	P
29	Q	P
30	Q	P

31	Q	P
32	Q	P
33	Q	P
34	Q	P
35	Q	P
36	Q	P
37	Q	P
38	Q	P
39	Q	P
40	Q	P
41	Q	P
42	Q	P
43	Q	P
44	Q	P
45	Q	P

46	Q	P
47	Q	P
48	Q	P
49	Q	P
50	Q	P
51	Q	P
52	Q	P
53	Q	P
54	Q	P
55	Q	P
56	Q	P
57	Q	P
58	Q	P
59	Q	P
60	Q	P