#### **CHAPTER 5**

## CONCLUSIONS AND RECOMMENDATIONS

This chapter provides a summary of this research study and is divided into three parts. The first part focuses on conclusions based on the research results. The second part shows the limitations of this study and, finally, the third part looks at some implications that can be derived from the study.

#### Conclusions

The 49-item, self-report scale of the Thai Expressed Emotion Scale (TEES) was developed to measure expressed emotions in Thai family caregivers of people with schizophrenia. The final TEES was composed of seven constructs, five of which were previously identified components of EE, namely critical comments, hostility, positive remarks, warmth and emotional over-involvement in the interactions of family caregivers. However, two additional constructs were added to allow consideration of culture-specific EE items particular to the Thai context, emotional under-involvement and emotional regulation. The resulting seven factors and displayed a total of 52.74 % of variance. These seven factors of the TEES included:

Factor I: Positive Remarks consisted of 7 items. The first factor consisted of favorable comments about the ill relative's behavior, personality or characteristics. The loadings of items on this factor ranged from .65 to .78 and accounted for 9.32 % of the percent of variance with an eigenvalue of 4.94.

Factor II: Hostility contained 8 items with factor loadings from .52 to .70 and accounted for 9.07 % of variance with an eigenvalue of 4.80. The second factor refers to remarks indicating general or overall rejection of the ill relative. Hostility includes feelings of aversion or repugnance toward the relative, treating the relative with cruelty or contempt, or overt attempts to rid the relative from the caregiver's life.

Factor III: Emotional under-involvement included 8 items with factor loadings from .58 to .73 and accounted for 8.38 % of variance with an eigenvalue of 4.44. The third factor refers to emotional detachment or disengagement from the ill relative, including minimal interest or satisfaction in interactions, little sense of loyalty toward the ill relative as a family member, loss of feeling for the relative or minimal concern for the relative's health status and feelings.

Factor IV: Emotion Regulation included 7 items with factor loading from .41 to .74 and accounted for 7.42 % of variance with an eigenvalue of 3.93. The fourth factor refers to the ways in which caregivers manage or control the negative or troubling emotions they may experience from the interactions with the ill relative. These strategies may involve the use of cognitive reframing or reappraisal as well as suppression or inhibition of negative emotions toward the ill relative.

Factor V: Critical Comments included 7 items with factor loadings from .56 to .69 and accounted for 7.28 % of variance with an eigenvalue of 3.86. The fifth factor refers to unfavorable comments about the ill relative's behavior, personality or characteristics, including things that the caregiver clearly resents, dislikes, or finds annoying because they elicit hurt, shame, anger, disappointment or disapproval.

Factor VI: Warmth included 7 items with factor loadings ranged from .35 to .81 and accounted for 7.11 % of variance with eigenvalue of 3.76. The sixth factor

refers to affection and empathy expressed toward the ill relative, including concern about the person's health and future, sympathy, love, pity, and interest in their lives and well-being.

Factor VII: Emotional over-involvement included 5 items with factor loadings from .34 to .61 and accounted for 4.15 % of variance with eigenvalue 2.20. The seventh factor refers to excessive intensity of involvement by a caregiver, including exaggerated emotional responses, over-intrusive or self-sacrificing behavior, and over-identification with the ill relative. Over-involvement is often characterized by excessive anxiety about the relative, perceived responsibility for the relative's illness, over-concern, or over-protectiveness toward the relative in an attempt to control things in the relative's life.

The internal consistency of the subscales was examined. The factors I, II, III, IV, V, VI and VII showed good internal consistency with coefficient alphas of .91, .86, .86, .85, .83, .84 and .75 respectively.

The validity involved content validity and construct validity, using the factor analysis technique, hypothesis testing approach, and convergent validity. The TEES showed a high level of an overall content validity index (CVI) of .88. Hypothesis testing was used to examine the construct validity of the TEES to predict caregiver and patient characteristics on a number of conceptually relevant variables. The results of hypothesis testing were as follows:

Caregivers who had significantly higher scores on warmth, positive remarks, and emotional regulation were more likely to be living with their schizophrenic relative while they were less likely to be living with them if they scored higher on emotional under -involvement. The results suggest that warmth, positive remark and

emotional regulation are present as a positive aspect of the EE and while the emotional under involvement present as a negative factor. Thus it is very interesting for researcher to explore more about the effects of these positive and negative sub concepts to enhance the knowledge for caregiving in the family of schizophrenic patients.

According to the results in this study, less self care by the patient was shown by patients whose caregivers were high in hostility, critical comments, and emotional over-involvement or emotional under-involvement. In the opposite sense, patients whose caregivers were high in warmth, positive remarks and emotional regulation had better self care.

On duration of patients' illness, no relationship was found between caregiver EE and any of the EE subscales. This finding suggests that EE could present in the family of schizophrenic patient anytime period of patients' illness. So, it is critical to design appropriate intervention for decrease negative EE in another hand to increase the positive EE. However, prospective study is needed to predictive the influences of both positive and negative EE toward the outcome of course of schizophrenia and family caregiving outcome.

Caregivers' psychological functioning or psychological well being: caregivers who had higher scores in hostility, critical comments, and emotional over-involvement had lower psychological wellbeing while caregivers who were high on positive remarks had better psychological well being. However, emotional under-involvement, warmth and emotional regulation showed no relationship to this variable. This finding suggests promoting the intervention for family caregiver of schizophrenic patients to increase their psychological well being and it is important to encourage other family member to support and helping in

caregiving for the schizophrenic patients in case of the major caregiver has lower level of psychological well being.

The number of patients' previous hospitalizations was greater for patients whose caregivers were high in hostility, emotional over-involvement and emotional under-involvement. Admissions were fewer for patients whose caregivers were high in positive remarks and emotion regulation. No relationship was found between number of admissions and either critical comments or warmth.

Convergent validity was measured by examining the correlation of the TEES with two other measures of expressed emotion: The Perceived Criticism Scale (PCS) and the Adjective Checklist (AC). The results indicated that a degree of significant relationship existed between the patient's perception of his/her own degree of criticism toward his/her caregiver and the TEES critical comments scores. However, there was no relationship between the patient's perception of the caregiver's criticism toward the patient and the TEES critical comments.

In summary, the development of the Thai Expressed Emotion Scale (TEES) appears to have reliable and valid psychometric properties. The results of this study indicate that the Thai Expressed Emotion Scale (TEES) is appropriate for measuring expressed emotions in the family caregivers of people with schizophrenia in the Thai cultural context.

## Limitation

The limitation of this study that is employed the cross-sectional research design, since caregivers' expressed emotions are shaped over time by various factors, longitudinal studies are recommended in this type of situation to test the stability of

the TEES and improve the ability of the TEES to detect changes in family emotional climate over time.

# Implications of the Findings

The results of this study have important implications for understanding major constructs of the expressed emotions of Thai family caregivers of people with schizophrenia. In addition, the TEES developed in this study will be useful for studying Thai families dealing with other psychiatric disorders such as psychosis, schizoaffective, depression and bipolar disorders. The TEES can also be applied for use with Thai family caregivers in another country, such as the United States. Furthermore, the psychometric properties and cultural sensitivity of the TEES make it useful in future cross-cultural research that may use the TEES. Information obtained from the TEES can be used to enhance the effectiveness of clinical interventions by nurses or other health professionals, such as psychiatrists and social workers.

### Future Research Recommendations

Although, the TEES has satisfactory psychometric properties, its predictive validity for prognosis, outcome or caring response of schizophrenia over time should be studied further. A prospective or longitudinal study is needed to identify how various score on TEES subscale may predict the outcome of caring or course of the patients illness. Such studies should also attempt to collect data from more than one individual in the studied families to strengthen the confirmation of human experience and capture those expressed emotions as accurately as possible in the families. In addition, a suitable cut off point between high or low levels of EE should be

studied in the same population. This will enhance the optimal use of the TEES. Therefore, the recommendations for future study would be studies that examine an appropriate cut off point between high or low levels of expressed emotion.

This study found that three positive EE factors, warmth, positive remarks, and emotion regulation, may act as protective factors by improving patient self care as reducing hospital admissions. However, these links need to be studied prospectively, to observe the effects of positive EE over time. Research to test the effects of family interventions for enhancing positive EE is also warranted. Ultimately, such interventions could provide the basis of family counseling to help reduce family stress and improve the patients' mental status and functional ability.

The final recommendation is that cross-cultural studies of expressed emotion in families should be further investigated. The knowledge obtained from such studies could enhance the understanding of the interactions between family climate, expressed emotions and protective factors in the every day activities of caregiving.