FACTORS PREDICTING ADAPTATION OF THAI FAMILIES WITH MENTALLY ILL ADOLESCENTS

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ABSTRACT

The evidence has previously shown that families of mentally ill adolescents are themselves at risk for mental health problems or psychiatric disorders when they face severe stress and lack coping resources. The purpose of this study was to examine the pattern of relationships among factors related to adaptation to stress in families of adolescents with mental illness. The guiding framework for this study was the Resiliency Model of Family Stress, Adjustment, and Adaptation. 237 family members of adolescents with mental illness who met the criteria completed the following questionnaires: Thai Family Stress Inventory (TFSI); the Life Skills Profile-20 (LSP-20); the Chulalongkorn Family Inventory (CFI); the Demands of Illness Inventory (DOII); the Family Hardiness Index (FHI); and the Family Adaptation Scale (FAS). Structural equation modeling via LISREL was used to analyze the data.

The results revealed that the model fit the data well (χ^2 = 154.63, df = 136, p = 0.131, GFI = 0.94, AGFI = 0.91, RMSEA = 0.024). The variance accounted for was 36 % in the family adaptation factor. This finding showed that family functioning and family appraisal of illness mediated the effect of family stress on family adaptation, suggesting that family functioning and family appraisal of illness could ameliorate the effect of family stress on family adaptation. Family functioning also mediated the effect of patient's life skills on family adaptation, suggesting that family functioning could reduce the effect of patient's life skills on family adaptation.

Findings from this study could broaden understanding of family functioning and family appraisal of illness that react to family stress and patient's life skills in relation to adaptation in the family. The findings may help psychiatric nurses better understand how stress, related to the care of mentally ill adolescents, affects their families, and how they can promote adaptation in these families. Further research needs to develop interventions that decrease family stress, and increase family functioning and family appraisal, thus improving adaptation in families with mentally ill adolescents.

KEY WORDS: FAMILY ADAPTATION/ FAMILY STRESS/ PATIENT'S LIFE SKILLS/ FAMILY FUNCTIONING/ FAMILY APPRAISAL OF ILLNESS / FAMILY HARDINESS

144 pages

ปัจจัยทำนายการปรับตัวของครอบครัวไทยที่มีวัยรุ่นป่วยด้วยโรคทางจิตเวช

FACTORS PREDICTING ADAPTATION OF THAI FAMILIES WITH MENTALLY ILL ADOLESCENTS

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บทคัดย่อ

ผลการวิจัยที่ผ่านมาระบุว่า ครอบครัวของวัยรุ่นที่ป่วยด้วยโรคทางจิตเวช จัดเป็นกลุ่มเสี่ยงต่อการมีปัญหาสุขภาพจิต และการป่วยด้วยโรคทางจิตเวช เนื่องจากต้องเผชิญกับความเครียดในระดับสูง และขาดแหล่งสนับสนุนช่วยเหลือในการเผชิญความเครียด วัตถุประสงค์ของการวิจัยนี้เพื่อศึกษารูปแบบความสัมพันธ์ของตัวแปรที่มีอิทธิพลต่อการการปรับตัวของครอบครัวที่มีวัยรุ่นป่วยด้วยโรคทางจิตเวช โดยใช้กรอบแนวคิด The Resiliency Model of Family Stress, Adjustment, and Adaptation กลุ่มตัวอย่างคือ สมาชิกครอบครัวของวัยรุ่นที่ป่วยด้วยโรคทางจิตเวช จำนวน 237 คนที่มีคุณสมบัติตามเกณฑ์ที่กำหนด และตอบแบบสอบถามซึ่งได้แก่ แบบวัดความเครียดในครอบครัว แบบวัดทักษะชีวิตของผู้ป่วย แบบวัดการทำหน้าที่ของครอบครัว แบบวัดการให้ความหมายต่อการเจ็บป่วยของสมาชิกในครอบครัว แบบวัดความเข้มแข็งของครอบครัว และแบบวัดการปรับตัวของครอบครัว สถิติที่ใช้ในการวิเคราะห์ข้อมูลคือ โมเดลสมการเชิงโครงสร้าง

ผลการศึกษาพบว่าโมเดลเชิงโครงสร้างมีความสอดคล้องเชิงประจักษ์ (χ^2 = 154.63, df = 136, p = 0.131, GFI = 0.94, AGFI = 0.91, RMSEA = 0.024) โดยสามารถอธิบายความแปรปรวนในการปรับตัวของครอบครัวที่มีวัยรุ่นป่วยด้วยโรคทางจิตเวชได้ 36 % ผลการศึกษาพบว่าความเครียดของครอบครัวมีอิทธิพลต่อการปรับตัวของครอบครัวโดยส่งผ่านการทำหน้าที่ของครอบครัว และการให้ความหมายต่อการเจ็บป่วยในครอบครัว นอกจากนี้ความเครียดจากทักษะชีวิตของผู้ป่วยมีอิทธิพลต่อการปรับตัวของครอบครัวโดยส่งผ่านการทำหน้าที่ของครอบครัว ซึ่งให้ข้อเสนอแนะว่าควรมีการส่งเสริมการทำหน้าที่ของครอบครัว และการให้ความหมายต่อการเจ็บป่วยในครอบครัวเพื่อช่วยลดอิทธิพลของความเครียดในครอบครัว และความเครียดจากทักษะชีวิตของผู้ป่วย ที่จะช่วยส่งเสริมการปรับตัวของครอบครัวที่มีวัยรุ่นป่วยด้วยโรคทางจิตเวชได้

ผลการศึกษาครั้งนี้ทำให้เกิดความเข้าใจในบทบาทของสถานการณ์ความเครียดในครอบครัว ทักษะชีวิตของผู้ป่วย การทำหน้าที่ของครอบครัว การให้ความหมายต่อการเจ็บป่วยในครอบครัว ความเข้มแข็งของครอบครัวต่อการปรับตัวของครอบครัวที่มีวัยรุ่นป่วยด้วยโรคทางจิตเวช นอกจากนี้ยังช่วยให้พยาบาลจิตเวชมีความเข้าใจว่าความเครียดจากการดูแลวัยรุ่นที่ป่วยด้วยโรคทางจิตเวชมีผลต่อครอบครัวอย่างไรและจะสามารถส่งเสริมการปรับตัวของครอบครัวได้อย่างไร ดังนั้นการวิจัยต่อไปจึงควรเป็นการพัฒนาโปรแกรมที่นำไปสู่การลดความเครียดจากทักษะชีวิตของผู้ป่วย การเพิ่มการทำหน้าที่ของครอบครัวและการให้ความหมายต่อการเจ็บป่วยในครอบครัวที่เป็นทางบวก เพื่อส่งเสริมการปรับตัวของครอบครัวที่มีวัยรุ่นป่วยด้วยโรคทางจิตเวช

144 หน้า

CONTENTS

CONTENTS (cont.)

CONTENTS (cont.)

LIST OF TABLES

LIST OF FIGURES

CHAPTER I
INTRODUCTION

1.1 Background and significance of the study

The adolescent years are a period of the great risk for the onset of mental illness (MI). The most severe and commonly diagnosed problems in adolescents with MI are schizophrenia, bipolar disorder, depression, attention-deficit/hyperactivity disorder (ADHD), and autism. Mental illnesses in adolescence have severe, long-lasting, and devastating effects on health and well-being of many adolescents, their families, and society. Approximately 10% to 20% of the youth world-wide are diagnosed with MI annually. It is one of the top ten leading causes of disability in the world for those aged 5 years and over (Murray & Lopez, 1996 as cited in Shatkin & Belfer, 2004). The prevalence rates for MI among adolescents depend on the criteria used and the population studied. According to a set of community-based studies, the rate of mental illness in adolescents aged 12 to 24 years ranged from 8% (in the Netherlands) to 57% (for MI cases treated in California, USA) (Patel, Flisher, Hetrick, & McGorry, 2007). In Thailand, about 15.6% to 18.7% of adolescents aged 13 to 18 years (the school based years) had mental health problems (Danpakdee, 1999). In addition, the number of treated adolescents with MI has increased annually from 29,763 to 33,018 and to 50,212 in 2005 and 2007 respectively (Planning Division, Mental Health Department, Ministry of Public Health, 2008).

Psychiatric disorders among adolescents are common public health problems with a high cost of treatments. Costello, Copeland, Cowell, and Keeler (2007) estimated that costs of treating adolescents with MI was highest among group homes for the mentally ill, emergency shelters, and for therapeutic foster care, followed by for inpatient hospital departments such as in psychiatric or general hospitals, and in drug/alcohol/detoxification units. The average annual costs for treating MI per adolescent aged 13 to 16 years were $3,146 in North Carolina. These costs could be extrapolated to national costs of $10.2 billion to $12.3 billion (Costello

et al., 2007). In addition, comorbidity has been shown concurrently among adolescents with MI that incurred the high costs (Costello, Foley & Angold, 2006).

Adolescence is a period of significant transitions. According to Erickson (1993), the developmental task of an adolescent is to establish independence from parents by gaining a sense of identity. Achieving the sense of identity may be difficult for adolescents who have spent much of their lives under negative circumstances or other stressful situations (Pillitteri, 2007). Development in adolescence may be disturbed by various factors related to the self, life experiences and the environment (Alestalo, Munnukka, & Pukkuri, 2002). Adolescents do not achieve a sense of identity and self-esteem, but they develop a sense of role confusion about their place in society. Thus, this experience can lead to difficulty functioning and managing new challenges or situations. Recent knowledge has revealed that there is interplay among susceptible genes, risky environments, development, and psychosocial adversity (Patel et al., 2007; Rutter, 2002). Under these circumstances, stressful experiences could possibly trigger vulnerability to psychiatric problems in adolescence (Gutgesell & Payne, 2006).

Without support and adequate care, having an adolescent with MI can affect all aspects of family life. It can cause severe stress and burden on family members. During the prodromal stage, for the family members of the adolescent with MI, it is difficult to understand or comprehend their thinking and experiences, including hallucinations, delusions, disordered thinking, and unusual speech or behaviors. Alestalo et al. (2002) found that psychiatric problems greatly limit an adolescent's ability to function normally. A strong association exists between MI and many other health and development concerns for adolescents, including, remarkably, with educational achievements, substance abuse, violence, smoking, lack of condom use, reproductive and sexual health (Chabra, Chavez, Harris, & Shah, 1999; Gutgesell & Payne, 2006). Adolescents become limited in their abilities to interact with other people, and often withdraw from society. The symptoms and behaviors of adolescents with MI could generate negative emotions.

Family members have a more difficult time to understand about how to take care of a person with psychiatric symptoms (Corcoran et al., 2007; Doornbos, 2001; Rose, Mallinson, & Gerson, 2006; Seloilwe, 2006). A common reaction of

family members is anger. A study showed that family members experienced feelings of guilt over possible genetic disorders, concern over the prognosis and course of the disease, and worry about the possibility of other family members becoming mentally ill (Wood, 2003). Fear is another emotional reaction emerging due to adolescents with MI expressing aggressive behaviors. In this case families are often afraid of dangerous actions and violence. Family members also experience feelings of grief, anxiety, depression and uncertainty (Watkins, 2001). In addition, much of the anxiousness related to mental disorders in young people tends to persist into the rest of their life, and cannot be remedied (Conn & Marsh, 1999). Nowadays, restrictive policies regarding hospital admission and short lengths of hospitalization increase the number of adolescents with MI living with their family (Pejlert, 2001; Rossler, Salize, Os, & Riecher-Rossler, 2005). With the process of deinstitutionalization in psychiatry, most adolescents with MI go home to their unprepared families. Most of those adolescents retain the symptoms of MI and suffer relapses (Conn & Marsh, 1999). Taking care of those adolescents can be burdensome to family members. Therefore, the role of families with adolescents who have MI has become increasingly important.

A lot of the demands from adolescents with MI force the family to adapt in order to survive. A number of studies on family members of MI indicate that family members struggling with the burden demonstrate issues ranging from emotional reactions to the illness, stress from the disturbed behaviors, disruption of household routines, shame or embarrassment concerning the family, restriction of social activities, and financial constraints (Brady, 2004; Doornboss, 1996; Ferriter & Huband, 2003; Martens & Addington, 2001; Rossler et al., 2005; Saunders & Byrne, 2002; Seloiwe, 2006). A study of the families of the mentally ill revealed that families with MI reported more stress than normative families in the areas of intrafamily relationships, marital issues, pregnancy and childbearing, finance and business, work/family balance and transitions, illness and family care, losses, transitions and family legal issues (Doornbos, 1996). Negative consequences resulting from the family role may not only be stressful to the family members, but may also result in problems in relationships for the patient, which may contribute negatively to patient's psychopathology and functioning (Meijer et al., 2004).

Even though the evidence has supported the belief that the family of adolescents with MI experience highly stressful situations, few studies investigating the issue of family members as caregivers for those adolescents have been found. In the United State 2003 National Survey of Children Health (NSCH), parents of children with autism reported feelings of difficulty, frustration, and anger. They displayed high stress and negative psychological outcomes related to the child's challenges in communicating, difficult behaviors, social isolation, difficulties in self care, and lack of community understanding (Schieve, Blumberg, Rice, Visser, & Boyle, 2007). Family demands are the normal life circle or accumulative stressors. In a qualitative study, Puotiniemi & Kyngas (2004) revealed that mothers of an adolescent with MI faced hardships with the normal family life cycle, family transitions, and family caregiving. Similarly, in Thailand, one study showed that the stressful situations for family members were adolescents' function and behaviors, financial problems, noncompliance with treatment and medication, side effect symptoms, as well as conflict in the family (Thummathai, 2001).

Since families have to deal with stressors in caregiving and the accumulated stressors in the families, the most important expectation of families is family adaptation to taking care of the adolescent with MI effectively. Family adaptation plays the key role in coping with those adolescents (Fontaine, 2003; Puotiniemi & Kyngas, 2004). If the adolescents with MI and other family caregivers support each other, they will succeed well in family adaptation. Thus, the quality of life among adolescents with MI will support their well-being. The needs of adolescents with MI are the prevention of exacerbation, maintenance or fostering of normal development and adherence to medication (Pillitteri, 2007). The needs of the family as a whole require family efforts to bring a new level of harmony, balance and functioning to families. The needs of other family members are also harmony and balance in interpersonal relationships, solids structure and function, family development, well-being, and spirituality. Thriving family adaptation requires protective and capability factors, and patterns of functioning to foster the family adaptation (McCubbin, Thompson, & McCubbin, 1996).

According to the Resiliency Model, family resources and capability factors are crucial in family adaptation (McCubbin & McCubbin, 1993). The family resources

and capability factors or resilience factors include family hardiness, social support, family functioning, family coping and family appraisal etc. The family resources and capability factors facilitate adaptation, or the ability to maintain integrity and functioning, and fulfill developmental tasks. Both family resource and capability factors work synergistically and interchangeably to respond successfully to crises and challenges (Black & Lobo, 2008). When the family is challenged, recovery involves the promotion of ability to adapt, or rebound from a crisis. Family resilience factors can buffer the potential negative effects of stressors and strains on family members. However, the stressors can tax family resilience factors (Paterson, 2002). In addition, Conn (2003) noted that families have the potential to respond to the negative consequences of MI with adaptation, including mitigating family risk and prevailing over the circumstances of their lives. Thus, families of adolescents with MI suffer through a state of disorganization accompanied by a demand for changes in the family's expectations, rules, and overall of pattern of functioning to achieve family adaptation.

Attempts have been made to examine factors influencing family adaptation in families of a patient with MI. Greeff, Vansteenwegen, and Ide (2006) identified resilience factors affecting family sense of coherence in 30 Belgian families. The study focused on parents and children of patients with MI. In this study, family sense of coherence was perceived as family adaptation. The results indicated that family hardiness was highly positively related to sense of coherence. Rungreangkulkij, Chafetz, Chesla, and Gilliss (2002) studied psychological morbidity of 108 Thai families containing an adult with schizophrenia. The psychological morbidity was used as the outcome of family adaptation. The results revealed that family functioning and level of the patients' functioning were significantly negatively related to psychological morbidity of mothers and relatives. Family stress and family appraisal were significantly positively related to psychological morbidity of mothers and relatives. In addition, the patients' functioning level, family functioning, pile-up of demands, family appraisal, and seeking of spiritual support accounted for 22.7 % of the variance in psychological morbidity of the mothers. For the relatives, the pile-up of demands, family appraisal, family functioning, and seeking of spiritual support accounted for 29.8 % of the variance in psychological morbidity of the relatives.

In Korea, Han et al. (2007) studied factors influencing family functioning in 365 families providing care for a member with chronic mental illness. The results showed that knowledge of disease, family hardiness, family support, family sense of coherence, and family coping were positively related to family functioning. Family stress was negatively related to family functioning. The combination of family support, family hardiness, family coping, knowledge of disease, and family stress accounted for 61.4 % of the variance in family functioning. Furthermore, family adaptation of 157 individual family caregivers and 65 families in Taiwanese families of patients with severe mental illness were examined. The results revealed that family adaptation was associated with lower pile-up of demands, greater social support, and more positive interpretation of family caregiving. Social support and interpretation of the meaning of family caregiving partially mediated between family pile-up of demands and family adaptation (Hsiao & Van Riper, 2009).

The studies mentioned above have demonstrated several issues. First, the families of adolescents with MI have not received much attention. Second, how the relationships among family stress, patient's life skills, family hardiness, family functioning, family appraisal, and family adaptation among Thai families of adolescents with MI are related. Third, evidence regarding the mediator underlying the adaptation process is lacking.

There has been limited development of a body of knowledge concerning families of adolescents with MI. Therefore, the need for more research on families of adolescents with MI is clear. A conceptually driven study is needed to delineate the processes associated with adaptation in families of adolescents with MI. Thus, based on an empirically supported framework from the Resiliency Model (McCubbin & McCubbin, 1993; McCubbin et al., 1996) this study explored the pattern of the relationships among family stress, patient's life skills, family functioning, family appraisal, family hardiness, and family adaptation in families of adolescents with MI. This study will guide the line of inquiry concerning the contribution of family variables to the outcome of family adaptation.

1.2 Theoretical Framework

This study is guided by the Resiliency Model of Family Stress, Adjustment, and Adaptation (McCubbin & McCubbin, 1993; McCubbin et al., 1996). The Resiliency Model was developed from Hill's ABCX model (1949; 1965), the double ABCX model (1983) and the Typology Model of Family Adjustment and Adaptation (1987; 1989). Later, a significant development in the focus of research was resiliency in the family unit. Resiliency serves as a vital role in stabilizing and giving predictability to the family unit, and is drawn from Aaron Antonovsky's Resiliency Model (DeMarco, Ford-Gilboe, Friedmann, McCubbin, & McCubbin, 2000). The Resiliency Model was extended from family stress theory, which describes how and why some families, when faced with the adversity of illnesses and traumatic conditions, are able to manage, sustain, and survive. Resiliency is significant in explaining how the complex combination of risk factors, protective factors, and recovery factors in home care promote the well-being of family members. The Resiliency Model is oriented toward family adaptation, which is its central concept. Family adaptation is the process in which families engage in direct response to the excessive demands of a stressor and depleted resources and realize that systematic changes are needed to restore functional stability and improve family satisfaction (McCubbin & McCubbin, 1993).

The five fundamental assumptions about family life underlying the Resiliency Model include: (1) families face hardship and changes as a natural and predictable aspect of family life over the life cycle; (2) families develop basic competencies, patterns of functioning, and capabilities designed to foster the growth and development of family members and the family unit and to protect the family from major disruptions in the face of transitions and changes; (3) families develop basic and unique competencies, patterns of functioning, and capabilities designed to protect the family from unexpected or non-normative stressors and strains and to foster the family's recovery following a family crisis or major transition and change; (4) families draw from and contribute to the network of relationships and resources in the community, including its ethnicity and cultural heritage, particularly during periods of family stress and crisis; and (5) families faced with crisis situations demanding

changes in the family functioning work to restore order, harmony and balance even in the midst of change (McCubbin et al., 1996: 14).

According to McCubbin et al. (1996), families respond to life events and life transitions in two phases: an adjustment phase and adaptation phase.

The adjustment phase explains the family process when the family first deals with crisis situations. Stressors have impacts on the vulnerability and patterns of functioning. Stressors refer to the situations in one's life that have impacts and increase stress within family system. Family vulnerability refers to the condition of interpersonal relationships and organization of a family system which changes with family life cycle and demanding factors (McCubbin et al., 1996). Within the family unit, family accumulation of stressors and strains varies across stages of the family life cycle. The stressors also interact with family appraisal and resources, as well as the family's problem solving and coping ability. Appraisal refers to how the family assesses the events and its related hardships. Resources refer to the family capability and strength in dealing with stressors. Family problem solving and coping refer to family management of stressful situations (McCubbin et al., 1996). These factors have effects on family adjustment. The patterns of functioning, appraisal, and resources act as a mediator to reduce the imbalance in family life. A family with positive adjustment will return to a normal state. In contrary, a family with negative adjustment will experience a family crisis situation. Family crisis is not a derogatory term. It represents a state of temporary disorganization brought by a demand for changes in the family expectations, rules, and overall of patterns of functioning. This leads to the onset of the adaptation phase.

In the adaptation phase, when the minor changes are not adequate to manage stressors, the family moves into a crisis situation. A crisis situation is defined as a state of family disorganization that indicates major changes in family functioning which must be made. The family requires a change in the goals, rules, roles, and boundaries (McCubbin et al., 1996). This is the onset of the adaptation phase. The crisis situation induces accumulative stress and demands in the family, affecting family type and patterns of functioning. These interact with family appraisal, family resources, and family problem solving and coping. Social support from the extended family, friends, and community will foster family resources. Family functioning,

family appraisal, family resources, and family coping are mediators to predict satisfaction with family life (McCubbin et al., 1996). The interactions among the factors are the family capabilities attempting to manage the crisis situation, leading to positive adaptation and the family returning to a normal state. On the other hand, if the family is unsuccessful in managing the changing family dynamics, they therefore cannot manage the crisis. If a family has negative adaptation, it will return to a crisis situation (McCubbin et al., 1996). Thus, from the adaptation phase, the interaction among the healthy family functioning, positive family appraisal, increased family resources, and coping strategies, then the greater the possibility they will be able to adapt to the crisis.

In summary, the family adjustment phase relies on stressors, vulnerability, patterns of functioning, appraisal, resources, and problem solving and coping. All of the components interact to regain family balance. If successful, a family will return to a normal situation. If the family is maladjusted, it will experience a crisis situation and move to the adaptation phase. In the adaptation phase, accumulation of family stressors may increase the crisis situation. The systematic changes arise in order to respond to the crisis. These changes involve the interactions among the components including family stressors, family type, family functioning, family resources, family appraisal, and family coping and problem solving. The family functioning, family resources, family appraisal, and family coping act as mediators to predict satisfaction with family life. Responding to demands placed upon family, mobilizing available resources, and making changes as needed to renew physiological and psychological stability and improve family satisfaction is the process of family adaptation (McCubbin et al., 1996). The components of the Resiliency Model will be described in order to explain the links in the adaptation process.

Family adaptation

Family adaptation is the response to family demands, mobilizing of available resources, and making of changes as needed to restore physiological and psychological stability and improve family satisfaction. Family adaptation is the central concept which includes both internal family changes and a level of rapport and interaction with the community (McCubbin et al., 1996). For families of adolescents with MI, a balance is sought between meeting the needs of the individual adolescent

with MI, the needs of other family members and the needs of the family as a whole. Further, MI is a chronic disease that needs a long-term relationship between the family and the health care system, as well as relationships with other community systems (e.g. school). Thus, the family to community level of adaptation must also be achieved.

Family stressors

Family stressors are the family pile-up of demands that produce changes in the family system as well as the family life events impacting the family unit. Family stressful events such as death of a family member, divorce of parents, natural disaster, and illness of a member (Doherty & Campbell, 1988). In addition, families with mentally ill adolescents experience more strongly the problems associated with prolonged illness, associated warning signs, and defective social functioning of the adolescent with MI. Having an adolescent with MI, and learning how to manage the related crisis and its hardships contribute to family caregiving demands. Thus, the family is required to stabilize its functioning to cope with the stressful events in the family life cycle as well as the crisis situation of having an adolescent with MI.

Family types

Family types are a set of primary characteristics of a family system which describes how the family system typically appraises, operates and/ or behaves (McCubbin et al., 1996). In stressful situations, family types can indicate a family's capabilities, responses, and outcomes. There are four types of family systems related to coping: a) a regenerative family, which is characterized by coherence and hardiness which emphasizes acceptance, activity, pride, caring, and loyalty, as well as tolerance in adversity; b) a rhythmic family, which is characterized by predictability and transferring traditions in celebrating events and occasions; c) a versatile family, which is characterized by family togetherness and flexibility; and d) a traditionalistic family, which is characterized by family celebrations and traditions which link the family with their past and future (McCubbin et al., 1996).

Family functioning

Family functioning refers to the significant tasks that a family *has* to perform in both normal and crisis situation to sustain physical, psychological, emotional, and social stability, and it depends on the stages of the family life cycle.

Families have to rearrange their family functioning to mange their family stressors. The new patterns of family functioning may bring additional strains to family relationships, rules, values and roles. Family functioning may not always be accepted by all family members and may increase tension in the family. Families with MI have reported lower family functioning than normal families (Doornbos, 1996). However, the family usually maintains the integrity of a family in order to shape the family adaptation to include the new family functions.

Family resources, strengths and capabilities

Family resources, strengths and capabilities are potentially available to families in crisis to manage the demands of the family. There are three levels of resources (individual, the family unit, and the community) that have an influence on family adaptation. Family resources, strengths and capabilities include elements such as parents' self-esteem, family coping, family hardiness, social support, and family time together etc. The family resources are viewed as a means to enhance family adaptation, reduce demands, and buffer against stress (Fink, 1995). A family with a mentally ill adolescent may use family resources when adapting to MI.

Family appraisal

Family appraisal is the critical relationship between the family demands and the family capabilities, and the strength to manage these family demands. The family perceives the situation created by itself and interprets and gives meaning to the situation. The more positive the family appraisal, the more simple the process of adaptation in the family. The convictions, values, belief, and expectations develop and influence family appraisal. The family is able to generate problem solving and coping strategies in order to adapt to the stressful situation.

Family problem solving and coping

Family problem solving and coping are the strategies, patterns, and behaviors designed to maintain or strengthen the family. Problem solving and coping eliminate family stress and hardships by acquiring the resources, managing tension, and shaping the family appraisal. In addition, family coping maintains the emotional stability and physical well-being of family members. Family coping obtains and uses family resources and community resources to manage a crisis situation.

The Resiliency Model was chosen to guide this study because this model describes how families work within a stressful situation and how families use their strengths, resources, and perceptions as components in an adaptation process. Moreover, this model has been used extensively in the studies of families with chronic illness or disability from diverse cultural background. For example, resiliency in families with a member with a psychological disorder (Greeff et al., 2006); maternal and family stress, coping, and adaptation in children with liver transplantation (LoBiondo-Wood, Williams, & McGhee, 2004); the effects of a parent's sense of coherence and well-being on family hardiness in families of young children with asthma (Svavarsdottir & Rayen, 2005); predictors of adaptation in Icelandic and American families of young children with chronic asthma (Svavarsdottir, Rayen, & McCubbin, 2005); family variables associated with well-being in siblings of children with Down's syndrome (Van Riper, 2000; 2007); psychological morbidity of families of a person with schizophrenia (Rungreangkulkij et al., 2002); the influence of family resources and family demands on the strains and well-being of caregiving families (Fink, 1995); family functioning in families providing care for a family member with schizophrenia (Saunders, 1999). The research conducted by McCubbin and colleagues have demonstrated that the relationships of the model variables shape the reaction of family members to the encounter (Carey, Oberst, McCubbin, & Hughes, 1991; McCubbin & McCubbin, 1993; McCubbin, Balling, Possin, Frierdich, & Bryne, 2002; Svavarsdottir, McCubbin, & Kane, 2000; Svavarsdottir, Rayen, & McCubbin, 2005). The results of these studies provide a better understanding of the phenomena of families that have an offspring with chronic illness. The Resiliency Model thus offers a system framework to direct inquiry into the experience of the families caring for offspring with chronic illness. As mentioned before, there is no study identifying the factors influencing the adaptation in the family of an adolescent with MI. This model will help to describe family efforts to adapt to a stressor over time.

Having an adolescent with MI can be classified as a situational stressor for the family. The evidence found that the family encounter not only the usual stressors of the transitional development of adolescents, but also the situational stressor from the psychiatric symptoms of the adolescent with a MI. Families of adolescents with MI have a greater pile-up of demands and tend to have greater difficulties in adapting to

such a situation. Over time, families of adolescents with MI have to empower their efforts to adapt to such stressors. Therefore, the family adaptation phase rather than adjustment phase described in the Resiliency Model will be used to describe the families of mentally ill adolescents in this study.

In adaptation phase, six major concepts were selected. Family adaptation was hypothesized to be a function of the transactions among family stressors, family resource and capabilities, and family outcome. Two components of family stressors which act as an antecedent were examined. First, the stressor events and prior strains were selected for this study. The stressors events and prior strains were studied in terms of family stress. Second, the adolescents' disruptive behavior, symptoms, and deficient social functioning, in relation to the surroundings and general functional living skill of the adolescent with MI were studied. These functions were studied in terms of the patient's life skills. Family stress and patient's function were viewed as the potential stressors to perpetually family adaptation.

Family resources and capabilities in this model include family functioning, family appraisal of illness, and family hardiness. Family functioning is the obligation to promote the family to maintain physical, psychological, emotional, and social balance. Family appraisal of illness interprets family demands and whether or not the family is capable of responding effectively to the situation. Further, family hardiness is the internal strengths and durability of the family unit, which function as a buffer against family demands, to facilitate family adaptation. Family adaptation and family stressors are thought to be mediated by family resources and capabilities (family functioning, family appraisal, and family hardiness).

Family adaptation is viewed as the outcome of family efforts to bring a new level of balance, harmony, coherence, and functioning to a family crisis situation (McCubbin & McCubbin, 1993; McCubbin et al., 1996). Perceiving satisfaction with intrafamily and family–community fit is measured as the outcome for these families. This involves all the changes of Thai families with mentally ill adolescents. The model depicted in Figure 1 demonstrates this.

Family Stressors **Family Resources and Capabilities** **Family Outcome**

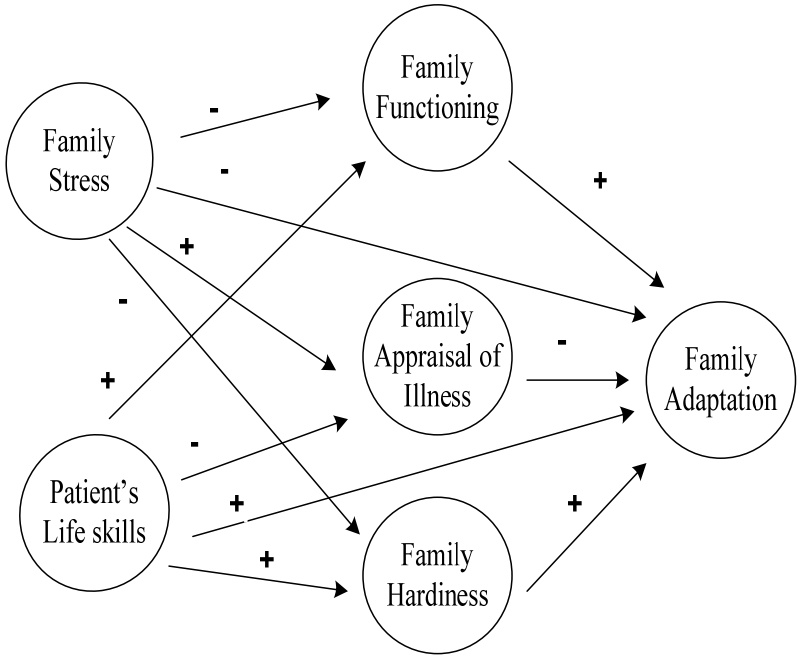


Figure 1. Hypothesized Model of Family Adaptation in Families of Adolescents with Mental Illness

1.3 Purpose of the Study

The purpose of this study was to examine the pattern of the causal relationships among family stress, patient's life skills, family functioning, family appraisal of illness, family hardiness, and family adaptation in families of adolescents with MI.

1.4 Research question

How do family stress, patient's life skills, family functioning, family appraisal of illness, and family hardiness influence family adaptation among families with mentally ill adolescents?

1.5 Hypotheses

1. Family functioning, family hardiness, and patient's life skills have positive direct effect on family adaptation.

2. Family appraisal of illness and family stress have negative direct effect on family adaptation.

3. Family stress has a negative indirect effect on family adaptation through family functioning, family appraisal of illness, and family hardiness.

4. Patient's life skills have a positive indirect effect on family adaptation through family functioning, family appraisal of illness, and family hardiness.

Scope of the study

This study focuses on family adaptation of Thai families of an adolescent with MI. The selected concepts, based on the Resiliency Model, were family stress, patient's life skills, family functioning, family hardiness, family appraisal of illness, and family adaptation. The study was conducted with family members of adolescents with MI. MI was interpreted as a diagnosis of schizophrenia, bipolar disorder, depression, attention-deficit/hyperactivity disorder (ADHD), or autism, based on the International Classification of Diseases (ICD-10) or the Diagnostic and Statistical Manual of Mental Disorders, fourth edition Text Revision (DSM-IV-TR), from outpatient clinics and inpatient clinics of Suan prung hospital, Prasrimahapho hospital, Suansaranrom hospital, and Srithanya hospital, covering the four regions of Thailand. The data were collected from May, 2009 to September, 2009.

Expected Outcome

The findings from this study are expected to provide better understanding of how families use their strengths and resources such as family functioning, family

appraisal of illness, and family hardiness to adapt to problems related to having adolescents with MI. Understanding the mediating mechanism is the foundation to promoting family adaptation in families of adolescents with MI. The results of the study may further clarify the contribution of family adaptation as a clinical domain of family health, and may contribute to the development of effective family-based interventions for Thai families caring for psychiatric patients. Moreover, this study generates a new model to promote family caring for adolescents with MI.

1.6 Definition of terms

Family stress

Conceptual definition: Family stress is defined as the pile-up of demands, stressors, and strains that, when placed on the family, have the potential to produce changes in the family system. Such changes may affect all areas of family life and health such as the family relationship, family goals, established patterns of family functioning and family's values (McCubbin & McCubbin, 1993).

Operational definition: Family stress is operationalized by an individual score on the Thai Family Stress Inventory (TFSI) modified from the Thai Strain Inventory (TSI) (Rungreungkulkij, 2000). The original version of the Thai Strain Inventory of Rungreungkulkij (2000) was adapted from the Family Strain (McCubbin & Patterson, 1982, cited in Rungreungkulkij, 2000) and from survey studies regarding sources of Thai family stressors (Leelakraiwan, Setthaphumirin, & Kaew-Ying, 1992; Sornpaisan, Charusshing, & Boulek, 1998).

In this study, The Thai Family Stress Inventory was modified from the Thai Strain Inventory. 4 items were added by the results from two focus groups of 6 families of adolescents with MI, in order to cover all aspects of family stress. The TFSI is 15 items rated on a four point scale (0 = not at all to 3 = extremely), which was designed to measure the accumulation over time of stressors, strains, and transitions in the family within the past 12 months. The score can range from 0 to 45. The higher scores indicate higher family stress. The questionnaire can be self-administered, requiring approximately 5 minutes for participants to complete.

Patient's Life Skills

Conceptual definition: A patient's life skills are defined as the perception of family members about the function or disability of adolescents with MI that may cause stressful situations and produce changes in the family system.

Operational definition: A patient's life skills are operationalized by an individual score on the Life Skills Profile-20 (LSP-20) (Rosen, Trauer, Hadzi-Pavlovic, & Parker, 2001). The LSP-20 contains 20 items which are designed to measure the function of a person with MI.

The researcher back translated the LSP-20 into Thai. The scale measures the function or disability of adolescents with MI which impact the family. The scale is composed of five subscales including: self care (5 items); anti-social (4 items); withdrawal (5 items); bizarre (3 items); and compliance (3 items). Each participant was asked to score the items 4-3-2-1 from leftmost to rightmost anchor. The total score ranges from 20 to 80. The higher scores denote higher levels of patients' functioning. The questionnaire can be self-administered, requiring approximately 15 minutes for participants to complete.

Family functioning

Conceptual definition: Family functioning is defined as the tasks that families of an adolescent with MI need to take in either a normal or crisis situation in order to maintain physical, psychological, emotional, and social balance.

Operational definition: The operational definition of family functioning is the individual score on the Chulalongkorn Family Inventory (CFI) (Trungkasombat, 1997). The CFI is a 36-item self-report scale for family members older than 12 years of age, which was designed to measure the level of tasks that family members value themselves in their families. The CFI consists of seven subscales including: problem solving; communication; roles; affective responsiveness; affective involvement; behavior control; and general functioning. The rating is from strongly disagree (1) to strongly agree (4). The total score ranges from 36 to 144. The higher score indicates higher family functioning. The CFI requires approximately 15 minutes for participants to complete.

Family appraisal of illness

Conceptual definition: Family appraisal of illness is defined as the family's perceptions about the situation of having an adolescent with MI in the family, which can include both negative and positive perspectives. Family appraisal of illness involves making meaning of the situation and thus includes reevaluating priorities, goals, and values.

Operational definition: The family appraisal of illness is operationally defined as the person's score on the Demands of Illness Inventory (DOII) (Woods, Haberman, & Packard, 1987), which was back translated into Thai and modified by Rungreungkulkij (2000). The DOII was designed to measure the family perceptions about having a person with schizophrenia in the family. In addition, it includes family beliefs and expectations regarding the illness. The DOII has 19 items, rated from 0 (not at all) to 3 (extremely), and 2 semi-structured questions asking 1) What do you think is the cause of the patient's illness?; and 2) In what ways can the patient be treated?

In this study, only the 19 items from the DOII were selected. These relate to the family's perceptions about having an adolescent with MI in the family. The total score can range from 0 to 57. The lower scores indicate less negative appraisal of the illness. The questionnaire can be a self-report: it requires approximately 10 minutes for participants to complete.

Family hardiness

Conceptual definition: Family hardiness is defined as the internal strengths and durability of the family system during the life events and hardships in families of adolescents with MI. Family hardiness is characterized by a sense of commitment (the family's sense of internal strengths), challenge (the family's efforts to be innovative, active to experience new things and to learn), and control (family's sense of being in control of family life rather than being shaped by outside events and circumstances).

Operational definition: Family hardiness is operationally defined as the family's score on the Family Hardiness Index (FHI) (McCubbin & Patterson, 1987), and was back translated into Thai by Santati (2005). The FHI consists of a 20-item self-report questionnaire, which was designed to measure the characteristics of hardiness as a form of stress resistance and adaptation of resources within the family of a parent caregiver of asthmatic children. Each of the items is arranged from 0-3.

The total score ranges from 0 to 60; higher scores indicate a higher family hardiness. This requires approximately 10 minutes for participants to complete.

Family adaptation

Conceptual definition: Family adaptation is defined as family perception of satisfaction in family life. It is the outcome of family efforts over time to bring a new level of balance, harmony, and functioning to a family crisis situation. It involves two levels of functioning: the individual to the family, and the family to the community.

Operational definition: Family adaptation is operationally defined as the person's score on the Family Adaptation Scale (FAS) (Antonovsky & Sourani, 1988), which was back translated into Thai by the researcher. The FAS is an 11-item self-report questionnaire with semantic differential items, which was designed to measure the satisfaction with intrafamily and family–community fit to the life stressors and changes. The FAS scored from 1 to 7, ranging from 1 = completely satisfied, to 7 = dissatisfied. This questionnaire consists of three subscales including: internal family fit (individual to family unit); family–community fit; and both level fit. The total score ranges from 11 to 77. A high score indicates satisfactory adaptation or a balance between demands and capabilities in the family. This requires approximately 10 minutes for participants to complete.

CHAPTER II
LITERATURE REVIEW

Mental illness is a significant problem that affects patients, their families, and society. There is a limited amount of literature on how families care for adolescents with MI; what there is often not specific to this age group or these illness categories. Therefore, the related literature involving family adaptation in families with MI is reviewed here. In addition, the selected factors influencing family adaptation in families of adolescents with MI are proposed.

2.1 Adolescents with Mental Illness

2.1.1 Mental illness

Precise definitions of mental illness are difficult and impractical. Mental illness is associated with psychotic symptoms and impaired functioning (Narrow et al., 1998). The alterations in thinking, mood, and behavior contribute to a host of other problems in the person's life. For instance, disturbances of thought and perception are most commonly associated with schizophrenia. Likewise, severe disturbances in expression of, and affect and regulation of mood are most regularly seen in depression and bipolar disorder. Mental illness is considered by the American Psychiatric Association (APA) as the clinically significant behavioral or psychological syndrome experienced by a person and marked by distress, disability, or the risk of suffering, disability, or loss of freedom (American Psychiatric Association, 2000).

Mental illness has been defined as biological based brain disorders that variably affect aspects of cognition, emotion, and behavior (Fontaine, 2003). The terms "mental illness", "mental disorders", and "psychiatric disorder" are used interchangeably to describe a health condition marked by alterations in thinking, mood, or behavior that cause distress, impair ability to function, or both. Peck &

Scheffler (2002) analyzed definitions of mental illness used in state parity laws, identified factors influencing the development of these definitions, and examined the effects of different definitions on access to care for persons with mental illness. The definitions of mental illness in state parity laws have important implications for access, cost, and reimbursement and determine which populations receive a higher level of mental health services. In addition, their definitions used in state parity legislation vary significantly and fall into one of three major categories: "broad-based mental illness," "serious mental illness," or "biologically based mental illness." To define each of these categories, state legislatures do not rely on clinically accepted definitions or federal mental health policy. Rather, influenced by political and economic factors, they are developing their own definitions. However, mental illness covers a broad range of issues including depression, bipolar disorder, schizophrenia, ADHD, obsessive-compulsive disorder, autism etc.

The specific causes of mental illness remain unclear. Multiple factors, including genetic, viral, immunological, environmental, and biological are believed to contribute to the development of mental disorders. Further, the disruption of environmental conditions can result in mental illness (Johnson & Mohr, 2003). However, current knowledge of the etiology of MI improves our understanding of mental disorders. It has been revolutionized by contemporary knowledge of the biological components of behavior, affection, cognition, and interpersonal relationships (Costello et al., 2006).

The two diagnostic systems for MI in common use are the Tenth Revision of the International Classification of Disease (ICD-10) (World Health Organization, 1992) and the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition Text Revision (DSM-IV-TR) (American Psychiatric Association, 1994). Both systems objectively define symptoms and characteristic impairments of MI in a similar way, and have improved the reliability of diagnostic assessment. The major differences between the systems are the DSM-IV requirements of social or occupational dysfunction (not included in ICD-10) and 6 months duration of illness (versus 1 month for ICD-10). Mental health professionals use the DSM-IV or ICD-10 as a categorical classification system with diagnostic criteria listed for each MI. They use this to facilitate communication among clinicians and to apply the diagnostic criteria for medical treatment, health service, and research. However, both systems are used for diagnosis of Thai patients.

2.1.2 Mental Illness in Adolescence

Adolescence is a critical period of transition from childhood to adult life that lasts approximately 10 years. The World Health Organization (WHO) defines it as the period from 10 to 19 (World Health Organization, 2005a). Whereas, Gutgesell and Payne (2006) were describe it as operating between 11 and 22 years. Adolescents are not children anymore and at the same time not yet adults. They are just starting to figure out who they are other than just fulfilling the role of a daughter or a son. Adolescence is the stage at which most mental disorders are often detected for the first time. The high rate of self harm and suicide are a leading cause of death in adolescents (Patel et al., 2007). Psychiatric disorders that arise during adolescence seem to occur because of the failure in the processes of development. Most mental disorders begin among young people aged 12 to 24 years. Related risk factors, lack of support from family and community, and poverty influence their development (Costello et al., 2006).

The developmental theories provide a way of interpreting clinical data. Erickson's psychosocial theory (1967), describes how self assurance in the previous life stage leads to the adolescents gaining a self-identity and the ability to determine where the adolescent fits in society. Failure to develop a self-identity leads to role confusion, poor self confidence, and alienation (Oran, 2000). An individual's ability to anticipate future events makes a difference in the way he or she acts in the present. Accordingly, with a strong identity, adolescents tend to display independence, high self-esteem, and responsibility. In addition, Sullivan's interpersonal theory (1882-1949), suggests personality is manifested only in a person's interactions with another person or with a group. Sullivan proposed that the first genuine human relationship occurs during adolescence and that this marks the beginning of where the adolescent is searching for his or her own identity. The collaborative relationship is based on a process of learning to adjust to the needs of others, as well as to one's own needs, and reaching mutual satisfaction of needs. Self-esteem becomes more stabilized. Thus, adolescents learn to achieve love relationships while they maintain their self-identity.

Adolescents exposed to trauma have increased risk of developing new, or exacerbating pre-existing, psychiatric problems (Pine & Cohen, 2002). Kakaki et al. (2007) noted that the traumatic events affecting adolescents' mental health are natural disasters, accidents, wars, chronic or life threatening illness, sexual assaults, domestic

or community violence. Adolescents exposed to these events can experience loss of motivation, and concentration and develop learning disorders, anxiety, depression, acute stress disorders somatization, post-traumatic stress disorder, separation problems, sleep difficulties, aggressiveness, and high-risk health behaviors (alcohol or drug abuse, risky sexual conduct). Adolescents with MI face increased HIV risk because of an increased frequency of sexually risky behaviors, higher rates of substance use, and association in social networks with increased HIV risk. Many adolescents with MI are the victims of sexual abuse (Smith, 2001). In addition, alcohol consumption and the use of non injection drugs among MI youth are associated with increased sexually risky behaviors (Teplin et al., 2005).

In Thailand, Ruangkanchanasetr, Plitaponkarnpim, Hetrakul, and Kongsakon (2005) studied youth risk behaviors in 2,311 adolescents in Bangkok (8 schools, 13 communities, and 1 juvenile home institution). They found that adolescents were faced with high risk behaviors. Depression and suicide tendencies were reported among 19.9% and 8.1% of adolescents, respectively. The prevalence of substance abuse were 3.5 percent using tobacco, 1.7 percent taking alcohol, 4.6 percent using amphetamines, and 0.1 percent on other drugs. Factors relating to the family included a low socioeconomic status, poor relationships, broken families, and parental substance abuse. Thus, a great and varied number of risk behaviors may trigger MI in adolescents.

The psychiatric diagnoses for adolescents provide only limited explanations of the condition's etiology or outcomes. The symptoms of disorders are sometimes difficult to distinguish from the turbulence of normal growth and development. The certainty of current estimates for the frequency of the various psychiatric disorders is also inconsistent, partly because of changing definitions of these disorders (Narrow et al., 1998). Campbell (2006) noted that a wide range of psychiatric conditions affects adolescents. While similar in name to those adults, they are not necessarily similar in scope, symptoms, or presentation. A range of legal, policy, societal, and ethical issues may complicate efforts to intervene early and effectively, affecting diagnosis and treatment. In general, the most severe and common diagnoses in adolescents with MI are schizophrenia, bipolar disorder, depression, attention-deficit/hyperactivity disorder (ADHD), and autism.

The World Health Organization (2003a) stressed the importance in considering contextual understanding and appreciating overall context of the disorders. The exposure to alcohol in the uterus is an example of an environmental risk factor (Scahill, 1999). Also, evidence of poverty, lack of attachment, poor family relationships, maternal depression, poor school achievement, and disrupted family structure certainly predict adolescent psychiatric disorders (Costello et al., 2006). Further, the family systems, such as the rules, rituals, and communication patterns have an impact on adolescent development. Likewise, the adolescent's development influences the family system (Scahill, 1999).

The early identification of MI conditions is important. They are not always as obvious as would be thought. MI can result in a myriad of maladaptive behaviors. The early treatment of MI such as schizophrenia, depression and bipolar disorder not only brings alleviation to patients and their families, but improves the prognosis and often rapidly aids the return to functioning (World Health Organization, 2003b). Substance use disorders are also significant comorbid conditions that can alter the course of illness, treatment and outcome. They also represent a growing area of importance in the treatment of adolescents (Anderson, 2003). MI that may appear during adolescence include schizophrenia, mood disorders, bipolar disorder, conduct disorder, and substance abuse (Scholler-Joquish, 2000).

In summary, short coming-of-age specific epidemiological data is one reason for development of more limited and focused studies. This will help with planning and policy considerations for adolescents with MI. The extent of the negative effects of risk factors upon children tends to depend upon the severity of the risk factors and the psychological resilience of the child. Identifying MI in adolescents can be challenging, because adolescents change rapidly as they grow. Moreover, the prodromal stage of MI in adolescence is an ambiguous situation for families of adolescents with MI. Family members may have difficulty distinguishing between normal developments or underlying MI. In this study, adolescents are aged 12 to 24. The methodology to identify adolescents with MI will use the ICD-10 and/or the DSM IV-TR to select the families which have adolescents with MI. Mental illness is defined as schizophrenia, depression, ADHD, autism, bipolar disorder and its subtypes.

2.1.3 Effects of Mental Illness on Adolescent Development

MI affects the nature of and the timing of adolescent development. Peculiarity of the symptoms such as delusion, hallucination, inattention, aggression, depression, and impulsivity can intensify normal adolescent risk taking and put adolescents with MI at higher risk than their peers for negative experiences. Biological, psychological, and social development are highly inter-related and the timing of one may affect development in other domains (Suris, Michaud, & Viner, 2004). Those with MI appear to feel lonely, depressed, and suffer from stigma (Scholler-Joquish, 2000). MI affects the basic neuronal maturational mechanism and neurotransmitter that underlie the development of cognitive capabilities in adolescence. Adolescents who suffer from MI sometimes have more difficulties in accepting and discussing openly their signs and symptoms such as lack of motivation, difficulty in completing tasks, poor eating and sleeping behavior. In an attempt to look like their peers, they may make every attempt to avoid disclosing their conditions. This can place them in difficult situations, such as not participating in peer activities for unusual or odd reasons, or experiencing unexpected medical situations that then place their friends in a difficult position (Scahill, 1999). Scholler-Joquish (2000) noted that adolescents who develop MI at an early age will experience severe, long-lasting, and devastating results throughout their lives, and affecting their families and society.

Most young people who commit suicide have a diagnosable mental disorder, a substance abuse disorder, or both. They suffer from depression: experiencing higher levels of hopelessness, helplessness, or lower self-esteem than their non-suicidal peers. MI interferes in adolescents' mental, emotional, and physiological ability. Adolescents are deficit in the functioning of significant biologic, emotional, and cognitive systems. Their self concept and body image change, as well as their life process. They experience emotional stress or crises related to illness, pain, disability, and loss (Kaplan et al., 2006).

In summary, adolescents with MI often have a highly obstructed period of development. They start having problems with their self-identity and self confidence. The group interactions completely change. Gradually, they loose their self independence. As a consequence, they are often faced with a variety of negative experiences, which encourage their mental illness. This is completely different for their peers. This causes teenagers to depend more on their families.

2.2 Families of Adolescents with Mental Illness

Living with and caring for adolescents with MI can have a tremendous impact on the family. Adolescents are passing a period of life transition, hormonal changes, and relationship difficulties, compounded in those who also have a MI; this can be a great challenge to their families. The onset of MI in adolescence may not be recognized in the initial phase. MI has a profound effect on family members and the relationships. Each of these negative experiences and consequences encountered by adolescents with MI tends to disrupt family life and increase stress in family members (Suris et al., 2004). The disruptions include damaging family functioning, a restriction of social activities, and financial hardship. Families may find that community services are not available or not satisfactory. Some families find themselves negotiating with the legal and criminal justice system. This increased family conflict interferes with a teen's ability to emotionally separate from his/her family of origin. MI puts the entire family system under catastrophic levels of stress. They experience intense feelings of grief and loss. Lucas (2000) noted that adolescents with MI may struggle in areas such as social skills, language, cognition, or morality, as well as in psychological, cultural or behavioral development. It can be very difficult for family members to comprehend that adolescents have MI. As a result, treatment may be delayed for years in the expectation that the adolescents will thrive without it.

Moreover, some families may be rejecting and critical of the adolescents with MI. The cultural system may influence their perception of the family burden related to caregiving (Lefley, 1989). The primary responsibility for caregiving falls often to one person who then often leads to increased conflict and a greater risk of parental separation. Family members' feelings may range from shame to protectiveness. Others family members alternate between overprotection, over control, and rejection. Some families learn to adapt in ways that foster the growth and development of adolescents with MI and all family members while others are exhausted and give up (Fortaine, 2003). However, Mohr, Lafuze, and Mohr (2000) stated that all families are resourceful and have the capacity to grow and change. This helps families of adolescents with MI to respond and adapt to the crisis situation. They adapt to their changed circumstances and continue to function successfully. Thus, family adaptation is important for adolescents with MI and their families.

2.3 The Resiliency Model of Family Stress, Adjustment, and Adaptation

The conceptual framework used to describe family adaptation of Thai families of adolescents with MI was the Resiliency Model of Family Stress, Adjustment, and Adaptation (McCubbin & McCubbin, 1993; McCubbin et al., 1996). The Resiliency Model was developed from Hill's ABCX model (1949; 1965), the double ABCX model (McCubbin & Patterson, 1983) and the Typology Model of Family Adjustment and Adaptation (McCubbin & McCubbin, 1987; 1989). One of the significant developments is resiliency in the family unit. The resiliency serves a vital role in stabilizing and giving predictability to the family unit, which is a concept that draws from Aaron Antonovsky's resiliency model. The Resiliency Model is extended from family stress theory, which adds to our understanding of how and why some families, when faced with the adversity of illnesses and traumatic conditions, are able to manage, sustain, and survive. In this model, resiliency is significant to explain the complex combination of risk factors, protective factors, and recovery factors that are involved in home care and promote the well-being of family members. The Resiliency Model is oriented toward adaptation, which is its central concept. Adaptation acts as a response within the family unit to the extensive demands of a stressor, and involves realization that systemic changes are needed to restore functional stability and improve family satisfaction and well-being (McCubbin & McCubbin, 1993). This conceptual framework has been used to guide both family science and nursing studies throughout the world (DeMarco et al., 2000). In the Resiliency Model, the assumption that families manage stressful situations over time emphasizes the family's ability to recover from stressful events and crises by drawing on patterns of functioning, strengths, capabilities, appraisal, coping, resources, and problem solving to facilitate adaptation (McCubbin et al., 1996).

According to McCubbin and McCubbin (1993), families respond to life events and life transitions in two phases. The adjustment phase implicates minimal transitory changes that the family unit makes in its routine patterns that do not pose a hardship. The five interacting components are included in the adjustment phase: a) the stressors and prior strains (family vulnerability), b) the family's type and established patterns of functioning, c) family resources (strengths), d) appraisal of stress (perceptions and meaning of the stressor events), and e) the family problem-solving

and coping (decision and actions). McCubbin et al. (1996) noted that some stressors do not induce significant hardship on the family system. These stressors fit in with established patterns of family functioning, family resources, family appraisal, family problem solving, coping abilities and strengths. The family makes minor and short-term adjustments in the family system and life patterns to accommodate the stressors without a crisis. However, illness often results in hardships that are numerous and substantial, and demand substantive changes in the family system inclusive of family roles, goals, values, rules, priorities, boundaries, and overall patterns of functioning. In this situation, there is change in family functioning and families move toward a state of imbalance and disharmony. The result can be maladjustment and family crisis, which leads to the onset of the adaptation phase.

The adaptation phase occurs when the family attempts to make minimal adjustments are no longer effective and result in a crisis. Family crisis represents a state of temporary disruption and disorganization accompanied by a demand for changes. The demands are on family expectations, rules, and overall patterns of functioning in the family system. The goal of the adaptation phase is to allow families to restore some functional stability and improve family satisfaction in a stressful situation (McCubbin & McCubbin, 1993). The level of family adaptation emerges in response to a) the pile-up of demands, stressors, transitions and strains; b) the family's type and newly instituted patterns of functioning; c) the family resources (strength, capabilities, and social support); d) the family appraisal of the crisis; and e) the family problem-solving and coping.

In this phase, family adaptation occurs at two levels: 1) from the individual to the family, such as by ensuring the care and well-being of family members; and 2) from the family to the community, such as by building satisfactory relationships in the workplace and hospital (Van Riper, 2005). If families are successful in meeting and managing the crisis created by the pileup and the crisis situation, the family adaptation will bring a new level of balance, harmony and functioning to the family crisis situation, called family bonadaptation. Some families are unsuccessful in managing the changing family dynamics and therefore cannot manage the crisis. This situation is called maladaptation, which is a negative change in the pattern of functioning and it results in a recycle through the family process of adaptation (McCubbin et al., 1996).

Thus, within the adaptation phase, the interaction between greater family strengths, more positive family appraisal, better healthy family functioning and stronger coping strategy, will lead to a greater possibility that they will be able to adapt to the crisis.

The Resiliency Model has a strong potential to guide research that composes the concepts of family stress, family appraisal, family responses, and family adaptation. Second, the Resiliency Model incorporates the concept of resiliency in the family unit. The framework was extended to explain why families with chronic stress are able to adapt, through the use of recovery factors, in the creation of new successful patterns of family functioning. Third, this theory has been used to answer the complex questions of how a family uses their strengths, resources, and perceptions as components in an adaptation process that aims at achieving balance within their family and within their community. Fourth, the Resiliency Model explains why some families endure life hardships and traumas with minor adaptation and appear to be buffered by protective factors such as family hardiness and family appraisal of illness. Fifth, it provides a way to describe family efforts to adapt to a stressor over time. Finally, the Resiliency Model has been widely used to guide research by nursing and behavioral scientists working both individually and collectively to isolate protective and recovery factors in the family unit that may affect physical and psychological outcomes. In addition, the researches by McCubbin and colleagues have demonstrated that family stress, family appraisal, and family resources, as well as family functioning shape the reaction of family members to the encounter. The concepts of family stress, family appraisal, family resources, and family functioning are the primary focus of the study that was undertaken. It is hypothesized that family adaptation in families of adolescents with MI will be affected by a combination of family stress, family functioning, family appraisal of illness, and family hardiness.

The conceptual framework for this study is derived from the adaptation phase. The six variables specified in the adaptation phase are taken into the conceptual framework for this study: 1) pile-up of demands was studied in terms of family stress, 2) family crisis situation was studied in terms of patient’s life skills, 3) newly instituted patterns of functioning was studied in terms of family functioning, 4) family appraisal was studied in terms of family appraisal of illness, 5) family resources was

studied in terms of family hardiness, and 6) the outcome was studied in terms of family adaptation.

In this study, there are several categories of stressors and strains that combine as part of family adaptation to adolescents with MI. Firstly, patient's life skills encompass behavioral reactions to the illness and related hardships over time, and reflect whether or not the adolescent with MI has a disability or lower functioning. Secondly, family stress includes normative transitions in individual family members and the family as a whole. These stressors include family member death or illness, prior family strains accumulated over time, such as financial problems or unemployment, situational demands, and contextual difficulties such as acute illness or accident. They also include the consequences of family efforts to cope that have added to the family burden such as loss of property or conflicts in the family, and intrafamily and social ambiguity to act or cope effectively with the crisis; for example, in understanding of MI or its symptoms. Thus, in this study pile-up demands are not only particular demands of the illness stressor, but also the concurrent stressors, strains, and transitions. Family functioning, family appraisal of illness, and family hardiness will play a role as family resources for the purposes of family adaptation. This model will guide the line of inquiry concerning the contribution of family variables to the outcome of family adaptation.

2.4 Family Adaptation

Family adaptation is a central concept of the Resiliency Model. It is an important variable in the family's efforts to maintain adjustment and adaptation in response to stress in the family. The adaptation process uses resources factors or resilience factors and the capability of the family, as well as balancing stressors and strains (McCubbin & McCubbin, 1993). Various adaptation pathways are involved over time (Walsh, 2003b). In concept analysis, it is shown that family adaptation focuses on chronic illness of a child family member. Family adaptation is defined as a process of the family system identified by the use of multiple coping strategies to achieve adaptive tasks in a chronic illness situation (Clawson, 1996).

Family adaptation is the state of balance which contributes to the health of the family members and the family unit as a whole. The family adaptation shows efforts to bring a new level of balance, harmony, coherence and functioning to a family crisis situation. Family adaptation fit, at both the individual to family and the family to community levels of functioning, may vary on a continuum from good to poor (McCubbin et al., 1996; McCubbin & Patterson, 1987). However, family adaptation involves the process of restructuring and makes changes in the rules, boundaries, and pattern of family functioning.

A few researchers, drawing on the Resiliency Model framework, have explicitly identified family adaptation as the outcome variable of interest in studies concerned with families dealing with the illness of a member (Leske & Jiricka, 1998; Leske, 2003; Svavarsdottir et al., 2005). Besides this, family adaptation is widely conceptualized as family well-being (Fink, 1995; Leske & Jiricka, 1998; Leske, 2003; Svavarsdottir, 1997; Van Riper, 2000), general health status (Svavarsdottir, 1997; Rungreaungkulkij et al., 2002), family sense of coherence (Greeff et al., 2006), and family functioning (Hsiao & Van Riper, 2009), all considered analogous to family adaptation. However, this study will explore family adaptation, including family member satisfaction with the individual within the family and the family within the community.

Family adaptation occurs at two levels. One occurs after the family has accepted changes. Family members work again to become more appropriate to one another and the unit becomes more harmonious in its functioning. On another level, family adaptation occurs through daily transactions between the family and the community. Families interacting with the community to make a better fit are a part of the adaptation process. The definition of family adaptation in the Resiliency Model is congruent with the concept “family adaptation” in Antonovsky and Sourani (1988). Thus, family adaptation is defined as perceived satisfaction with intrafamily and family-community fit.

In this study, the Family Adaptation Scale (FAS) (Antonovsky & Sourani, 1988) has been selected to measure family adaptation. The FAS development was described in the study of Antonovsky and Sourani (1988). A sample of 60 married Israeli males who were disabled by injury or illness completed the FAS, along with their wives. The perceptions by spouses of the family’s satisfaction with its adaptation

to its internal and external environments were examined. Cronbach's alpha was reported as .85 for husbands, and .89 for wives (Antonovsky & Sourani, 1988). Leske and Jiricka (1998) studied family adaptation after critical injury in 51 families in Canada and used the FAS. They reported the internal reliability as a Cronbach's alpha coefficient of .91 for the total scale. Consequently, Leske (2003) used the FAS in 127 family members who participated within 2 days of admission to the intensive care unit after trauma and surgery. The result showed the alpha reliability was .90.

Additionally, Svavarsdottir et al. (2005) used the FAS in 129 families in the United State and 123 families in Iceland who had a young child with chronic asthma, and reported the internal reliability as a Cronbach's alpha coefficient of .89 for the whole scale. In the US sample, Cronbach's alpha coefficients were .88 for the mothers and .89 for the fathers. In the Iceland sample, Cronbach's alpha coefficients were .88 for the mothers and .84 for the fathers.

In Rungreangkulkij et al. (2002), family adaptation was operationalized as the psychological morbidity of individual family members. Individual family members' health has been viewed as one dimension of family adaptation. The convenience sample comprised 108 families containing a member with schizophrenia in the community. The results found that family stressor (patient's functioning) was negatively related to psychological morbidity ($r = -.36$; $p < .01$). Pile- up of demands (the normative and non-normative stressors and intrafamily strain) was positively related to psychological morbidity ($r = .45$; $p < .01$). Family resources were negatively related to psychological morbidity ($r = -.35$; $p < .01$). Family negative appraisal of the situation was positively related to psychological morbidity ($r = .28$; $p < .01$). Higher family functioning was negatively related to psychological morbidity ($r = -.43$; $p < .01$). In addition, the patients' functioning, family functioning, pile-up of demands, family appraisal, and seeking of spiritual support accounted for 22.7 % of the variance in psychological morbidity of the mothers. For the relatives, the pile-up of demands, family appraisal, family functioning, and seeking of spiritual support accounted for 29.8 % of the variance in psychological morbidity of the relatives. They collected data from both mother and a relative in each family. Nevertheless, they separated them into two groups for analysis. The results might be biased from the negative relationship

between family functioning and psychological morbidity. Family resources were not included for analysis because of its overlap with family functioning.

Families of adolescents with MI often find it urgent to adapt in order to reduce the two sources of family stressors, i.e., family stress both from the family life cycle and patient's life skills. In addition, the experience of stigma, the uncertainty about the illness, and the future after parents are no longer able to provide care were cited as important in the literature discussing parental care for a person with mental illness (Chafetz & Barnes, 1989; Greenberg, Greenley, McKee, Brown, & Griffin-Francell, 1993; Ryan, 1993). The experience of stigma and uncertainty about the illness can give meaning to the situation. Thus, the need to study family appraisal of illness is required to fully understand family adaptation.

Greeff et al. (2006) identified resiliency factors in 30 families with a mentally ill family member. They measured sense of coherence in order to explain family adaptation. The result found that the most significant correlations were family hardiness and family adaptation in parents ($r = .63$; $p < .001$) and children ($r = .42$; $p < .05$). In this study, caution is needed when generalizing the study because of the use of a small sample size. Furthermore, the sample was too heterogeneous in terms of length of illness, as well as age of identified patient (adults and children).

Hsiao and Van Riper (2009) examined family adaptation of 157 individual family caregivers and 65 families in Taiwanese families of patients with severe mental illness. Individual adaptation refers to family caregiver burden and depressive symptoms of family caregiver. Family adaptation refers to family functioning. The results found that family caregivers with higher levels of social support and a more positive meaning of family caregiving are able to adapt more effectively when confronted with a pile-up of demands. Social support and meaning of caregiving were the mediators' between pile-up of demands and family adaptation. Individual and family members with severe and persistent MI develop the strengths and capabilities to foster the growth and development of individual family members and the family unit.

Understanding family adaptation is crucial but challenging and complex. Few empirical data are available to describe family adaptation and factors influencing family adaptation in families of a person with MI, and in families of adolescents in particular. This is due to the fact that the research on family caregiving in families of a

person with MI tends to emphasize a pathological or negative outcome. Further, there is a lack of consensus about terminology of family adaptation and a variety of measures used to investigate family adaptation. This variation makes it difficult to compare the results of the different studies and to gain an insight in the relation between variables. Therefore, there is a need to study family adaptation in families of adolescents with MI. The present study will explore family adaptation in the stage and defines it as the perception of satisfaction with the family's adaptation to its internal and external environments.

Families of adolescents with MI often experience family stress when families fail to adapt to their symptoms and development tasks. Family stress increases when they experience stressful life events and they attempt to maintain their family by using the family resources and capability to stabilize and create harmony and balance. In these ways, families of adolescents with MI and some family factors have an effect on family adaptation. Families of adolescents with MI are well adapted if family members can use family resources and capabilities, have healthy family functioning, maintain a strong sense of family hardiness, and maintain positive family appraisal of illness. In addition, family resources and capabilities can gain stage-appropriate family adaptation if family members have low family stress and high level of patient's life skills. Therefore, in this study, the factors that are hypothesized to influence family adaptation are family stress, patient's life skills, family functioning, family appraisal of illness, and family hardiness.

2.5 Factors Related to Family adaptation

2.5.1 Family Stress

There are many theoretical definitions of family stress found in literature. Hill (1949) c defined family stress as the events that place pressure for change on the family system. Similarly, McCubbin et al. (1983) defined family stress as events or circumstances that place pressure for change on the family system. Olson and Gorall, (2003) conceptualized family stress as the buildup of change that is stressful, suggesting that all situations in which family members are challenged by the

environment in a way that overtakes their individual or collective resources and threatens the well-being of the family are family stress.

Family stress is defined as a demand placed on the family that produces, or has the potential of producing changes in the family system (McCubbin et al., 1996). Several studies of families dealing with health and social problems are important in family stress (Gilliss, 1991; Gilliss & Knafl, 1999; Klein & White, 1996; McCubbin, 1999). Life events can increase the risk of illness and disability to family members. These events can be categorized as normative and non-normative. Normative events are those that are generally expected to occur at a particular stage of development or in the life span such as starting a first job, or retiring from work. Non-normative events, in contrast, are those that are not anticipated to occur and which the family has no ability to predict. Moreover, life events and the accumulation of events can result in a family crisis (McCubbin et al., 1996). Understanding family stress requires an examination of several related concepts: family life events, family transition, family burden and family crisis. No single concept is a sufficient threat to family stress. In addition, it is essential to explore how family members handle a stressful situation (Walsh, 2003b). The family plays an important role both in the development and in the management of an illness and disability (World Health Organization, 2003a).

A significant amount of research exists on families of adolescents with MI. Parents tend to experience more stressful life events, including higher total and negative life changes than other family members, marital distress, general family dysfunction, stigma, burden of caregiving, guilt, and physical illness (Czuchta & McCay, 2001; Milliken, 2001; Schwartz & Gidron, 2002). Furthermore, parents who have a child with MI rate themselves as experiencing less enjoyment in parenthood. During the transition of children with mental illness, the parent may perceive the desired child as a family member who is physically present but psychologically absent. The child's illness constrains family functioning because the family demands change (Milliken, 2001). The stresses for parents are tremendous, and include learning the painful lesson that psychiatry is not an exact science.

Puotiemi and Kygas (2004) interviewed a mother and her daughter who had been in psychiatric patient care. The participants were interviewed three times. The coping demands faced by the mother were aggressive behavior, withdrawal from

personal relationships, inability to concentrate, unstable mental health and concern about the future of her daughter. The relationship between family members was quarrelsome, the communication was poor, family atmosphere was unsupportive and chaotic. Significantly, the mother generated new somatic diseases. The mother took care of herself by studying and doing handiwork. The main coping resource was emotional support from friends and members of the family. However, the husband had broken off all contact with the family. Likewise, in Thailand, Thummathai (2001) interviewed thirty seven parents who have adolescents with MI concerning stressful caregiving situations. The results were six stressful caregiving situations: inability to study or work, self care deficit, problematic behaviors, therapeutic activities, financial problems, and conflict between the main caregiver and other significant caregivers. This stress was considered to be the combined product of the increased caring need of adolescents with behavioral problems, lower functioning, and the emotional reaction to disability. Thus, adolescents with MI are the stressors to families and enhance the family crisis or family stress.

Families can be the source of significant stress. The development of MI in adolescents can have a ravaging effect on the family because their hopes and expectations for future are often dashed. Not surprisingly, a major effect of MI on the family is the creation of a high level of stress. Although this stress can have a negative effect on everyone in the family, the effects are especially pernicious for the adolescent with MI and can contribute to a more severe course of the illness. According to McCubbin and colleagues (1996), a family is seldom dealing with a single stressor. The family's situations are intensified by the concurrent pile-up of demands such as the life changes and hardships. The hardships associated with a family crisis include increased marital or sibling relationship strains, community conflicts, and decreased emotional or financial resources, depending on the nature of the stressors. These hardships create adjunctive burdens on the family system. In addition, family transitions are the result of the normal growth and development of family members. The normal transitions may arise in the same time frame as the family struggles to manage the crisis situation. Walsh (2003a) noted that families may be unfortunate in the concurrence of multiple stressors. The overwhelming of family stressors creates an increasing vulnerability for family problems. The complexity of

the family stress contributing to risk or resilience may vary with emerging challenges over time. Moreover, Seloilwe (2006) noted in her qualitative research that the experiences and demands of families who care for their mentally ill relatives at home in Botswana revealed a myriad of experiences and problems that families encountered in providing care to their relatives. Furthermore, family caregiving of mentally ill members is unique and specific in situation demands.

Several studies in psychiatric nursing found that family burden and family demands negatively influence family functioning (Hsiao & Van Riper, 2009; Ohaeri, 2003; Rose et al., 2006). Chien et al., (2007) in their study with 203 family caregivers of schizophrenic patients in Hong Kong, found that the families who perceived a higher level of caregiver burden were those who lived in a family with poorer functioning. The findings of the study are congruent with those of families with chronic ill patients. These studies showed that family stress was negatively associated with family well-being. In addition, a family that is confronted with discrimination in workplace, community, and society may face the long term consequences of isolation. Families of adolescents face a wide range of physical, mental, and social changes which are viewed as family stressors. Adolescent development results in a certain degree of disequilibrium, as family members often assume. These are identified as impacting families with financial difficulties, marital conflicts, unemployment, and substance abuse.

2.5.2 Patient's Life Skills

Patient's life skills is a stressor of the family and has been shown to vary with the severity of illness in families with MI. Numerous studies of family burden, strain, and distress have demonstrated that family members of persons with MI suffer from behavior symptomatology and that the level of functioning of mentally ill relatives as the most distressing (Barrowclough, Tarrier, & Johnston, 1996; Biegel, Miligan, Patnum, & Song, 1994; Hatfield, Coursey, & Slaugter, 1994; Loukissa, 1995; Marten & Addington, 2001; Noh & Avison, 1988; Rienhard & Horwitz, 1995; Tuck, Mont, Evans, & Shupe, 1997). Some researchers used the related concept of deficient functioning as a factor associated with burden (Cook, Lefly, Pickett, & Cohler, 1994). Additional studies of Provencher, Fournier, Perreault, and Vezina (2000) have supported the idea that the degree and frequency of impaired functioning or behavioral

disturbance is associated with greater levels of family burden. In addition, the caregiver's perception of the behavioral disturbances is significant in understanding the symptoms of mental illness and thus needs to be measured.

Family members experience more distress when the patient shows depressed or anxious behaviors (Tuck et al., 1997). In their study of parents with a son or a daughter suffering from schizophrenia, Ferriter and Huband (2003) have found that parents most commonly identify behaviors causing difficulty as violence, withdrawal, and verbal aggression. Further, MI results in "ambiguous losses" for the family (Rose, 1996). These losses are ambiguous in the sense that, while the ill family member is still physically present, psychologically they have changed and the person previously known is no longer there. Grieving this kind of loss is difficult because, although we have rituals for mourning the death of someone in the family, we do not have any for losses incurred as a result of MI.

The previous studies considered the disruptive behaviors, and deficient social functioning of the ill relatives as family stressors (Cook et al., 1994; Kendall, Leo, Perrin, & Hatton, 2005; Rienhard, 1994; Thummathai, 2001). Kendall and colleagues (2005) conducted a descriptive study to examine child behavior problems, maternal distress, and family conflict encountered by 157 mothers of ADHD children. The age of the children with ADHD ranged from 6 to 18 years old. Their results indicated that behavior problems in the children with ADHD were associated with distress in their mothers. Mothers who had more distress reported having higher family conflict than mothers reporting less distress. However, child behavior problems were not found to directly affect family conflict, but child behavior problems had an indirect affect on family conflict. This suggests that the mother's role in these families is important.

Schieve et al. (2007) examined stress and aggravation among 459 parents of children aged 4 to 17 years in the United state 2003 National Survey of Children's Health (NSCH). They found that parents of a child with autism have additional stressors related to the child's challenges in communicating, difficult behaviors, social isolation, difficulties in self-care, and lack of community understanding. The child's behaviors and conduct problems were most strongly related to parent stress. In

addition, parents of children with autism who recently needed special service were classified as having high aggravation and high family burden.

In addition, the mixed methods study in 30 family members of mentally ill relatives of Rose and colleagues (2006) also reported that family members' perceptions of illness severity were high and resulted in altered family functioning such as in the communication, behavioral control, affective involvement and problem solving. However, some families described how they could not easily classify the illness symptoms and found it difficult to manage, which caused them to feel embarrassed, isolated and lose crucial support.

A few studies have focused on the relationship between the adolescent's symptoms and family functioning. Some balanced families appear to have more positive health outcomes for a patient with MI. As Saunders (1999) reported, the greatest impact on the family members and most disruptive problem in the family as a unit is the patients' behavioral problems. The patient's behavioral problems were positively associated with family functioning in families providing care for a family member with schizophrenia. The patient's behavioral problems explained family functioning to a level of 16%. Thus, higher family functioning was associated with higher function of mentally ill patients. Additionally, Rungreangkulkij et al. (2002) studied 108 families of person with schizophrenia in Northeastern Thailand. They found that there is an impact of stress related to the patient's functioning and family stressors on the mother's psychological morbidity. Thus, family stressors are negatively associated with family functioning.

The causes and effects between family caregiver stress and perception of caregiving is extremely difficult to unravel. It is as powerful to argue that family appraisal is colored by family stress as to argue that family stress is a response to family appraisal of illness. Thus, Hanson, Gedaly-Duff, and Kaakinen (2005) noted that health problems influence family perceptions and behaviors. Likewise, family perceptions and behaviors influence health outcomes. In addition, the stressors from specific behaviors of adolescents with MI or strategies that a family may have used in the adjustment phase are: increased rigidity or suppression of frustrations and feelings, consuming alcohol or drug abuse to manage psychological tension, which may lead to psychological or physical dependency (Thummathai, 2001).

The association study between patient behaviors and family appraisal of illness in family caregiving was dearth. Tucker, Barker, and Gregoire (1998) conducted a survey of a total population of patients with schizophrenia or schizoaffective disorder and their caregivers to examine the relationship between patient behaviors and the experience of caregiving. Seventy-three people who currently received medication or experienced symptoms were identified. The researchers found the negative family appraisal was best predicted by patient depression or anxious behaviors. Thus, family members who appraise the situation negatively are indeed likely to complete more tasks on behalf of the patient, but not necessary because of the degree of the patient's disability.

The stressor of families with MI is illness symptoms (Rose, 1998). The appearance of behavioral problems poses colossal challenges for the entire family system. Family members have described the suffering and difficulties of living with patient's symptoms of MI, as well as the ways they have used their own experiences to assist their patients (Doornboss, 2001; Ferriter & Huband, 2003; May & Lund, 1999; Rose, 1998). Families are clearly confronted with stressors related to caring for and living with an adolescent with MI. Stressors are doubly influential in stressful situations requiring supporting the adolescent's normal development and providing caregiving for the mentally ill. Some families develop varying degrees of problems while others seem to exhibit well-being. When it is induced, the situation of caregiving in a crisis requires adaptation. Thus, patient's life skills are a major variable that has been considered in family adaptation of families of adolescents with MI.

In this study, patient's life skills are a demand of the family that produces changes in the family system which is family stress. The patient's life skills are pondered as the adolescent's level of functioning includes different levels of bizarre behavior, withdrawal, antisocial behavior, self care and compliance. These behaviors and symptoms associated with MI may include disruptive behaviors, defective social functioning, hallucination, delusion, thought disturbance, and social withdrawal (Doornbos, 1997; Song, Biegel, & Milligan, 1997).

The Life Skills Profile-20 (LSP-20) (Rosen et al., 2001) has been selected to measure patient's life skills in this study. It is an assessment instrument of general function in activities of daily life, especially developed for people diagnosed with a

severe MI. The LSP-20 is useful in real clinical settings to evaluate the general function of the patient with MI. As many of the skills are relevant in other psychiatric disorders the LSP-20 has been applied to a broad range of diagnoses. Additionally, the philosophy of the LSP-20 focuses on a person's life skills rather than their lack of life skills. This is seen as being both positive for the person and encouraging carers and others to emphasize what the person can do, rather than what they cannot.

The LSP-20 was modified from the LSP-39 and the LSP-16 by Rosen and colleagues (2001). The LSP-20 is about half the length of the original, but its subscales and total score correlated at .92: higher than the original scale. Test-retest and inter-rater reliabilities were also comparable with the original, and validity was demonstrated with expected correlations with items of the PANSS (Positive and Negative Syndrome Scale). The internal consistencies of the five subscales were bizarre (.71), withdrawal (.78), antisocial (.82), self-care (.82) and compliance (.81). The reliability Cronbach's alpha coefficient for the total LSP-20 was .90 (Rosen et al., 2001).

2.5.3 Family Functioning

Based on the various family theoretical perspectives, a definition of family functioning can be derived within the guidelines of any of the frameworks. For example, family functioning can be defined as problem solving, communication, roles, affective responsiveness, and affective involvement, and behavioral control (Epstein, Ryan, Bishop, Miller, & Keitner, 2003). According to Olson, Sprenkle, and Russel (1979), family functioning would be defined in term of cohesion, adaptability, and communication. Beavers and Hampson (1993) defined family functioning as competence and styles in the family. Family functioning refers to basic attributes regarding the family system that characterize and explain how a family system typically appraises, operates and/or performs (McCubbin et al., 1996). Family functioning is defined as the ability of the family to meet the needs of its members through developmental transitions (Johnson, 2000).

Family functioning is a multidimensional construct reflecting family's activities and interaction. These are either effective or ineffective in enabling a family to meet its goals. They provide for its members' material and emotional support, and foster members' well-being and development (Walsh, 2003a). Suttiamnuaykul (2002)

defined family functioning as “the important attributes about family systems that describe how a family performs or operates in particular cultures and societies in order to maintain homeostasis of that family”. The patterns of family functioning are the change in family dynamics to manage the family stressors as well as restore family harmony and balance to achieve adaptation (McCubbin et al., 1996).

Several models of family functioning describe the dimension of family functioning differently. Within the perspective of the McMaster Model of Family Functioning (Epstein et al., 2003) it is conceptualized through six dimensions: problem-solving, communication, roles, affective responsiveness, affective involvement, and behavior control. The Circumplex Model of Family Functioning (Olson & Gorall, 2003) composes of three dimensions: family cohesion, adaptability, and communication. The Beavers Systems Model (Beavers & Hampson, 1993) specifies two dimensions of family functioning: competence and style. All of these model union with family process and are based on general systems theory. However, each model reflects the values and beliefs in their own perspectives.

Minuchin (1974) emphasized that no families are problem free. Healthy family functioning does not mean a family without problems. A healthy family can be found to have problems (Walsh, 2003a). Moreover, culture, values, religion, and belief influence the perception and behaviors of family members, which affect the family functioning. Therefore, family functioning is an important factor in the family context. One such threat to family equilibrium is illness, which is usually jeopardizing to the entire family. When a family member does not function in his/her normal way then this not only affects all the other family members, but also the overall family function.

The effect of psychiatric conditions on family functioning has been studied: schizophrenia, bipolar disorder, major depression, substance abuse, adjustment disorder, eating disorders, and anxiety disorders (Cummings, Keller, & Davies, 2005; Friedmann et al., 1997; Han et al., 2007; Saunders, 1999; Heru & Ryan, 2002). There are many needs in the family that change during the adolescence of a child. The functions of the family and how these needs are dealt with will also change. The changes will most likely occur as the child or the children in the family begin the process of adolescence.

Rungreangkulkij et al. (2002) studied 108 families of persons with schizophrenia. They found that family functioning is related to the psychological morbidity of mothers and relatives ($r = .43$, and $r = .35$; $p < .01$ respectively). The family functioning was measured by the Chulalongkorn Family Inventory (CFI) which was developed by Trungkasombat (1997). The family functioning includes problem-solving; communication; roles; affective responsiveness; affective involvement; behavior control; and general functioning.

Additionally, Han et al. (2007) studied factors influencing family functioning in 365 families providing care for a member with chronic mental illness in Korea. The results showed that knowledge of disease, family hardiness, family support, family sense of coherence, and family coping were positively related with family functioning. Family stress was negatively related with family functioning. The combination of family support, family hardiness, family coping, knowledge of disease, and family stress accounted for 61.4 % of the variance in family functioning. However, the family functioning in this study was defined differently from that in Rungreangkulkij and colleagues' study (2002). Family functioning based on the Olson et al. (1989) study consisted of family cohesion and adaptability.

In this study, the researcher chooses family functioning based on the McMaster Model of family functioning. Because of it has been used to some extent in studies involving Thai families with mentally ill adolescents (Lakthong, 2005; Sombatkaew, 2002; Thokani, 2005). Several components: problem-solving, communication, affective responsiveness, affective involvement, role, behavior control, and general functioning have been identified as the tasks that families with adolescents need to consider in both normal and crisis situations in order to maintain physical, psychological, emotional, and social balance (Epstein et al., 1980 cited in Trangkasombat, 2001).

1. Problem-solving refers to the way the family resolves problems and conflicts. Resolving conflicts in the family is not an easy task. It depends on how one chooses to deal with them. Family conflicts considered in a positive way may help tremendously in the end result. Throughout their journey with the family, family members try to adapt to family members' needs to reduce the chances of the needs causing greater problems. Problem solving may be improved by treating everyone

with equality. Conflicts can be positive and might help in toning down the hostility in the family.

2. Communication refers to the clarity and directness of information exchange in the family. Communication is a very important part of any good relationship. This is especially true for the relationship between family members. Having a good communication among family members has the advantage of more successfully avoiding conflict in their family. By communicating the rules of the house and allowing discussion of how those rules are administered, family conflicts are often decreased. This makes it easier because everyone knows where he/she stands and can feel more open to go to others family members for consultations.

3. Affective responsiveness refers to the appropriateness of emotional response between family members. The level of affective expression among family members and the awareness of each other's feeling are crucial for families of adolescents with MI. They can express emotion for each other in order to share their feelings and release tension.

4. Affective involvement refers to the appropriateness of emotional attachment and the interest family members have toward one another. Affective involvement strongly influences the family system. Family attachment does not become any weaker and aids the adolescents in many ways: as a preventive measure against depression, and in forming social networks and building social skills. The affective involvement in family fosters many skills including intimacy, trust, conflict resolution, and identity formation. The family members are a crucial source of support and act as a buffer against conflicts with other family members and friends. A marital conflict or divorce against conflicts with other family members and friends. A marital conflict or divorce makes the family itself unstable and adolescents have to adjust themselves to a new family situation.

5. Role refers to the clarity and appropriateness of the distribution of family roles and responsibilities. Unfortunately, in adolescence, this task becomes more difficult in the family. One reason is that parents often see themselves as "managers" of their children. They are constantly organizing their children's life, such as providing good food, making sure their children are in bed on time. This is fine up until late childhood, however, as it causes problems at the beginning and all throughout

adolescence. Instead of being “managers” of their child’s life, parents need to be consultants who focus on helping their teenager develop and exercise “decision-making”, not managing their lives. Parents should give their adolescents a chance to become more autonomous for the larger goals in their lives.

6. Behavior control refers to the clarity and execution of family rules. In order to keep the rules of the house and decrease family conflict, allow discussion of how those rules are formed is important. This makes keeping rules easier and no one feels they are told what to do any longer.

7. General functioning refers to the ability of family members to maintain family function in their response in physical, psychological, emotional, and social needs.

In this study, the Chulalongkorn Family Inventory (CFI) (Trangkasombat, 1997) has been selected to assess family functioning. In Thailand, the CFI has been widely used as it is culturally appropriate and shown to be a valid instrument with high internal consistency ranging from .83 to .91. Trangkasombat (1995) studied 30 families (90 participants), of which none had family members with a history of psychiatric hospitalization, and found the internal consistency reliability alpha coefficient of the total instrument was .88. Rungreangkulkij (2000) revealed that the Cronbach’s alpha of the CFI in 108 families of a person with schizophrenia was .91. In addition, Trangkasombat (2001) investigated family functioning in families of psychiatric patients in hospital and nonclinical families in the community. There were 60 families in each group. The results of the CFI scores in psychiatric families were significantly lower than the control group, reflecting poor family functioning in families with a psychiatric patient. The Cronbach’s alpha for the total CFI was .88.

Tohkani (2005) compared family functioning in 70 families with adolescent psychiatric patients at the outpatient clinics of three psychiatric hospitals and 70 families with healthy adolescents in three schools in Nonthaburi and Bangkok, Thailand. The study reported reliabilities of the CFI in families with psychiatric adolescents at .87 and in families with healthy adolescents at .83. Meanwhile, Lakthong (2005) used the CFI in a quasi-experiment to determine the effect of family counseling on family functioning in 26 families of adolescent methamphetamine abusers who attended Wang Sam Mo hospital, Udon Thani Province, Thailand. The

results found the Cronbach's alpha for the total CFI was .88 and the reliabilities of the CFI in seven dimensions ranged from .84 to .90.

In summary, family functioning in this study is defined as the tasks that families of adolescents with MI need to pursue in either normal or crisis situations in order to maintain physical, psychological, emotional, and social balance. However, for Thai families containing an adolescent with MI, family functioning regarding the taking care of adolescents with MI and others family members has been underexplored. Therefore, there is a need to explore what family functioning is in Thai families of adolescents with MI. Further, the contributions of family functioning on family adaptation in families of adolescents with MI need to be identified.

2.5.4 Family Appraisal of Illness

Another component of the Resiliency Model is the family appraisal of illness, meaning the family perception and the definition of the illness. The subjective definition of the illness shapes the family response and is crucial to the course of family adaptation. The more constructive or positive the appraisal, the easier for families to develop problem solving and coping strategies, and ultimately adaptation (McCubbin & McCubbin, 1993). Family appraisal of illness is very important to the family as they need to define the illness and determine how to deal with it and how stressful it will be for them (Atinian, 1999).

Family appraisal of illness is the way the family members see the illness. It is the way that the symptoms influence their decision about seeking medical treatment, and their ideas about the causes, consequences, and course of the MI. It is how the family thinks about the illness of a family member and makes decisions in how to deal with the illness. Family appraisal of illness is a useful concept for exploring the family caregiving experience from a transactional perspective. Appraisal is also the part of the transaction between the person and the environment (Lazarus & Folkman, 1984). Hunt (2003) noted that appraisal has been proposed as a mediator of burden and outcome in a family caregiving situation. Whether caregiving is stressful is determined by the family appraisal of illness.

Although MI in an adolescent may be viewed as something happening within the family, the family is also affected by how MI is treated in the health care

system. Van Riper (2005) noted the factors that families determine, such as which resources are available for financing health care services, and how policies determine who is eligible for these services on the basis of legal and ethical principles. In other words, as well as family members being interdependent, the families in a community are interdependent.

In appraising the illness episode, Chen and Greenberg (2004) noted that the family gives its own meaning to the situation, a meaning that may be close to or distant from the professional consensus. Likewise, families differ widely in their utilization of health care services. One category of studies examines why some families choose to send a family member to a health care professional whereas other studies examine why other families treat the same problem at home. These family decisions are also affected by the availability and accessibility of health care to the family. Therefore both family health beliefs and family decisions are made in interaction with the health care system.

However, family appraisal of illness is a complex personal and social activity that goes on largely outside professional settings. The two differences that occur among most families and most health care professionals in accessing health and illness are as follows (Doherty & Campbell, 1988).

1. Emphasis on the subjective versus the objective. Health care professionals are trained to look for measurable biological changes associated with disease, such as elevated blood pressure or blood glucose. On the other hand, individuals and families tend to focus more on the subjective aspects of the illness. An illness of a family member who feels fine with it might be an insignificant issue to the family, but to a health care professional it might look like a serious threat to the survival of the patient. Obviously, this oppositional situation is filled with potential for misunderstanding and conflict between family members and health care professionals.

2. Interpersonal framework versus epidemiological framework. Health care professionals are trained to evaluate symptoms within the incidence and prevalence of a disease in a population. On the other hand, families tend to think of symptoms in terms of the experience of other family members and close friends.

McCubbin et al. (1996) noted that family appraisal helps families to give meaning to stressful life events and family struggles, and it appears to play a principle

role in shaping the family responses and strategies directed to adaptation. This aspect of family appraisal involves the creation of family experiences and understandings shared by family members for the purpose of facilitating the family adaptation.

Wright and Leahey (2005) emphasize nurses' roles in understanding the family context. For example, nurses must be aware that health beliefs and behaviors are influenced by racial identity, privilege, oppression, social class forms, educational attainment, income, and occupation. The clustering of values, lifestyles, and behavior influences family interaction and health care practices. Furthermore, family members' spiritual and religious beliefs, rituals, and practices can have a positive or negative influence on their ability to cope with or manage an illness or health concern.

The family unit is also stressed in giving meaning to the health problem. Family meanings are the collective views of the family unit refined, developed, and adopted by family members to render legitimacy and acceptability to the illness. In the encounter of a family health problem, the family appraisal may be cast aside and replaced by a shared commitment to have one member devote his/her full time efforts to the care of a member who is ill or disabled. At some time in the future, this member should have the possibility to pursue his or her own career goals (DeMarco et al., 2000).

Family appraisal of illness is the way in which families give meaning to family life, keep alive the memories and influences of previous generations, protect the health of family members, and negotiate diagnosis and treatments in the different cultures of health care systems. Of particular interest in depression is the tendency of individuals and families to minimize the seriousness of the symptoms and to delay seeking help. Because the idea of suicide is terribly frightening, the patient and the family may contrive to ignore the significance of symptoms such as insomnia. Family appraisal of illness will be influenced by the willingness of a health care professional to share information and offer emotional support for the family. Unclear or indirect communication between health care professionals and patients and families can lead to a persistent misunderstanding of the illness (Doherty & Campbell, 1988).

The family appraisal of illness of an adolescent with MI, and the family decision to pursue medical care, often have little to do with symptoms that are of primary interest to many health care professionals. Most people experience distressing

psychological symptoms on a frequent basis, but deal with these problems at home rather than at the hospital. Family appraisal of illness in clinical practice opens crucial information to the family to accept the social nature of MI. Every family can be viewed as having its own culture, values, and beliefs, and families tend to cluster into more or less identifiable ethnic and cultural groups.

Hsiao & Van Riper (2009) conducted a cross-sectional, descriptive study to examine individual and family adaptation in 84 Taiwanese families of persons with severe persistent MI. The mediating effects of social support and meaning of family caregiving on the relationship between pile-up of demands and individual and family adaptation were explored. They found that social support and meaning of family caregiving were the mediators. The findings support the idea that family caregivers with higher level of social support and a more positive meaning of family caregiving are able to adapt more effectively when confronted with a pile-up of demands.

Failla and Jones (1991) found that a higher level of family hardiness was associated with the positive appraisals which strengthen family relationships and family functioning. The families with a lower hardiness were less capable of managing family resources when dealing with a stressful situation, and they probably give meaning to the situation as more vulnerable than challenging.

Family appraisal of illness in the appropriate situation is essential for the family to adapt to a member of the family who is mentally ill. Family caregivers reported positive family appraisal of their situation, which indicated high family hardiness and increased sense of family well-being (Carey et al., 1991). Thus, family hardiness functions as the mediator or protective factor that manages family stress and family adaptation.

Therefore, the meanings that these caregiving families perceive are in addition to the reasons, capacity, and content with which all families must consider their situation. Few studies have explored the impact of this arrangement of family appraisal of illness on the dependent variable of family adaptation in families of an adolescent with MI. However, this is critical, as McCubbin et al. (1996) noted. The family unit determines the efficacy and legitimacy of these changes by contrasting and screening the changes with the family’s values, beliefs, expectations and rules which are integral to the family appraisal of illness.

In this study, the Demand of Illness Inventory (DOII) (Rungreangkulkij, 2000) has been selected to measure family appraisal of illness. Rungreangkulkij (2000) used the DOII to determine the perceptions of the family on having a person with schizophrenia in the family. The settings were the rural northeastern areas within a 54 km radius of Khon Kaen province and the study found that the Cronbach's alpha of the DOII was .85. The Cronbach's alpha coefficient for the total instrument in families of a person with schizophrenia was .90, indicating high internal consistency of the instrument.

In summary, the family of an adolescent with MI that evaluates the illness in a positive light can be considered to have effective family adaptation and this will strengthen the family during the stressful situation. On the other hand, families that fail to successfully evaluate family resources and have high family stresses have some difficulty in family adaptation. They tend to opt for passiveness in caregiving. Because of the negative meaning associated with the hardships, they cannot view the illness in the family from a positive perspective. It can be hypothesized that negative family appraisal of illness has a negative association with family adaptation and patient's life skills, and a positive association with family stress.

2.5.5 Family Hardiness

Family hardiness is the internal control over psychological tension and inner power, which is characterized as giving meaning to life and the challenges that are faced (McCubbin et al., 1998). It is the internal strengths and durability of the family and is characterized by a sense of control over outcomes of life, a view of change as growth-producing, and an active rather than a passive orientation in adapting to stressful life situations. In addition, family hardiness functions as a buffer or mediating factor in allaying the effects of stresses and demands, and a stabilizing factor in the context of the family life cycle (McCubbin et al., 1996).

Kobasa's concept of individual hardiness is extended to the family system in family hardiness. It is considered as availability of family resources and the mediator relationship between family stress and family adaptation (Ford-Gilboe & Cohen, 2000). The concept of hardiness in a family may play an important role in preventing family members' burnout. To establish a sense of control and minimize the

effect of uncertainty, family members need adequate educational preparation and continued mentoring in caregiving. Encouraging the use of family resources promotes family functioning by allowing the members to progress in their ability to accept more responsibility. Families should be taught to care for the needs of their adolescents with MI and to renew themselves through pleasurable activities, hobbies, and other interests.

One can define family hardiness as the family members' internal strengths and durability as characterized by ability to work together to find solutions to difficulties, a view of change as beneficial and growth producing rather than threatening, and sense of control over the outcome of life events and hardships. Family hardiness decreases the family demands placed on family members. It is a key concept influencing family adaptation (McCubbin et al., 1991). However, most of the studies on family hardiness have examined families that contain a member with physical illness (Leske et al., 1998; Leske, 2003; Niyomthai, 2005; Santati, 2005; Svavarsdottir et al., 2005).

The three components of family hardiness are as follows:

1. Commitment refers to the family's sense of internal strength, dependability and ability to work together.

2. Challenge refers to the family's effort to be innovative, active, to experience new things and to learn. It is normal to experience change occasionally and the change entails growth rather than danger.

3. Control refers to the family's sense of being in control of family life rather than being shaped by outside events and circumstance. Families believe that they are able to influence events and actively participate, instead of being at the mercy of external forces.

From the literature review discussing the family of a person with MI, Han and colleagues (2007) studied family hardiness in 365 families of patients with MI. The results found that family hardiness was positively related to family functioning ($r = .51$; $p < .001$). Moreover, Greeff et al. (2006) studied family hardiness in 30 Belgian families. They did research on a parent and a child of a mentally ill family member. The family sense of coherence was used to measure family adaptation. They found that family hardiness was highly positively related to family adaptation (a parent, $r = .63$, $p < .001$; a child, $r = .42$; $p < .05$). The reliability of the results might be confused by the convenience sampling and the small sample size. The length of

illness was not reported. The replication of this study would clarify the mechanics of family hardiness to decrease family stress and foster family adaptation.

In this study, the Family Hardiness Index (Santati, 2005) has been selected to measure family hardiness. Santati (2005) assessed the content validity of the FHI Thai version by using a panel of six Thai experts to confirm the representativeness of the domain. Inter-rater agreement was also evaluated by asking the expert panel to rate the items as they fit the concept label and definition. The Thai version of the FHI was accepted by the panel of experts. The Cronbach's alpha in 253 parent caregivers of the pre-school asthmatic children was .80 (Santati, 2005).

In Western studies, the reliability of the FHI in previous research has been supported, in one study, Cronbach's alpha was .82 and the test-retest reliability was .86 (McCubbin et al., 1987). Several studies reported reliability ranged from .79 to .89 (McCubbin & Thompson, 1989; Oberst, Hughes, Chang, & McCubbin, 1991; Fink, 1995; Clark, 2002, Svavarsdottir et al., 2005). In addition, Greeff et al. (2006) studied 30 families with a mentally ill family member (both parents and children), and found that the reliability was .82. In Korea, the FHI was used in 365 families having a family member with chronic mental illness at an outpatient clinic, and it was found the reliability was .86 (Han et al., 2007).

Although family hardiness has been examined and considered as the family system resource that facilitates a family, those studies have rarely included families with MI. However, the successful treatment and outcome of adolescents with MI depend on family commitment to learning new skills and consistently applying them in their families. The challenge is to ensure that a family perceives change as beneficial and helping growth of close relationships in their families in order to take care of an adolescent with MI. A successful family can manage and control the situation by reducing stress and improving family functioning. The suitable form of family hardiness among families of adolescents with MI needs to be evaluated.

Summary

This chapter reviewed many important issues related to families of adolescents with MI. It includes the nature of adolescents with MI and their family adaptation. The findings of research revealed that families having adolescents with MI experience family life events and patients' behavioral problems. It was found that these families had utilized several resources and capabilities to adapt to such stressful situations. Based on the studies reviewed, there is limited evidence regarding adaptation in families containing an adolescent with MI. The results of the studies have not yet indicated the protective or resilience factors of family adaptation in families providing care for an adolescent with MI.

This study examines the pattern of the relationships among the factors related to adaptation in families of adolescents with mental illness. The selected factors from the Resiliency Model of Family Stress, Adjustment, and Adaptation will be examined for predictive factors that have an effect on family adaptation of Thai families of adolescents with MI. The chapter shows that family stress, patient's life skills, family functioning, family appraisal of illness and family hardiness influence family adaptation. In addition, family functioning, family appraisal of illness, and family hardiness work as the mediator in the family adaptation of families of adolescents, using the Resilience Model. The results of this study will be useful in understanding the family adaptation of families which have an adolescent with MI in Thai culture. It also provides a foundation to develop an effective intervention to help the families dealing with their adolescents with MI effectively.

CHAPTER III
METHODOLOGY

This chapter describes the methodology, including the research design, population and sample size, setting, instrumentation, data collection, protection of human subjects and data analysis methods. A pilot study and findings are also presented.

3.1 Research design

A cross-sectional study was used to examine the relationships between family stress, patient's life skills, family functioning, family appraisal of illness, family hardiness, and family adaptation among families of adolescents with MI.

3.2 Population and Sampling

Population of the Study

The population in this study was family members of adolescents with MI who attended outpatient and inpatient clinics at selected psychiatric hospitals under the Ministry of Public Health in four regions of Thailand. These hospitals are Suan prung hospital, Prasrimahapho hospital, Suansaranrom hospital, and Srithanya hospital. The following criteria were used for selecting the participants.

Inclusion Criteria

Family members:

1. A family member who identified his/her self as a major provider of direct care for adolescent with MI and a representative of family, including his/her mother , father, parent, sibling, or other relative.

2. Having an adolescent with MI diagnosed by psychiatrists.
3. Aged 18 years and over.
4. Living continuously with an adolescent with MI in the same household for a minimum period of 1 year prior to the study.
5. Being able to communicate and understand Thai language.
6. No history of psychiatric disorders.
7. Agree to participate in the study.

Adolescents with MI:

1. Adolescents with age ranging from 12 to 24 years old (Patel et al., 2007).

2. Being diagnosed by psychiatrists that he/she has had at least one of mental illness including, schizophrenia, bipolar disorders, depression, attention deficit hyperactivity (ADHD), autism and its subtypes for at least 6 months prior to the study. These diagnoses are in accordance with the criteria of the ICD-10 (International Classification of Disease version10) or the DSM-IV-TR (Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision).

Exclusion Criteria

1. Participants who wanted to stop completing the questionnaires.
2. Participants who showed the signs of physical or emotional distress or discomfort during the completing the questionnaires.

Sample of the Study

The sample size was determined from Cochran's formula (1963).The formula was

$$n \geq \frac{Z^2 \hat{\sigma}^2}{d^2}$$

Where n is the estimate of sample size

Z is the abscissa of the normal curve that cut off an area α at the tails, 1.96 for $\alpha = 0.05$

$\hat{\sigma}^2$ is the estimated population variance of family adaptation, $(8.698)^2$

d is the margin error for the mean estimation, setting 1.7% of the mean of family adaptation, 1.127

Thus, the sample size in this study was calculated with regard to this formula as

$$n \geq \frac{(1.96)^2(8.698)^2}{(1.127)^2}$$

$$n \geq 230$$

In this study, the minimum sample size for the validity of this study was 230 participants. To increase data confidence, added 10 percent of the participants as performed for attrition to the sample size. Therefore, the sample size in this study was 253 participants.

Sampling Technique

The facilities for treatment and rehabilitation of adolescent psychiatric disorders are scattered under state and private agencies. Stratified sampling technique was used to select random representative psychiatric hospitals. The sampling technique included two steps as follows:

Step 1: Based on the geographic areas in Thailand, seventeen psychiatric hospitals accredited by the Department of Mental Health, Ministry of Public Health were divided into four regions. The criteria for selection of the psychiatric hospitals were that these hospitals had the largest number of patients per year comparing with others in each region. Thus, four psychiatric hospitals were recruited in this study, including Suan prung hospital from the North, Prasrimahapho hospital from the Northeast, Suansaranrom hospital from the South, and Srithanya hospital from the Central region.

Step 2: The sample was calculated according to the proportion of the patients in the four hospitals. A total of 310 families of adolescents with MI were recruited as 19.94 %, 22.58 %, 20.42 %, and 37.06 % of Suan prung hospital,

Prasrimahapho hospital, Suansaranrom hospital, and Srithanya hospital respectively. Therefore, this study had 51 family members from Suan prung hospital, 57 family members from Prasrimahapho hospital, 52 family members from Suansaranrom hospital, and 93 family members from Srithanya hospital (Table 3.1).

Table 3.1 Estimated Sample Allocations in Selected Hospitals

Hospital	Number of Patients (Year)	Percent	Estimated Sample
Suan prung hospital	74,750	19.94	51
Prasrimahapho hospital	84,651	22.58	57
Suansaranrom hospital	76,558	20.42	52
Srithanya hospital	138,954	37.06	93
Total	374,913	100.00	253

Prior to collecting the data, a pilot study was performed. It took a period of four months to complete this pilot study, because very few eligible participants attended the clinics, approximately 0 to 2 cases per day. Following the pilot study, 300 family members of adolescents with MI were approached. Forty eight participants refused to participate in the research project at the initial approach. Fifteen participants were excluded from the study: 5 participants did not have enough time to complete the questionnaires; 3 refused because feeling of stigmatization attached to being family members of adolescents with MI; 4 stated that they were not be able to disclose the family matters because of their religious principles; and 3 were excluded because of extreme tension while completing the questionnaires. Based on the limited research time frame and dissertation defense committees' decision, 237 participants were finally accepted as appropriate sample size.

3.3 Settings

This study was conducted at inpatient and outpatient clinics in four psychiatric hospitals of four regions throughout Thailand. First, Suan prung hospital which is located in Chaing Mai province, northern region was selected. This hospital serves 251 outpatient visits per day and has 700 beds. Second, Prasrimahopho hospital which is located in Ubonrajathanee province, northeast region was chosen. This hospital serves 317 outpatient visits per day and has 750 beds. Third, Suansaranrom hospital which is located in Surajthani province southern region was selected. This hospital serves 281 outpatient visits per day and has 1,300 beds. Finally, Srithanya hospital which located in Nonthaburi province, central region was chosen. This hospital serves 501 outpatient visits per day and has 2,280 beds. All of these hospitals provide similar services, including psychiatric treatments and rehabilitation, as there are tertiary care centers for patients from various provinces and have been accredited by the Department of Mental Health, Ministry of Public Health. Specifically, all of these hospitals have child and adolescent psychiatric clinics and specialist psychiatrists.

3.4 Instrumentation

A set of Thai version, self-reported questionnaires which are seven instruments were used in this study; (1) The Personal Information Profile; (2) The Thai Family Stress Inventory (TFSI); (3) The Life Skills Profile-20 (LSP-20); (4) The Chulalongkorn Family Inventory (CFI); (5) The Demands of Illness Inventory (DOII); (6) The Family Hardiness Index (FHI); and (7) The Family Adaptation Scale (FAS).

The Thai Family Stress Inventory (TFSI) and the Chulalongkon Family Inventory (CFI) were developed by Thai researcher (Trangkasombat, 1997).

The Demands of Illness Inventory (DOII) (Rungreangkulkij, 2000) and the Family Hardiness Index (FHI) (Santati, 2005) were already translated into Thai by Thai researchers using back translation technique. The Life Skills Profile-20 (LSP-20) and the Family Adaptation Scale (FAS) instruments were translated into Thai by the translation process. The seven instruments were described in the following sections.

1. The Personal Information profile

The Personal Information Profile comprises two parts including:

Part one: Personal information of a family member including with age, gender, education, marital status, relationship with the patient, number of children in the family.

Part two: Personal information of an adolescent with MI, including; age, gender, age of onset (age at diagnosis), number of admission in the hospital following being diagnosed as having a mental illness, and the diagnosis.

2. The Thai Family Stress Inventory (TFSI)

The TFSI was used to measure family stress. The TFSI was modified from the Thai Strain Inventory. The scale was first developed by Rungreungkulkij (2000) to assess pile-up of demands in families of a person with schizophrenia within the past 12 months. The questionnaire consists of 11 items focusing pile-up of demands which were defined as the sum of normative and non-normative stressors and intrafamily strains. Participants were asked to rate each item from 0 (not at all stress) to 3 (extremely stress). The total scores range from 0 to 33. The higher scores indicate higher pile up of demands. The Cronbach's alpha of the instrument was .73 (Rungreungkulkij, 2000).

According to Cronbach's alpha of the instrument was .73. The Thai Strain Inventory was modified by the author's permission. The researcher established the two focus groups with six Thai family members of adolescents with MI (three for each group) to identify sources of Thai family stressors. The group discussions were semi-structured, with questions related to stressful family life events derived from the Thai Strain Inventory (Rungreangkulkij, 2000) and the work of others in the field of family caregiving and mental illness (Leelakraiwan, Setthaphumirin, & Kaew-Ying, 1992; Sornpaisan Charusshing, & Boulek, 1998). Content analysis indicated that families of adolescent with MI dealing with unemployed, illegal, drug abuse and disagreeing in mental illness. Thus, four items (2, 13, 14, and 15) relevant to the finding were added. Also, the modifications were performed in item 7 and 9 in order to be better fit with the entire family context. In addition, according to the content validators' suggestion, item 10 was modified. Therefore, the TFSI has 15 items on four-point scale from 0 (not at all stress) to 3 (extremely stress). The higher scores indicate higher family

stress. The total score can range from 0 to 45. The questionnaire can be self-administered, requires approximately 5 minutes for participants to complete.

In this study, the reliability coefficient from pilot study and main study were .81 and .79 respectively (Table 3.3).

3. The Life Skills Profile-20 (LSP-20)

The LSP-20 (Rosen et al., 2001) was used to measure the patient's life skills perceived by family members about the function and disability of adolescents with MI that may cause stressful situations leading to changes in the family system. The LSP-20 contains a 20-item with five subscales including; bizarre behaviors (items 4, 5, 7); withdrawal behaviors (items 1, 2, 3, 14, 20); anti-social behaviors (items 15, 17, 18, 19); self-care (items 6, 8, 9, 10, 16); and compliance (items 11, 12, 13). Each participant was asked to score the items 4-3-2-1 from leftmost to rightmost anchor. The total score ranges from 20 to 80. The higher scores indicate higher function of patients. The questionnaire can be self-administered, requires approximately 10 minutes for completion. Since the LSP-20 has never been used in Thailand, it was translated into Thai language using back translation technique.

After permission acquirement, the LSP-20 was translated and tested for content validity by five clinical experts. According to content validitors' comment, some modifications were performed in the translated version in order to enhance clarity and appropriateness. For example, the word "this person shows tenderness (affection) to others" was changed to "this person interacts with tenderness (affection) to others".

In this study, the reliability coefficient from pilot study and main study were .85 and .90 respectively (Table 3.3).

4. The Chulalongkorn Family Inventory (CFI)

Family functioning was measured by the CFI (Trangkasombat, 1997). The CFI is a 36-item self report scale for family members older than 12 years of age. The CFI was designed to measure the level of family functioning. This questionnaire consists of seven subscales including: a) 6-item of problem-solving (1, 2, 3, 8, 25, and 26); b) 4-item of communication (9, 16, 28, and 31); c) 3-item of roles (10, 17, and 29); d) 5-item of affective responsiveness (4, 11, 18, 34, and 35); e) 5-item of affective involvement (5, 12, 21, 24, and 33); f) 4-item of behavior control (6, 13, 27, and 30); and g) 8-item of general functioning (7, 14, 15, 19, 20, 22, 32, and 36). The rating

scale is from 1 (strongly disagree) to 4 (strongly agree). Scoring is reversed for negative words items, which are items 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, and 36. The total scores range from 36 to 144. The higher scores indicate healthy family functioning. The questionnaire can be self-reported, requires approximately 15 minutes for participants to complete.

The CFI was the instrument that could be used without explicit permission because the developer had made them public (Trangkasombat, 1997). In this study, the content validity was performed. The reliability coefficient from pilot study and this study were .85 and .91 respectively (Table 3.3).

5. The Demands of Illness Inventory (DOII)

Family appraisal of illness was measured by the DOII which was translated into Thai and modified by Rungreangkulkij (2000). The DOII has 19 items, rating from 0 (not at all) to 3 (extremely). The lower scores indicate less negative appraisal of the illness. The total scores can range from 0 to 57. The questionnaire can be self-administered, requires approximately 10 minutes for participants to complete.

In this study, the process of permission acquirement of the DOII was performed. Later, the content validator's suggestions for some modifications were performed in item 1, 2, 7, and 9 in order to enhance clarity and appropriateness. The reliability coefficient from pilot study and this study were .85 and .87 respectively (Table 3.3).

6. The Family Hardiness Index (FHI)

The FHI is a 20-item self-report designed to measure the internal strengths and durability of the family unit. The FHI was developed by McCubbin et al. (1987) and translated into Thai by Santati (2005). This questionnaire consists of three sections: 1) commitment (items 4, 5, 6, 7, 8, 9, 11, 18); 2) challenge (items 12, 13, 14, 15, 16, 17); and 3) control (items 1, 2, 3, 10, 19, 20). The rating scale is scored on a 4 point scale ranging from 0 (false) to 3 (true). Scoring is reversed for negative items, which are item 1, 2, 3, 8, 10, 14, 16, 19, and 20. The total scores range from 0 to 60. The higher scores indicate high family hardiness. The questionnaire can be self-administered, requires approximately 10 minutes for participants to complete.

In this study, the process of permission acquirement was performed. According to the content validation, some modifications were adjusted in item 2, 3 and 4 in order to clarity and appropriateness. For example, in item 2 the word is too

threaten to the participants. In addition, the word “we” and “I” were changed to “our family”. The reliability coefficient from pilot study and this study were .76 and .79 respectively (Table 3.3).

7. The Family Adaptation Scale (FAS)

Family adaptation was measured by the FAS developed by Antonovsky and Sourani (1988). The 11-item with semantic differential items scored from 1 (completely satisfied) to 7 (dissatisfied). This questionnaire consists of three subscales include: a) 6-item of internal family fit (individual to family unit) (1, 4, 5, 7, 10, and 11); b) 2-item of family–community fit (8 and 9); c) 3-item of both level of fit (2, 3, and 6). The total score range from 11 to 77. A high score indicates satisfactory in family or a balance between demands and capabilities. The questionnaire can be self-report, requires approximately 10 minutes for participants to complete. Since the FAS have never been used in Thailand, it was translated into Thai language using back translation technique.

In this study, the FAS was the instrument that could be used without explicit permission because the developers had made them public (Antonovsky & Sourani, 1988). After, content validation, some modifications were performed in item 10 in order to clarity. For example, the word “wishes” was changed to “expectations”. The reliability coefficient from pilot study and this research study were .85 and .88 respectively (Table 3.3).

Translation Process

The researcher utilized back translation technique to translate the English version to Thai language. The process of translation and back translation of the FAS and the LSP-20 were guided by Brislin (1970). There were 4 steps of the translation process as follows:

1. The original English version was translated into Thai language by a bilingual Thai from faculty of nursing, Mahidol University.

2. The Thai version was reviewed by a Thai monolingual reviewer. The ambiguous and incomprehensible wordings were identified.

3. Another bilingual translator then performed back translation by translating the reviewed Thai version instrument (as explained in step 2) back into English language. (Back translation)

4. The back translated version was reviewed by comparing the meaning of its contents with the original version by a native English language (a monolingual American from the English Language Center, Mahidol University) who do not know Thai language in terms of meaning equivalence. In addition, the researcher compared the back translated version with the original version for both linguistic congruence and cultural relevancy. Items with evident discrepancies between the two versions were examined to ascertain whether the problems took place in the forward or backward translation. To correct any errors in any items, the whole cycle from step 1 to 4 was performed again. The translation process was repeated until the maximum equivalence between the Thai version and back translated version was reached.

Instrument Validation Process

All the instruments in this study were tested for reliability and validity. The equivalent testing in this process was conducted in the instrumental validation process (Polit & Beck, 2008). Flaherty et al. (1988) recommended an enhancement of the content equivalence for cross cultural which focuses on the cultural relevance of the content of each an instrument's items. Content equivalence refers to the relevancy of content of items to the cultural phenomena under study (Beck, Bernal, & Froman, 2003). Therefore, a content validity index with a panel of five experts was used (Table 3.2). Four experts were nurse instructors with expertise in psychiatric mental health nursing and another was a psychologist.

A panel of five experts were asked to rate the cultural relevancy of each item in measuring the construct of the instrument from 1 to 4. The rating scores given by five experts used the index of content validity (CVI) to determine the extent of agreement between the experts (Waltz, Strickland, & Lenz, 2005). With all of those instruments, experts rated the content relevance of each item using a 4-point rating scales including: 1 = not relevant; 2 = enable to assess relevance without item revision or item is in need of such version that it would no longer be relevant; 3 = relevant but needs minor alteration; 4 = very relevant and succinct. An index of content validity

showing the proportion of agreement among judges will be calculated for each item and the total scale. The specific guidelines for judging the appropriateness, accuracy, and representativeness of the specifications were given by the experts (Polit & Beck, 2006). Based on the experts' responses the content relevance of each item, the total scale revisions, and the identity omission were performed. In addition, the measurements, those measurement rating and a CVI scores were modified if the I-CVI score was less than 1 and S-CVI was less than .80 (Polit & Beck, 2006). Before implementation, all questionnaires were modified in order to make them appropriate to Thai families of adolescents with MI.

A content validity index was computed both scale-level: content validity index for scales (S-CVI), and content validity index for items (I-CVI). The results of content validity index (CVI) of each questionnaire were acceptable. However, all instruments also needed to be used in a pilot study prior to conducting this research, so as to examine the reliability and to evaluate the clarity and suitability of the instruments for using in Thai families of adolescents with MI. The results of content validity index (CVI) of each questionnaire were as follows (Table 3.2):

Table 3.2 Content Validity Index of Instruments

Instrument	S-CVI	I-CVI (Range)
1. The Thai Family Stress Inventory (TFSI)	.98	.65-1.00
2. The Life Skills Profile-20 (LSP-20)	.93	.65-1.00
3. The Chulalongkorn Family Inventory (CFI)	.98	.80-1.00
4. The Demands of Illness Inventory (DOII)	.85	.55-1.00
5. The Family Hardiness Index (FHI)	.94	.75-1.00
6. The Family Adaptation Scale (FAS)	.87	.75-1.00

Table 3.3 Research Instrument Reliabilities

Variables	Research instruments	Cronbach's Alpha	
		30 cases	237 cases
Family Stress	The Thai Family Stress Inventory (TFSI)	.81	.79
Patient's life skills	The Life Skills Profile-20 (LSP-20)	.85	.90
Family Functioning	The Chulalongkorn Family Inventory (CFI)	.85	.91
Family Appraisal of Illness	The Demands of Illness Inventory (DOII)	.85	.87
Family Hardiness	The Family Hardiness Index (FHI)	.76	.79
Family Adaptation	The Family Adaptation Scale (FAS)	.85	.88

3.5 Protection of Human Subjects

Prior to data collection, the approval of the Institutional Review Board (IRB) of Mahidol University, Faculty of Medicine, Chiang Mai University were obtained accompanied by Suaun prung hospital, Prasrimahopho hospital, Suansaranrom hospital, and Srithanya hospital (Appendix D). The process of inform consent were completed before the data collection process. Assents forms also were obtained from adolescents with MI depend on their age (lower than 18 years) and the level of function. More importantly, the participants and adolescents with MI were assured of the confidentiality of the study with no impact on their services and their freedom to discontinue their participation at any time. The time required for complete the questionnaire set is 45 to 60 minutes. No individual identities were detected in written reports or data was shared with others for analysis. The participants were asked if they have any concern or any questions before, during, or after the completion of the self-report or the interview, and the researcher was available to answer questions. If the questions in family issues are come up, after complete questionnaires, the researcher was provided with referral information relevant to hot-line calling, emergency clinic, primary care system, or social welfare etc.

3.6 Data Collection

After the protection of human subject process was completed, the data collection was initiated in the two phases: pilot testing and hypotheses testing. The pilot testing took 4 months from January 2009 to April 2009. The hypotheses testing took 5 months from May 2009 to September 2009.

Phase I: Pilot Testing

A pilot study was conducted in 30 families of adolescents with MI to identify problems with the design, determine if the recruitment technique is effective, to assess the instrument development process including cultural implications of using the research instruments proposed, psychometric properties, detect potential problems in data collection, to obtain accurate estimates of the time required to complete the instruments and to estimate the cost of the data collection, to gain experience and confidence in working with the participants and instruments, and to practice data analysis techniques (Jacobson, 2004).

The pilot study was performed in two hospitals: Maharaj Nakorn Chiang Mai Hospital and Srithanya hospital. Then the participants from inpatient and outpatient clinics were identified. The researcher introduced herself and explained the objectives of the study to them. The participants were informed of their right to participate or refused to participate in the study. The written consent form and assent form were signed if the participants and adolescents with MI were willing to participate in this study. The participants were asked to complete the questionnaires as well as to evaluate the clarity and appropriateness of the questions, and instructions.

On the basis of the results from this pilot study the questionnaires were modified. The data from the pilot study was analyzed to estimate the internal consistency, reliability, using Cronbach's alpha coefficients (Table 3.3). The acceptable outcomes of all instruments were more than .70 (Burn & Grove, 2009).

Phase II: Hypotheses Testing

1. The data collection was established in four hospitals. The researcher submitted the letters of the Dean of the Faculty of Graduate Studies, Mahidol University to ask permission for data collection from directors of the selected hospitals.

2. After obtaining approval of the Institutional Review Board (IRB) and the director's hospital permission. The researcher coordinated with the directors of nursing department, head of departments, head nurses and staffs working at the outpatient and inpatient departments of each hospital in order to explain the research objective and process.

3. The research assistants were necessary to training. Research assistants were mental health and psychiatric nurses who graduated in Master Degree of Nursing and have got experiences in caring for psychiatric patients and their families. All research assistants were explained and trained by the principle researcher in order to better understand the research objectives, the instruments, the data collection procedures, the participants' human rights, the confidential protection strategies, and how to explain and facilitate participants if they had any questions or concerns.

4. Based on the lists of potential participants, the researcher and research assistants recruited the sample from both outpatient and inpatient settings who met the inclusion criteria. Participants were invited to participate in the research study. The written informed consent was obtained from all agreed participants.

5. The places and time of data collection varied among the four hospitals. For the participants who were illiterate, the data were obtained by interview. Participants who were literate might choose to complete the questionnaires on their own or being interviewed by the researcher. The participants responded to questionnaires of personal information profile, the TFSI, the LSP-20, the CFI, the DOII, the FHI, and the FAS. It took each participant approximately 45 to 60 minutes to complete the questionnaires. The researcher or research assistants were presented during the completion of the instruments. Participants were encouraged to ask the researcher if they had questions associated with the instruments at any time.

6. The researcher or research assistants read each item carefully to make sure the questionnaires were completed and asked participants to check again if the answers were not clear. The participants received a gift in the appreciation of their time and effort after they finished completing all questionnaires in this study.

3.7 Data Analysis

The researcher utilized Software Product for Service Solution (version 17, Mahidol University) and the Linear Structural Relationship (LISREL) (version 8.80, student version, Scientific Software International, Inc.). The procedures for data analysis were as follows.

Exploratory Data

The Software Product for Service Solution and PRELIS program (version 2.72) was used to execute the data.

1. The data were coded, entered and rechecked based on a scoring system formulated by the researcher.

2. The distribution of each variable examined with descriptive statistics including, mean, standard deviation, range of scores, frequencies, percentages, skewness, and kurtosis.

3. The assumptions testing were performed to achieve assumptions of multivariate analysis including, normality, linearity, homoscedasticity, and multicolinity (Hair et al., 2006).

4. The intercorrelations between variables in the model estimated with the correlation matrix.

5. The quality of the research instruments tested with Cronbach's Alpha coefficient for the reliability of the instruments.

Statistical Analysis

The SEM statistics employing LISREL program (8.80) was used to analyze causal relationship among variables in the model to predict family adaptation in families of adolescents with MI by examining the parameters of the measurement model and the hypothesized model, and tested the fitting of hypothesized model and found out the best fit model to the hypotheses. This analysis was performed in two steps.

Step 1: The measurement model validity: the measurement model of patient's life skills, family functioning, family hardiness, and family adaptation were tested for the model fit and to examine the construct validity of the proposed measurement model. A confirmatory factor analysis (CFA) was used to test the

measurement model. The overall model fit and the criteria for construct validity were examined for the measurement models.

Step 2: The structural model validity: the hypothesized model clarified exogenous and endogenous variables in the path diagram. The structural model was refined by freeing and evaluating the modify model for the best model fitted to answer the hypotheses. The modification indices were used as a guideline for model improvement of the relationships between indicators under theoretical based.

According to Hair and colleagues (2006), the evaluation criteria for the model fit should be based on the several criteria and the diversity of perspectives to achieve the statistical, theoretical, and practical relevance. In general, the goodness-of-fit criteria and the measurement model fit indexes were used for evaluating the model fit are as follows:

The Overall Fit Model Indexes:

1) Nonsignificant Chi-Square (χ^2) ($p > .05$) was recommended because it indicates the proposed model fits the observed covariance and correlation well. A large value of chi-square indicates the differences between observed and estimated matrices. However, the low chi-square values resulting in the significant levels greater than .05 or .01 indicates the actual data and predicts input matrices which are not statistically different.

2) Norm chi-square (ratio of chi-square to degree of freedom) was identified whether the observed and estimated matrix differ considerably. The recommended value was 1 to 2.

3) Goodness- of- fit Index (GFI) was the square residuals of the prediction and actual data comparison reflecting the overall degree of fit. The value ranged from 0 to 1. The higher value indicated better fit. The GFI greater than .90 was considered good. However, the absolute acceptable threshold values had not been established.

4) The Adjusted Goodness of Fit Index (AGFI) was an extension of the GFI. The recommended acceptance value of AGFI is a value greater than or equal to .90.

5) The Root Mean Square Error of Approximation (RMSEA) was the discrepancy per degree of freedom. A recommended value acceptance is a value ranging from .05 to .08.

6) The Comparative Fit Index (CFI) was a comparison between the estimated model and a null or independent model. The values ranged from 0 to 1 and the large values indicated higher levels of goodness- of- fit.

The Measurement Model Fit Indexes:

1) The statistical significance of the indicator loading was identified that the measurement of each latent variable was valid. The t-value of each variables representing the parameter estimated divided by its standard error must exceed the critical value of $\pm$ 1.96, $\pm$ 2.576, and $\pm$ 3.291 for the .5, .01, and .001 significant levels, respectively.

2) The square multiple correlations (R^2) of indicator variable were identified as a reliability indicator of the extent to which each of the variables adequately measures its respective underlying construct. The values ranged from .00 to 1.00. A recommended acceptance level was .70.

Summary

This chapter presented research methodology, design, the population and sample, the procedures for data collection, the protection of human right, research instruments, pilot study and data analysis procedures. In this study, a correlational, cross-sectional research design was used to examine the causal relationships among family stress, patient's life skills, family functioning, family appraisal of illness, family hardiness, and family adaptation among Thai families of adolescents with MI. Two hundred and thirty seven family members of adolescents with MI recruited into the study. In addition, a pilot study was done to test the study feasibility and to test the instruments clarity, readability, appropriate language, and reliability.

CHAPTER IV
RESULTS

The results of this study were presented in four sections with tables and explanation. Demographic characteristics of the samples and description of study variables are firstly displayed. The second section described the assumptions testing of the study variables. The third section presents the measurement model and hypothesized model testing. The last section reports the results of modified model.

4.1 Characteristics of the Sample

4.1.1 Data of family members

In this study, 300 family members of adolescents with MI were approached from four psychiatric hospitals in four regions including the north, the south, the northeast, and the central area of the country. However, forty-eight participants refused from the study. Fifth-teen participants were excluded from the study (Five participants could not have enough time to complete the questionnaires. Three of this number indicated having stigma attached to being family members of adolescents with MI. Four stated not be able to disclose the family matters because of the principle of religion. Three were excluded because of extreme tension while completing the questionnaires). Therefore, 237 participants were recruited in this study including 35 participants from Suan prung hospital, 54 participants from Suansaranrom hospital, 61 participants from Prasrimahapho hospital, and 87 participants from Srithanya hospital.

Most of family members accompanied patients to the outpatient clinic of these hospitals (outpatient clinic = 199 family members and inpatient clinic = 38 family members). Almost two-third of family members was in middle adulthood with age range from 31-50 years old (63.3%). Average age of participants was 45.62 years

old (SD = 10.41). Number of female participants were two-time higher than male (female = 68.4%, male = 31.6%). The majority were Buddhist (95.4%). Of the total, 75.5% were married, while 11.4% were separate or divorce.

For education, about thirty-four percent had elementary school level. Most of participants had occupation (82%) and 23.2% were agricultural workers. Nearly half of participants (43.5%) earned family income less than 10,000 bath/month (1US $ = 33 bath, 303.03 US $). It was found that 4.6% (n = 11) had two psychiatric patients living in the same household. Regarding the relationships with patients, the majority of participants (54.4%) were mothers. The duration of caregiving ranged from 1 year to 23 years, with a mean of 5.3 (SD = 4.80). The demographics of subjects were shown in Table 4.1.

Table 4.1 Demographic Characteristics of family members (n = 237)

Demographic Characteristics	Values	n	Percentage
Age (Year)			
	18-30	20	8.4
	31-50	150	63.3
	51-70	63	26.6
	71-76	4	1.7
	Mean = 45.62, SD = 10.41, Range = 18 to 76		
Gender			
	Female	162	68.4
	Male	75	31.6
Religions			
	Buddhism	226	95.4
	Islam	8	3.4
	Christianity	3	1.3
Marital status			
	Married	179	75.5
	Separate/Divorce	27	11.4
	Widow	14	5.9
	Single	17	7.2
Educational Level			
	Elementary School	81	34.2
	High School	73	30.8
	Vocational	24	10.1
	Bachelor degree	42	17.7
	Master degree	17	7.2

Table 4.1 Demographic Characteristics of family members (n= 237) (cont.)

Demographic Characteristics	Values	n	Percentage
Occupation			
	Farmer	55	23.2
	Unemployed	42	17.7
	Employee	41	17.3
	Government Officer	39	16.5
	Merchant	33	13.9
	Business Employee	18	7.6
	Other	9	3.8
Family Income (Bath/Month)			
	≤10,000	103	43.5
	10,001-25,000	66	27.8
	25,001-40,000	37	15.6
	40,001-55,000	10	4.2
	≥55,001	18	7.6
	Missing	3	1.3
Number of Family Members (Person)			
	1-4	158	66.6
	5-8	76	32.1
	9-11	3	1.2
	Mean = 4.37, SD = 1.50, Range = 1 to 11 person		
Number of MI Patient in Family (Person)			
	1	226	95.4
	2	11	4.6
Relationship with Patient			
	Mother	130	54.8
	Father	57	24.1
	Grandfather/Grandmother	37	15.6
	Sister/Brother	13	5.5
Experience for Caregiving (Year)			
	1- 5	153	64.6
	6-10	44	18.6
	11-15	30	12.7
	16-23	10	4.2
	Mean = 5.29, SD = 4.80, Median = 3.30, Range = 1 to 23 years		

4.1.2 Data of adolescents with MI

Thirty-five percent of patients were in the age ranged between 20 to 24 years old , 33.8% in the age ranged between 12 to 15 years old, and 31.2% in the age ranged between 16 to 19 years old with a mean of 17.60 years old (SD= 3.9). Approximately, 62 % of the patients were male and 38.4 % were female. More than half of the patients had high school education (55.3%).

The mean age of patients at the time of diagnosis was 13.40 years old (SD = 5.51). The number of admissions ranged from 0 to 15 times, with a mean of 5.29 (SD = 1.61). However, around fifty eight percent of the patients were never admitted in the hospital. The majority of patients were diagnosed with schizophrenia (41.8%), the second were attention-deficit/hyperactivity disorder (ADHD) (27%), and the third were depressive disorder (14.3%). The demographic characteristics of patients were summarized in Table 4.2.

Table 4.2 Demographic Characteristics of Adolescents with Mental Illness (n = 237)

Demographic Characteristics	Values	n	Percentage
Age (Year)			
	12-15	80	33.8
	16-19	74	31.2
	20-24	83	35.0
	Mean =17.60, SD = 3.91, Range=12-24 years		
Gender			
	Male	146	61.6
	Female	91	38.4
Educational Level			
	No education	13	5.5
	Elementary School	61	25.7
	High School	131	55.3
	Vocational	21	8.9
	Bachelor degree	11	4.6

Table 4.2 Demographic Characteristics of Adolescents with Mental Illness (n = 237) (cont.)

Demographic Characteristics	Values	n	Percentage
Age at Diagnosis (Year)			
	1- 5	30	12.7
	6- 10	41	17.3
	11-15	72	30.4
	16-20	77	32.5
	21-24	17	7.2
	Mean = 13.40, SD = 5.51, Range=2 -24 years		
Number of admissions			
	0	137	57.8
	1-2	77	32.4
	3-4	17	7.1
	5-15	6	2
	Mean = 5.29, SD = 1.61, Range = 0 to 15 times		
Diagnosis			
	Schizophrenia	99	41.8
	Bipolar Disorder	21	8.9
	Depressive Disorder	34	14.3
	ADHD	64	27.0
	Autism	19	8.0

4.2 The Description of Study Variables

This study included six major variables: family stress, patient's life skills, family functioning, family appraisal of illness, family hardiness, and family adaptation. Descriptive statistics for all variables are presented in Table 4.3.

Total score of family stress ranged from 0 to 33 with the mean of 10.90 and standard deviation of 7.11.

Total score of patient's life skills ranged from 26 to 80 with a mean score of 62.83 and standard deviation of 10.49.

The mean score for family functioning was 112.76 and standard deviation of 15.60. Total score of family functioning ranged from 54 to 143.

Family members rated their family appraisal of illness with the total score of family appraisal of illness ranged from 3 to 55 with a mean score of 26.22 and standard deviation of 11.36.

Total score of family hardiness ranged from 19 to 60 with a mean score of 45.09 and standard deviation of 8.01.

Total score of family adaptation ranged from 31 to 77 with a mean of 66.30 and standard deviation of 8.70.

Table 4.3 Descriptive Statistics for All Variables and Its Indicators (n = 237)

Variables	Possible Range	Actual Range	Mean	Median	Mode	SD	sk	Ku
Family Stress	0-45	0-33	10.90	9.77	5.00	7.11	0.77	0.17
Patient's Life Skills	20-80	26-80	62.83	64.06	65.00	10.49	-0.54	-0.07
Bizarre	1-12	3-12	9.22	9.54	12.00	2.34	-0.60	-0.46
Withdrawal	1-20	7-20	14.94	15.32	15.00	3.44	-0.38	-0.67
Antisocial	1-16	6-16	12.16	12.76	15.00	2.48	-0.46	-0.49
Self care	1-20	6-20	15.77	16.11	16.00	3.04	-0.66	0.07
Compliance	1-12	3-12	10.30	10.71	12.00	1.81	-1.05	1.08
Family Functioning	1-144	54-143	112.76	115.05	119.00	15.60	-0.70	0.76
Problem solving	1-24	6-24	18.83	19.28	22.00	3.72	-0.70	0.30
Communication	1-16	6-16	12.54	12.73	14.00	2.35	-0.39	-0.51
Roles	1-12	3-12	9.78	10.04	10.00	1.88	-0.93	0.85
Affective responses	1-20	5-20	16.01	16.25	17.00	2.58	-0.79	1.23
Affective involvement	1-20	5-20	15.43	15.65	15.00	2.92	-0.56	0.16
Behavioral control	1-16	4-16	10.94	10.95	11.00	2.29	-0.05	-0.09
General function	1-32	11-32	26.20	26.95	29.00	4.51	-0.92	0.75
Family Appraisal of Illness	0-57	3-55	26.22	25.00	23.00	11.36	-0.35	-0.47
Family Hardiness	0-60	19-60	45.09	46.00	54.00	8.01	-0.63	0.04
Commitment	0-24	1-24	20.29	21.33	24.00	3.76	-1.50	3.69
Challenge	0-18	1-18	12.70	12.51	12.00	3.01	-0.76	1.59
Control	0-18	1-18	12.11	12.49	12.00	3.74	-0.47	-0.27
Family Adaptation	11-77	31-77	66.30	68.23	77.00	8.70	-1.11	1.28
Internal family fit	1-42	17-42	36.18	37.03	42.00	4.91	-1.09	1.15
Family-community fit	1-14	6-14	11.89	12.23	14.00	2.07	-0.83	-0.02
Both level fit	1-21	8-21	18.24	18.85	21.00	2.74	-1.17	1.25

Note: SD = Standard Deviation = Skewness, Ku = Kurtosis

4.3 Assumption Testing

Assumptions of multivariate analysis for structural equation modeling (SEM) were tested prior to the statistical analysis to ensure an accuracy of the findings and confirm no violation of statistical assumptions. All of variables were examined for normality, linearity, homoscedasticity and multicollinearity.

Normality

Normality is the shape of data distribution for a variable and its correspondence to the normal distribution. For assessing the normality, both normal probability plots and univariate normality were used. If the data are normally distributed, the normal probability plot would show the linear pattern of the points on the plot follow the diagonal. These plots were applied to see how well the data fit to the theoretical distribution (Hair et al., 2006). Within the PRELIS 2.72, univariate normality of all variables had normal distribution (Table 4.4). The value of skewness was less than 3 and kurtosis was less than 20 (Kline, 2005) and Z-score of skewness and kurtosis was close to zero. As results, all of variables had a normal distribution.

Table 4.4 Test of Univariate Normality of Variables (n = 237)

					Z-score	
	Mean	SD	sk	ku	sk	ku
Family Stress	10.902	7.106	0.018	-0.076	0.118	-0.119
Patient's Life Skills	62.826	10.488	-0.020	-0.095	-0.130	-0.185
Family Functioning	112.755	15.599	-0.001	-0.015	-0.004	0.091
Family Appraisal of illness	26.223	11.361	0.001	-0.020	0.004	0.074
Family Hardiness	45.091	8.008	-0.009	-0.028	-0.055	0.048
Family Adaptation	66.304	8.698	-0.078	-0.255	-0.499	-0.805

Linearity

Linearity refers to the association between dependent and independent variables which the change in the dependent variable was correlated with the independent variable. The departure from linearity impacts to the correlation coefficient between each pair of variables (Hair et al., 2006). In this study, the bivariate scatter plot of the variables showed that the relationships between independent and dependent variables were linear.

Homoscedasticity

Homoscedasticity refers to the dependent variable show equal levels of variance across the range of predictor variables (Hair et al., 2006). The graphical plots of residuals were used to reveal the homoscedasticity. This assumption was accepted because the standardized residuals from the stem leaf plot of standardized residuals in this study indicated the normal distribution. In addition, the Q plot of standardized residuals in this study displayed the straight line from lower left to upper right corner which indicated a linearity and homoscedasticity of error of variance (Hair et al., 2006).

Multicollinearity

Multicollinearity refers to high degree of relationships among independent variables which able to reduce independent variables predictive power by extent to which it associated with other independent variables (Hair et al., 2006). In this study, correlation coefficients among independent variables, tolerance values, variance inflation factor (VIF) and all condition indices were used to examine multicollinearity. The results of correlation analysis showed correlation coefficient among five independent variables ranged from -0.14 to 0.72 (Table 4.5). These results were no more than 0.85. The tolerance values were in range from 0.53 to 0.80 that were more than 0.19. The variance inflation factors (VIF) were in range from 1.25 to 1.87. The VIF more than 10 means a high degree of multicollinearity. In addition, the condition indexes were less than the threshold values of 30 (Table 4.6). Thus, there was no existence of multicollinearity in these variables.

Table 4.5 Correlation Matrix of the studied Variables (n = 237)

Variables	FS	PLS	FF	FAP	FH	FAD
FS	1.000					
PLS	-0.369**	1.000				
FF	-0.469**	0.418**	1.000			
FAP	0.446**	-0.225**	-0.226**	1.000		
FH	-0.282**	0.322**	0.722**	-0.141**	1.000	
FAD	-0.313**	0.351**	0.573**	-0.257**	0.456**	1.000

Note: **p < .01

FS = Family stress, PLS = Patient's life skills, FF = Family functioning

FAP = Family appraisal of illness, FH = Family hardiness, FAD = Family adaptation

Table 4.6 Testing of Multicollinerity in Multiple Regression of Studied Variables (n = 237)

Variables	Tolerance	VIF
Family Stress (FS)	0.595	1.682
Patient's life skills (PLS)	0.800	1.251
Family Functioning (FF)	0.534	1.874
Family Appraisal of Illness(FAP)	0.761	1.314
Family Hardiness (FH)	0.581	1.720

Model Dimension	Eigenvalue	Condition Index	Constant	Variance Proportion				
				FS	FC	FF	FAP	FH
1	5.554	1.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.325	4.13	0.00	0.30	0.01	0.00	0.03	0.01
3	0.095	7.64	0.00	0.39	0.00	0.00	0.94	0.00
4	0.021	16.36	0.00	0.01	0.60	0.02	0.00	0.33
5	0.009	24.64	0.23	0.07	0.34	0.32	0.02	0.63
6	0.006	29.64	0.77	0.18	0.05	0.66	0.00	0.03

4.4 Model Testing

The analysis statistics of Structural Equation Model (SEM) by LISREL composes of the measurement models and structural model. The measurement models described the relationship between the latent variable and the observed variable that were assessed with the confirmatory factor analysis (CFA). The structural model displayed the relationships among exogenous latent variables and endogenous latent variables.

The Measurement Model Testing

In this study, four measurement models were tested (patient's life skills, family functioning, family hardiness, and family adaptation). The family stress and family appraisal of illness were not tested for measurement model because both of them were single construct.

The results from measurement model fit testing indicated that four models were in the good model fit. A non-significant $\chi 2$ indicated the good model fit in 4 measurement models; patient's life skills, family functioning, family hardiness, and family adaptation (p-value = 0.266, 0.378, 0.200, 0.873 respectively), and $\chi 2$ /df were less than 3.0. The remaining four goodness-of-fit indices were at good levels (GFI= 0.983 to 1.00, AGFI = 0.964 to 1.000, RMSEA= 0.000 to 0.349) (Table 4.7).

Patient's life skills contained five observed indicators: bizarre behavior, withdrawal, antisocial, self care, and compliance. From Table 4.7, the result indicated that the model fitted the data ($\chi 2$ = 6.44, df = 5, p-value = 0.266, χ^2 /df = 1.288, RMSEA = 0.349, GFI = 0.989, AGFI = 0.968). The standardized factor loading ranged from 0.51 to 0.82 and t-values exceeded the critical value of + 3.29 at the significance levels of 0.001. The reliability estimates (R^2) of all indicators ranged from 0.27 to 0.67. The composite reliabilities of bizarre behavior, withdrawal, antisocial, self care, and compliance were 0.13, 0.09, 0.09, 0.07, and 0.05 respectively. The results revealed that all indicators represented the construct of patient's life skills.

Family functioning comprised of seven observed variables: problem solving, communication, roles, affective response, affective involve, behavioral control, and general function. As Table 4.7, the results indicated that the model fitted the data ($\chi 2$ = 13.94, df = 13, p-value = 0.378, χ^2 /df = 1.07, RMSEA = 0.018, GFI = 0.983, AGFI = 0.964). The standardized factor loading ranged from 0.17 to 0.92. The reliability estimates (R^2) ranged from 0.03 to 0.85 and all indicators were

significant. The composite reliabilities ranged from 0.01 to 0.10. The findings showed that all indicators represented the construct of family functioning.

Family hardiness composed of three observed indicators: commitment, challenge, and control. As Table 4.7, the results indicated that the model fitted the data ($\chi 2$ = 1.65, df = 1, p-value = 0.200, χ^2 /df = 1.65, RMSEA = 0.053, GFI = 1.000, AGFI = 0.970). Control path were significant. The standardized factors loading ranged from 0.41 to 0.85. The reliability estimates (R^2) of all indicators ranged from 0.17 to 0.72. The composite reliabilities ranged from 0.07 to 0.57. Thus, three indicators represented the construct of family hardiness.

Family adaptation contained three observed indicators: internal family fit, family-community fit, and both level fit. As Table 4.7, the results indicated that the model fitted the data ($\chi 2$ = 0.03, df = 1, p-value = 0.873, χ^2 /df = 0.03, RMSEA = 0.000, GFI = 1.000, AGFI = 1.000). The standardized factors loading ranged from 0.65 to 0.92. Internal family fit, family-community fit, and both level fit indicators were significant. The reliability estimates (R^2) of all indicators ranged from 0.42 to 0.85. The composite reliabilities ranged from 0.05 to 0.12. Therefore, three indicators represented the construct of family adaptation.

Table 4.7 The Measurement Model Construct Measures and Goodness of Fit Index

Variables	Standardized Factor Loading	SE	t-value	Factor Score Regression	R^2
Patient's life skills					
Bizarre	0.80***	0.13	14.05	0.13	0.64
Withdrawal	0.82***	0.20	14.40	0.09	0.67
Antisocial	0.76***	0.15	13.03	0.09	0.58
Self Care	0.74***	0.18	12.44	0.07	0.54
Compliance	0.51***	0.12	7.95	0.05	0.27
χ^2 = 6.44, df = 5, p= 0.266, χ^2 /df = 1.288, RMSEA = 0.349, GFI =0.989, AGFI = 0.968					
Family Functioning					
Problem Solving	0.87***	a	a	0.07	0.75
Communication	0.66***	0.14	11.44	0.03	0.43
Roles	0.73***	0.10	13.27	0.08	0.53
Affective Response	0.73***	0.14	13.27	0.04	0.53
Affective Involve	0.67***	0.17	11.69	0.04	0.45
Behavioral Control	0.17**	0.15	2.54	0.01	0.03
General Function	0.92***	0.21	19.72	0.10	0.85
χ2 = 13.94, df = 13, p = 0.378, χ^2 /df = 1.07, RMSEA = 0.018, GFI =0.983, AGFI = 0.964					
Family Hardiness					
Commitment	0.66***	a	a	0.17	0.44
Challenge	0.85***	a	a	0.57	0.72
Control	0.41***	0.11	5.55	0.07	0.17
χ2 = 1.65, df = 1, p = 0.200, χ^2 /df = 1.65, RMSEA = 0.053, GFI =1.000, AGFI = 0.970					
Family Adaptation					
Internal Family Fit	0.92***	a	a	0.12	0.85
Family-community Fit	0.65***	0.13	10.60	0.05	0.42
Both Level Fit	0.86***	0.17	13.74	0.12	0.74
χ2 = 0.03, df = 1, p = 0.873, χ^2 /df = 0.03, RMSEA = 0.000, GFI = 1.000, AGFI = 1.000					

Note: * p < .05, ** p < .01, *** p < .001

a = Values were not calculated because the coefficients were set to constant number

χ2 = Chi-Square, df = Degrees of Freedom, GFI = Goodness of Fit Index, AGFI = Adjusted Goodness of Fit Index, RMSEA = Root Mean Square Error of Approximation

The Structural Model Testing

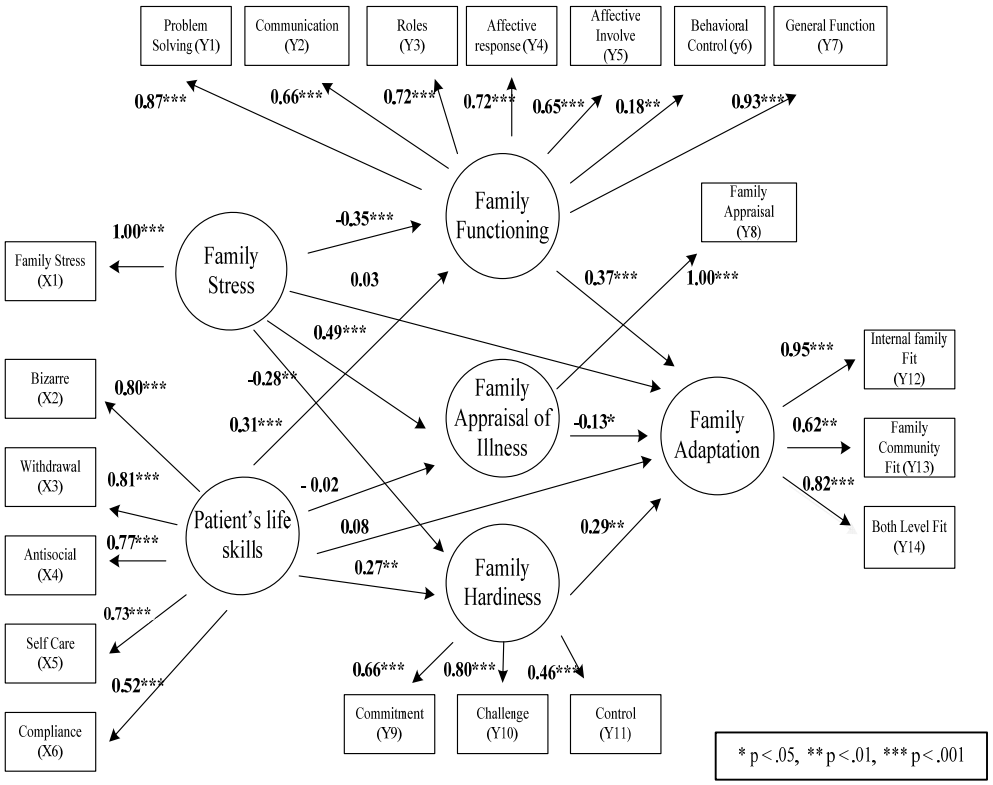
The hypothesized model included two exogenous variables (family stress and patient's life skills) and four endogenous variables (family functioning, family appraisal of illness, family hardiness, and family adaptation). To verify the model, parameter estimates, residual, standard residual, modification indices, and overall model fit were identified.

1. Hypothesized Model Estimates

As shown in Table 4.8 and Figure 4.1, the path coefficients in the hypothesized model were statistically significant: family functioning–family adaptation ($\beta = .37$, $p < .001$), family appraisal of illness – family adaptation ($\beta = -.13$, $p < .05$), family hardiness – family adaptation ($\beta = .29$, $p < .01$). Family stress – family functioning ($\gamma = -.35$, $p < .001$), family stress – family appraisal of illness ($\gamma = .49$, $p < .001$), family stress – family hardiness ($\gamma = -.28$, $p < .01$), patient's life skills – family functioning ($\gamma = .31$, $p < .01$), patient's life skills – family hardiness ($\gamma = .27$, $p < .01$). Whereas, the path coefficients of family stress – family adaptation, patient's life skills – family appraisal of illness, and patient's life skills – family adaptation were non-significant ($\gamma = .03$, $\gamma = -.02$, and $\gamma = .08$ respectively) (Table 4.8). The goodness-of- fit values at $\chi 2 = 453.50$, df = 160, p = 0.000, χ^2 /df = 2.83, RMSEA = 0.088, GFI = 0.84, AGFI = 0.79. The model accounted for and explained 31 % of variance in family functioning, 24 % of variance in family appraisal of illness, 21 % of variance in family hardiness, and 37 % of variance in family adaptation. The hypothesized model did not fit the data. Therefore, the hypothesized model would be modified.

2. Model Modification and Model Fit

To improve the fit of data to the model, the hypothesized model was modified by using the modification indices (MI) and theoretical support. Hair et al. (2006) recommended that the standardized residual should be $\pm$ 2.58 and MI should not exceed 3.84. In the hypothesized model, it was found that the standardized residuals ranged from -6.29 to 8.44 and MI ranged from -1.73 to 55.93. Thus, the high values of MI were following gradually set free to the hypothesized model before a satisfactory modified model was achieved.



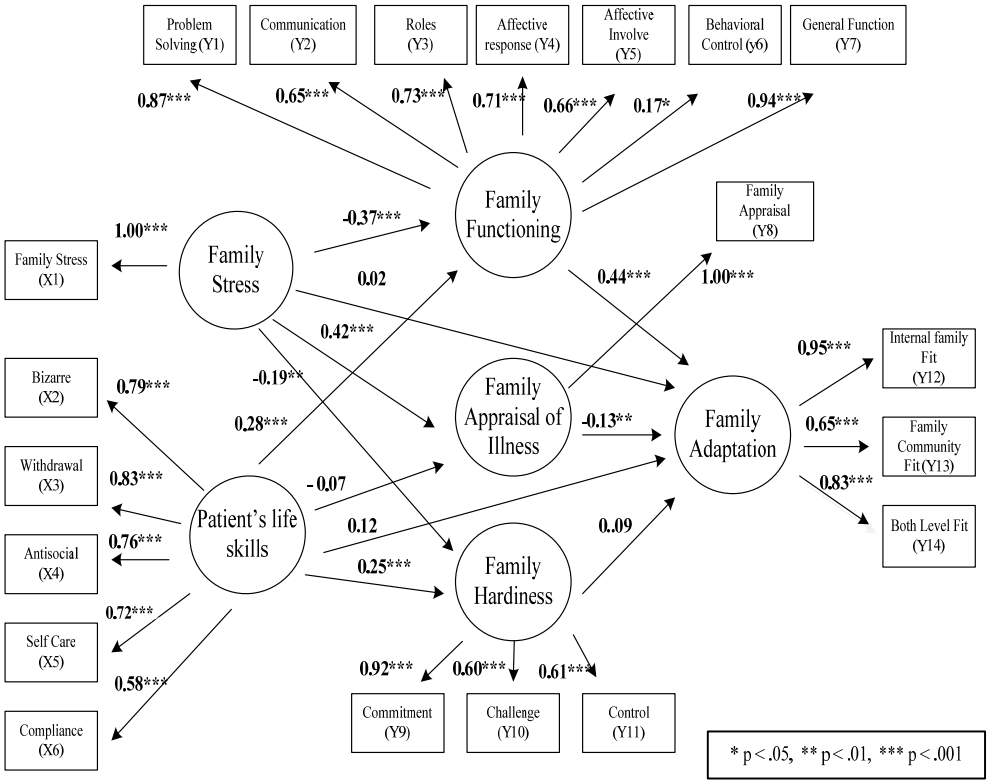
$\chi 2$ = 453.50, df = 160, $\chi 2$ /df = 2.83, p-value = 0.000, GFI = 0.84, AGFI = 0.79, RMSEA=0.088

Figure 4.1: Hypothesized Model of Family Adaptation in Thai Families of Adolescents with Mental Illness

As shown in Figure 4.2 and Table 4.8 , the path coefficients in the modified model were statistically significant: family functioning – family adaptation (β = .44, p < .001), family appraisal of illness – family adaptation (β = -.13, p < .01), family stress- family functioning (γ = -.37, p < .001), family stress – family appraisal of illness (γ = .42, p < .001), family stress – family hardiness (γ = - .19, p < .01), patient's life skills – family functioning (γ = .28, p < .001), patient's life skills – family hardiness (γ = .25, p < .001). However, the four path coefficients in this model were non-significant including: family hardiness – family adaptation, family stress – family adaptation, patient's life skills – family adaptation, patient's life skills – family appraisal of illness (β = .09, γ = .02, γ = .12, and γ = .08 respectively) (Table 4.8).

For the modified model, the selected goodness-of-fit measures are reported in Table 4.9 and 4.10. The chi-square ($\chi 2$) was 154.63, with degree of freedom 136. The p-value was 0.131, $\chi 2$/df = 1.14, RMSEA = 0.024, GFI = 0.94, and AGFI = 0.91

that had better fit to the empirical data than the hypothesized model. The square multiple correlations (R^2) of each observed variables ranged from 0.03 to 1.00. Moreover, two path coefficients changed from significant with the specified level 0.01 to 0.001 (PLS-FF and PLS-FH) (Table 4.8). The model accounted for and explained 29 % of variance in family functioning, 20 % of variance in family appraisal of illness, 14 % of variance in family hardiness, and 36 % of variance in family adaptation. Therefore, this modified model was used to test the research hypotheses.



$\chi 2$ = 154.63, df = 136, $\chi 2$ /df = 1.14, p-value = 0.131, GFI = 0.94, AGFI = 0.91, RMSEA = 0.024

Figure 4.2: Modified Model Family Adaptation in Thai Families of Adolescents with Mental Illness

Table 4.8 Validation Results of the Causal Model of Family Adaptation of Adolescent with Mental Illness (n = 237)

Path Diagram	Hypothesized Model				Modified Model			
	Path Coefficients	SE	t-value	R^2	Path Coefficients	SE	t-value	R^2
LAMBDA-Y								
FF-PS	0.87***	a	a	0.76	0.87***	a	a	0.76
FF-COM	0.66***	0.13	11.46	0.43	0.65***	0.13	11.43	0.42
FF-ROLE	0.72***	0.10	13.08	0.52	0.73***	0.10	13.64	0.53
FF-AFFEC	0.72***	0.14	13.20	0.52	0.71***	0.14	12.93	0.50
FF-INVOLVE	0.65***	0.17	11.39	0.43	0.66***	0.16	11.85	0.43
FF-BE_CON	0.18**	0.15	2.66	0.03	0.17*	0.15	2.55	0.03
FF-GENFUNC	0.93***	0.21	20.12	0.86	0.94***	0.20	20.94	0.87
FAP-FAP	1.00***	a	a	1.00	1.00***	a	a	1.00
FH-COMMIT	0.66***	a	a	0.44	0.92***	a	a	0.85
FH-CHALLEN	0.80***	0.34	7.17	0.65	0.60***	0.23	8.04	0.36
FH-CONTROL	0.46***	0.30	5.76	0.21	0.61***	0.30	7.47	0.37
FAD-INTER	0.95***	a	a	0.91	0.95***	a	a	0.89
FAD-COMMUNI	0.62***	0.12	10.53	0.39	0.65***	0.12	11.51	0.43
FAD-BOTH	0.82***	0.15	15.03	0.68	0.83***	0.14	15.80	0.70
LAMBDA-X								
FS-FS	1.00***	a	a	1.00	1.00***	a	a	1.00
PLS-BIZZARE	0.80***	0.13	14.03	0.64	0.79***	0.13	14.03	0.62
PLS-WITHD	0.81***	0.20	14.33	0.66	0.83***	0.19	14.73	0.69
PLS-ANTI	0.77***	0.14	13.31	0.59	0.76***	0.14	13.18	0.57
PLS-SELF	0.73***	0.18	12.38	0.53	0.72***	0.18	12.53	0.53
PLS-COMPLI	0.52***	0.12	8.05	0.27	0.58***	0.12	8.87	0.32
GAMMA								
FS-FF	-0.35***	0.01	-5.35		-0.37***	0.01	-5.82	
FS-FAP	0.49***	0.10	7.61		0.42***	0.09	7.09	
FS-FH	-0.28**	0.01	-3.41		-0.19**	0.01	-2.69	
FS-FAD	0.03	0.01	0.38		0.02	0.01	0.26	
PLS-FF	0.31**	0.07	4.47		0.28***	0.07	0.18	
PLS-FAP	-0.02	0.76	-0.30		-0.07	0.67	-1.16	
PLS-FH	0.27**	0.09	3.09		0.25***	0.07	3.58	
PLS-FAD	0.08	0.08	1.05		0.12	0.07	1.44	
BETA								
FF-FAD	0.37***	0.07	5.11		0.44***	0.10	4.38	
FAP-FAD	-0.13*	0.01	-2.06		-0.13**	0.01	-2.26	
FH-FAD	0.29**	0.08	3.64		0.09	0.09	1.02	

Note: SE = Standard Error, * p < .05, ** p < .01, *** p < .001

a = Values were not calculated because the coefficients were set to constant number

Table 4.9 Comparison of Goodness-of-fit Indices Between Hypothesized and Modified Model

Structural Model	Hypothesized Model	Modified Model
Absolute Fit Measure		
Chi-square	453.50	154.63
Degree of freedom	160	136
p-value	0.000	0.131
GFI	0.84	0.94
RMR	1.90	0.83
RMSEA	0.088	0.024
Incremental Fit Measures		
AGFI	0.79	0.91
NFI	0.91	0.97
CFI	0.93	0.99
Parsimonious Fit Measures		
Normed chi-square	2.83	1.14

Note: GFI = Goodness of Fit Index, AGFI = Adjusted Goodness of Fit Index, NFI = Normed Fit Index, CFI = Comparative Fit Index, RMR = Root Mean Square Residual, RMSEA = Root Mean Square Error of Approximation

Table 4.10 Summary of Total Effects, Indirect Effects, and Direct Effects of Causal Variables on Endogenous Latent Variables

Causal Variables	Affected Variables: Family Functioning			Family Appraisal of Illness			Family Hardiness			Family Adaptation		
	TE	IE	DE	TE	IE	DE	TE	IE	DE	TE	IE	DE
Family Stress	-0.37***	-	-0.37***	0.42***	-	0.42***	-0.19**	-	-0.19**	-0.21**	-0.23***	0.02
Patient's life skills	0.28***	-	0.28***	-0.07	-	-0.07	0.25**	-	0.25**	0.27**	0.15**	0.12
Family Functioning	-	-	-	-	-	-	-	-	-	0.44***	-	0.44***
Family Appraisal of Illness	-	-	-	-	-	-	-	-	-	-0.13**	-	-0.13**
Family Hardiness	-	-	-	-	-	-	-	-	-	0.09	-	0.09
Structural Equation Fit		R^2 = 0.29			R^2 = 0.20			R^2 = 0.14			R^2 = 0.36	
Modified Model	$\chi 2$ = 154.63, df = 136, $\chi 2$ /df = 1.14, p-value = 0.131, GFI = 0.94, RMSEA = 0.024											

Note: TE = Total Effects, IE = Indirect Effects, DE = Direct Effects
* p < .05, ** p < .01, *** p < .001

CHAPTER V
DISCUSSION

This chapter presents a discussion of the hypotheses testing, based on the best fit of the structural equation model of families of adolescents with MI.

Discussion on Hypotheses Testing Results

Hypothesis 1: *Family functioning, family hardiness, and patient's life skills have positive direct effect on family adaptation of families with mentally ill adolescents.*

The results revealed that family functioning had significant positive direct effect to family adaptation ($\beta = .44$, $p < .001$), whereas, family hardiness and patient's life skills had a non-significantly direct effect to family adaptation in families containing an adolescent with mental illness ($\beta = .09$, $p > .05$; $\beta = .12$, $p > .05$ respectively). Thus, the finding of this study partially supported this hypothesis.

The finding that family functioning had a direct effect on family adaptation of families with mentally ill adolescents was congruent with the previous studies (Greenberg, Greenley, McKee, Brown, & Griffin-Francell, 1993; Han et al., 2007; Rungreangkulkij, 2000; Saunders, 1999; Thompson, Gil, Burbach, Keith, & Kinney, 1993). However, the family hardiness had no significant direct effect to their adaptation. According to the resiliency model, family functioning, family appraisal, family resources, and family coping are considered mediators to predict satisfaction with family life (McCubbin et al., 1996). McCubbin and colleagues (1996) suggested that the interactions among these factors are the family capabilities attempting to manage the crisis situation, leading to positive adaptation. Having a mentally ill adolescent could disrupt family life and increase stress in family members (Suris et al., 2004). Families of adolescents with MI thus experience an excessive demand. The family members have to perform the important activities and interact with each other

in enabling all the family members to meet the goals and foster members' well being (Walsh, 2003a). Thus, the family functioning could promote stability in their families by strengthening the relationships of the family members during the stressful situation. The finding lends support to the importance of family functioning in the adaptation process in families of adolescents with MI. Thus, assisting families of adolescents with MI without encouraging the functioning of the family would not be successful in promoting adaptation in a family.

Additionally, one study identified the family hardiness as one of the resiliency factors in families with a mentally ill family member (Greeff et al., 2006). The result of this study was found to be contrary to that study. Family hardiness is the internal control over psychological tension and inner power, which is characterized as giving meaning to life and the challenges that are faced (McCubbin et al., 1998). The family hardiness defined by this study was measured by three characteristics of the family members: 1) the family sense of internal strength, dependability and ability to work together; 2) the family effort to be innovative, active, to experience new things and learn; 3) the family sense of being in control of family life. McCubbin et al. (1996) noted that for family members who experience increased stress related to their child's illness, family hardiness becomes evident and be directed at the reduction or elimination of stress, achievement of additional resources, on going management of family tension, and shaping family members' meaning of the situation. Thus, it was expected that family hardiness had a direct effect to family adaptation, but this finding could not support the explanation of the resiliency model. The possible explanation is that the family hardiness might be overshadowed by family functioning as analyzed by structural equation model (SEM) since the finding of correlations among the studied variables showed that there was a positive correlation between family functioning and hardiness at a high level ($r = .72$; $p < .01$) (see Table 4.5). This finding was similar to that of Han and colleagues' study, which found that family hardiness had a positive relation with family functioning in the family of a mentally ill ($r = .51$; $p < .001$). Further examination of the effect between family hardiness and family adaptation is recommended.

Regarding the finding that a patient's life skills had no direct effect on family adaptation of families with mentally ill adolescents, the finding contrasts a previous study (Schieve et al., 2007). The finding may be due to stress from facing the patient's life skills being buffered by the family functioning. It was suggested by one previous study (Saunders, 1999), that the patient's behavioral problems were important factors to predict family functioning in families of a person with mental illness.

In summary, the findings in this study partially supported this hypothesis. Family functioning strongly predicted adaptation in families of adolescents with MI. Family hardiness and patient's life skills had no direct effect on family adaptation.

Hypothesis 2: *Family appraisals of illness and family stress have negative direct effect on family adaptation of families with mentally ill adolescents.*

The findings in this study partially supported this hypothesis. Family appraisal of illness was found to have direct negative effect on family adaptation ($\beta = -.13$, $p < .01$). It could be explained by the fact that families of adolescents with MI who perceived their caregiving situation as stimulating a rather low level of stress were well adapted. Greater family positive appraisal shapes the family adaptation in order to protect the health of family members. This process would enhance the family composition of family adaptation. These findings suggested that in order to promote family adaptation in a family containing an adolescent with MI, family members need to be thinking about the illness of the adolescent from a positive perspective.

However, this study found that family stress had a non-significantly direct effect on family adaptation ($\beta = .02$, $p > .05$) A possible explanation of the non-significant direct effect is that there might be resiliency in families of adolescents with MI. As proposed by the model, family stress had an effect on family functioning, family hardiness and family appraisal of illness. However, the finding revealed that both family functioning and family appraisal of illness had an effect on the family adaptation level. Family functioning and family appraisal of illness were proved to be part of the family adaptive power in that they directly enhanced family adaptation. In addition, there may be some potential mediating variables associated with family resources and capabilities based on the resiliency model, but that were not considered

in this study, such as family problem-solving and coping: these are strategies of a family acting to maintain or strengthen the family. Another possible explanation might be that families of adolescents with MI were more sensitive to other types of family adaptation that were not measured in this study. However, the contradictory findings on the effect of family stress on family adaptation needs further study.

Hypothesis 3: *Family stress has a negative indirect effect on family adaptation through family functioning, family appraisal of illness, and family hardiness of families with mentally ill adolescents.*

This study found that family stress had a significantly negative indirect effect on family adaptation ($\beta = -.23$, $p < .001$) through family functioning and family appraisal of illness. In addition, family stress had a significant negative total effect on family adaptation ($\beta = -.21$, $p < .01$).

The findings could be explained by the fact that stress in families of adolescents with MI had effects to disrupt family functioning and family appraisal of illness and consequently affected family adaptation. In other words, if the family of mentally ill adolescents had high stress, the family functioning, hardiness, and appraisal of illness would be disrupted, and the inadequate family resources would impair the well-being of the family. This study makes a contribution to the stress and adaptation literature by demonstrating the pathway through which family stress influences the family adaptation of families of adolescents with MI.

In this study, the most common stresses reported by the families were the difficulty in raising their child, followed by experiencing anxiety and stress, financial strain, school problems, and family conflicts. These findings were consistent with western literature stating that the families faced an accumulation of internal and external stressors, heightening vulnerability and risk for subsequent problems (McCubbin et al., 1996; Patterson, 2002; Wash, 2003a). Family stress is an extension of individual stress into the family as a unit, and threatens the well-being of the family. Try: in a challenging situation, the family manages family resources in order to achieve harmony and balance (Hobfoll & Spielberger, 1992).

The findings were congruent with previous studies (Han et al., 2007; Rungreaungkulkij et al., 2002; Saunders, 1999). Several studies also found that family

burden and family demands negatively associated with family functioning in families of patients with MI (Chien, Chan, & Morrissy, 2007; Liu, Lambert, & Lambert, 2007; Martens & Addington, 2001; Ohaeri, 2003; Rose et al., 2006). This illustrates the fact that families with high stress from family life events, strains, and distress, might be at risk for dysfunction in their families. Therefore, the lower the family stresses, the higher the family functioning.

These findings are supported by the previous studies. Family pile-up of demands was positively related with family appraisal of illness in mothers and relatives of a person with schizophrenia (Rungreaungkulkij, 2000). Also, Pickett, Cook, Cohler, and Solomon (1997) noted that parents' positive appraisals of their relationship with their mentally ill were significantly related to decreased levels of caregiver burden. Welcher (1997) also found the relationship between family pile-up of demands (family stress) and family appraisal in families of deaf children. Hsiao & Van Riper (2009) found that family caregivers with a more positive interpretation of family caregiving reported lower levels of family caregiver burden. In addition, drinking of husbands in military families was found to influence the relationship between pile-up of demands and family appraisal (Keawma, 2002). This is in-line with this study, where family stress was lessened by a less negative family appraisal of illness.

Even though there was no prior study conducted directly to examine the influence of family stress on family hardiness in families of adolescents with MI, a possible explanation of the finding that family hardiness did not work as a mediating effect on family stress and adaptation may be that family hardiness is reciprocal with a sense of resilience. Second, family hardiness may serve as a stress buffering factors only when the stressor is particular pernicious. Moreover, it might be that family hardiness is interrelated to family functioning and family appraisal of illness.

Additionally, families of adolescents with MI had encountered stress in the family life cycle and appraised the situation. Families responded by managing the family stress as well as restoring family harmony and balance to achieve adaptation. Likewise, families of adolescents with MI use the internal strengths and the durability to overcome stresses of life. These data lend support to the importance of family functioning and family appraisal of illness in explaining difference in family adaptation. The results also confirmed that family stress negatively predicts the level

of family adaptation and both family functioning and family appraisal of illness were the mediators. This finding is supported by the Resiliency Model, as previously mentioned in the conceptual framework, where family pile-up of demands involves the interactions among family resources and capabilities to predict family adaptation in family life. Thus, families of adolescents with MI respond to a crisis situation by mobilizing available resources and making changes to stabilize and improve family adaptation. The resulting reduction in the sense of stress of families having adolescents with MI enhances the family resources and capabilities, particularly increasing family functioning and positive family appraisal of illness.

In summary, the findings revealed that family functioning and family appraisal of illness acted as mediating factors between family stress and family adaptation in families of adolescents with MI. This means that the families who have stronger family resources and capabilities will adapt well in a stressful situation. Therefore, family resources and capabilities can regulate the impact of family stress and increase family adaptation in families of adolescents with MI.

Hypothesis 4: *Patient's life skills have a positive indirect effect on family adaptation through family functioning, family appraisal of illness, and family hardiness of families with mentally ill adolescents.*

Patient's life skills had a positive indirect effect on family adaptation ($\beta = .15$, $p < .01$) through family functioning. In addition, patient's life skills had a significant positive total effect on family adaptation ($\beta = .27$, $p < .01$). The findings in this study partially supported this hypothesis.

The findings were congruent with previous studies (Rose et al., 2006; Rungreangkulkij et al., 2002; Saunders, 1999). Behavioral problems of a person with MI was negatively associated with family functioning. Thus, having a family member with MI was a risk factor for dysfunction in their families. Mental illness can cause dysfunction in every dimension of family functioning (Saunders, 1999).

In addition, the findings indicated that there was a non-significant effect of patient's life skills on family appraisal of illness. A possible explanation is that MI is chronic, unpredictable, difficult to manage and hard to understand. The family members in this study played a role of caring for their adolescents with MI over a long

period (ranging from 1 to 23 years, mean 5.29). These years may contribute to the perception that the patient's life skills are not seriously affected. It seems likely that such an experience and duration can even weaken the stressors from patient's life skills. Second, adolescents with MI in this study had relatively high function (mean = 62.83, SD = 10.94). Moreover, family members might receive adequate support and services from health professionals for the patient's treatment and multiple needs. A family may have sufficient resources available to deal with the adolescents' symptoms, resulting in their meaning of this situation defining it as controllable and manageable. Thus, family appraisal of illness also was not a mediator between patient's life skills and family adaptation.

The finding suggests that families of adolescents with MI who had high level of patient's life skills had high level of family hardiness. This finding demonstrated that families of person with MI had strengths for dealing with stressors related to the illness. Rose (1998) supported the idea that family caregivers of MI put efforts to recover the sense of control to regulate the symptoms of their relatives' illness. Thus, if the function of adolescents with MI is high, the family has a sense of control over outcomes of life and views change as growth. However, family hardiness was not a mediator between patient's life skills and family adaptation, because family hardiness had no direct effect on family adaptation.

In summary, the results from this study partially supported this hypothesis. Only family functioning mediated the effect of patient's life skills on family adaptation in families of adolescents with MI. In other words, if the family of mentally ill adolescents perceived high stress from the patient's problem behaviors, the family functioning would be disrupted, and the unhealthy functioning would impair the well-being of the family.

Overall, the findings of this study support the proposition of the Resiliency Model, in which during the crisis, increased family stresses are negatively related to family adaptation. However, family resources and capability are not universal, and differ because of ethnicity, experience, and the perceived severity of risk (Black & Lobo, 2008). Family stress in families of adolescents with MI arises from stressors related to the family life events and perceived behavioral problems of their adolescents. Family stress has the possibility to either weaken or strengthen family

resilient factors. For families having an adolescent with MI, facing stress may present challenges not damaging and perceived rather as opportunities for fostering healing and growth in the family. McCubbin and colleagues (1996) believed that family resilient factors work synergistically and interchangeably to respond successfully. The findings in this study indicated that resilient factors including family functioning and family appraisals of illness were unified and worked together in the adaptation process. The model of family adaptation in families of adolescent with MI in this study was a best fit to the empirical data and explained 36 % of the variance in family adaptation of adolescents with MI. In order to promote adaptation of families of adolescents with MI, the intervention should be targeted on developing or fostering the family functioning and positive family appraisal of illness.

CHAPTER VI
CONCLUSION

This chapter summarizes the present study and describes the implications as well as the contribution of research findings.

6.1 Summary of the Study

This cross-sectional descriptive study used the Resiliency Model of Family Stress, Adjustment, and Adaptation (McCubbin et al., 1996) as a framework. The selected variables were family stress, patient's life skills, family functioning, family appraisal of illness, family hardiness and family adaptation. This study was designed to examine the pattern of the relationships among family stress, patient's life skills, family functioning, family appraisal of illness, family hardiness and family adaptation in Thai families of adolescents with MI. This study was conducted from May, 2009 to September, 2009.

6.1.2 Sample Characteristics

Two hundred and thirty-seven family members from four psychiatric hospitals across Thailand were recruited. Most of family members (68.4%) were female, ages ranged from 18 to 76 years old (mean = 45.62, SD = 10.41), 55.4% were mothers, 95.4% were Buddhist, 75.5% were married and had education at an elementary school level (34.2%). The majority of them were employed (82%), and 23.2% were agricultural workers. Nearly half (43.5%) earned a family income less than 10,000 baht/month (1US $ = 33 baht, 303.03 US $). It was found that 4.6% had two psychiatric patients living in the same household.

Regarding adolescents with MI, most of them were male (61.6 %), with ages ranged from 12 to 24 years old (mean = 17.60, SD = 3.9). More than half had high school education (55.3%). The mean age of patients at the time of diagnosis was

13.14 years old (SD = 5.51). Most of them had never been admitted to the hospital (57.8%). The diagnoses of adolescents with MI were schizophrenia (41.8%), ADHD (27%), depression (14.3%), bipolar disorder (8.9%), and autism (8%).

6.1.3 Instruments

The instruments used in this study were: 1) the Personal Profile of Participants, 2) the Thai Family Stress Inventory (TFSI), 3) the Life Skills Profile-20 (LSP-20), 4) the Chulalongkorn Family Inventory (CFI), 5) the Demands of Illness Inventory (DOII), 6) the Family Hardiness Index (FHI), and 7) the Family Adaptation Scale (FAS).

The content validity of all instruments was assessed by a panel of five experts. Some modifications had been made following the experts' advice concerning the TFSI, the LSP-20, the DOII, the FHI, and the FAS. Reliability of all instruments was tested with 30 families of adolescents with MI, results of which were all accepted.

Items analysis, and confirmatory factors analyses of each instrument were examined using SPSS (version 17, Mahidol University) and LISREL (version 8.80, student version, Scientific Software International, Inc.) with 237 families of adolescents with MI. Reliability of all instruments was acceptable, ranging from .79 to .91.

6.1.4 Research Findings

The data were transformed by descriptive statistics through the Software Product for Service Solution (version 17, Mahidol University). Internal consistency of six instruments was estimated by Cronbach's alpha. Pearson's correlation coefficient was computed to explore the relationships among variables. The structural equation modeling statistics (SEM) through the Linear Structural Relationship (LISREL version 8.80, student version, Scientific Software International, Inc.) was performed to test and modify the model.

Testing the hypothesized model was conducted as follows: the measurement models were examined via confirmatory factor analysis. Next, the hypothesized model was examined and modified by freeing specific parameters. Lastly, the modified model was accepted as a goodness-of-fit to the data at values of $\chi 2 = 154.63$, df = 136, $\chi 2$ /df = 1.14, p-value = 0.131, GFI = 0.94, RMSEA = 0.024;

the model explained 36 % of variance in family adaptation. The findings based on the hypotheses are presented below.

1. Family functioning had a significant positive direct effect on family adaptation. However, family hardiness and patient's life skills had a non-significant direct effect on family adaptation.

2. Family appraisals of illness had a negative direct effect on family adaptation, but family stress had a non-significant direct effect on family adaptation.

3. Family stress had a negative indirect effect on family adaptation through family functioning and family appraisal of illness, but not through family hardiness.

4. Patient's life skills had a positive indirect effect on family adaptation through family functioning, but not through family appraisal of illness and family hardiness.

The results revealed that family functioning and family appraisal of illness presented a mediating effect between family stress and family adaptation, while family functioning presented a mediating effect between patient's life skills and family adaptation. The findings suggested that family functioning and family appraisal of illness were related to the family resources and capabilities of family adaptation in families of adolescents with MI. Family functioning was the most important factor: working as the family resources and capabilities. These findings supported the concept that function of family members and positive perception of illness enhance family adaptation of families of adolescents with MI to take care of adolescents with MI. Thus, the findings from this model partially supported the proposition of the Resiliency Model.

6.2 Implications and Contribution of Research Findings

The findings of this study have important implications and contributions for nursing science, nursing practice, health care policy, and future research, as presented in the following pages.

6.2.1 Contribution for Nursing Science

The findings of this study contribute to the literature of family adaptation by demonstrating the pattern of relationships among the factors related to family adaptation in Thai families of adolescents with MI. The model explained 36% of adaptation among the Thai families of adolescents with MI. The details are given below:

1) The patterns of the relationships among the factors appropriately and logically explained the phenomena in families of adolescents with MI in Thailand, corresponding with the Resilience Model (RM). The propositions derived from RM and related literatures were supported and considered with empirical adequacy. This tested model confirmed that RM can be used to explain the phenomena of families of adolescents with MI in Thailand. This study demonstrated how and why families of adolescents with MI, when faced with family stress, were able to manage, sustain, and survive. Having a high family functioning and less negative family appraisal of illness could promote family adaptation and reduce family stress.

2) In this study, family stressors were conceptualized as not only stress from the family life events but also the patient's life skills. Findings revealed that families of adolescents with MI have to face family stress from family life events and low function of adolescents with MI. The presence of an adolescent with MI in the family can be inherently stressful for family members. Additionally, families of adolescents with MI perceived this situation as having both positive and negative perspectives depending on their family appraisal of illness.

3) The results from the tested model confirmed the impact of family stress and patient's life skills on family adaptation in Thai families of adolescents with MI. They also demonstrated mediation between family stress and family adaptation, patient's life skills and family adaptation. This mediation effect identified the family resources and capabilities factors. It was shown that to promote family adaptation, effective intervention should focus on the following. (1) Disrupting the development process of family stress by providing training on stress management and patients' symptoms management, and helping families to understand the potential reasons for adolescents to develop MI symptoms; (2) Enhancing positive family appraisal of illness by promoting shared responsibility for managing caregiving, reducing guilt and blame, and suggesting positive aspects of caregiving such as personal development, a

sense of meaning in life, companionship, mutuality in the family, and family strength; (3) Improving family functioning by helping them to work together as a supportive and collaborative team, determining the effectiveness of their family functioning, providing information and resources for effective family functioning, and supporting the families to take part in treatment and psychological rehabilitation. The emergence of family resources and capabilities factors therefore provide newly important basic knowledge, which is an essential contribution to nursing science in Thailand.

6.2.2 Implications for Nursing Practice

As shown in the results from this study, psychiatric and mental health nurses may apply this knowledge in many different settings to promote family adaptation and provide appropriate intervention for families of adolescents with MI.

Nurses working in the hospitals should be aware of families who have adolescents with MI. The effect of hospitalization on adolescents with MI and their families is a concern for nurses. In psychiatric hospitals, families have restricted visiting hours. Adolescents with MI and their families often suffer from separation and lack of family nurturance. Hospitalization causes stress in the families of adolescents with MI. Some families do not anticipate that their adolescents may have MI, and they are unprepared. They do not know about the disease, the effects on their adolescents' development and the effects on each family member and family life (Gedaly-Duff & Heims, 2005).

Nurses should assess family members of adolescents with MI for their ability to take care of their adolescents, the stressors in their families, and the meaning that family members give to this situation. This can help nurses use these assessment outcomes to generate appropriate interventions that are critical for families of adolescents with MI. For instance, families who have high negative perception of illness may need to be advised to receive continuous counseling to reduce negative feelings and enhance positive aspects of caregiving, which may modify family perception of the illness. In addition, families with high stress may need to be instructed about how to provide caregiving more competently and be introduced to the rewards of caregiving. Examples of enhancing positive aspects of caregiving include

using family support groups, stress management, self empowered strategies, family empowerment and others.

According to the results of this study, nurses should focus on improving adaptation in the family, decreasing family stressors and enhancing the family's resources and capabilities so as to develop an appropriate family support program for families of adolescents with MI. Family functioning was found as the best contributor to family adaptation. Families usually need to alter their ways of functioning to accommodate the illness. This indicates that change is needed and new patterns of functioning should be tried. Thus, both parents may try to spend time with an adolescent with MI, and additional help from relatives may be sought. The improvement of family functioning should be emphasized and integrated into the intervention program to promote the family adaptation up to a good level. For example, balancing involvement and improving roles are necessary to help families through their difficult time and situations.

In the community, some adolescents with MI are able to study in general schools or special schools. Psychiatric mental health nurses should assist teachers at schools to enhance the ability to assess stress, negative feelings, and family strengths. Families of adolescents with MI, teachers, and nurses should consider stress experienced by the family, including the difficulties in managing disturbed behaviors, the uncertainty and unpredictability of symptoms, loneliness and isolation that are a consequence of the stigma of having adolescents with MI. In some families, family stress contributes to higher level of affective and anxiety disorders. Nurses should facilitate networking between families and schools, hospitals, and other families to promote adaptation of adolescents with MI and their families in appropriate landmarks in the family environment.

In summary, family intervention programs and family counseling for the families of adolescents with MI should include: 1) reduction of family stress from family life events and the impact of MI on the families; 2) information about the illness, and how to improve the positive aspects in caregiving; and 3) enhancing family functioning.

6.2.3 Implications for Health Care Policy

The findings of this study provide contributions to policy makers that they should be aware of urgent needs of family psychiatric mental health services in the health care system. These implications are as follows.

The health care system needs to focus more on the family as the unit of services, especially in adolescents with MI. This could be done by increasing resources and support to maintain family functioning, such as availability of family centered care for adolescents with MI. Training nurses to increase competence and self-confidence in working with families of adolescents with MI and to collaborate with a multidisciplinary team, such as child and adolescence psychiatrist, social worker, psychologist, special teacher, or occupational therapist is essential in providing good care for patients and their families.

Specifically for families whose adolescents with MI are able to study in school, the alienation and stigma could be overwhelming for both the adolescents with MI and their families. Adolescents with MI in this study complained that they often felt reluctant to talk about their illness with teachers and their friends. In addition, some families in this study reported feeling that they were being blamed for caring for the adolescents with MI, and experienced personal feelings of embarrassment. These issues affected family appraisals in a negative aspect. Some families described adolescents with MI's problematic behaviors and reported that they did not know about the illness symptoms. Support services identified by families of adolescents with MI indicated the need for more family understanding and family support. Information about MI, individual counseling and support groups for families are also important to increase knowledge and understanding of the illness and resources available to families.

The lack of special school and specialists to improve problems for adolescents with MI are also evident; there is urgent need to deal with issues such as behavior, speech, and attention. One mother in this study expressed her anxiety that the number of special schools were limited, and therefore had limited places that could accept students each year. She could not look after her son day to day because of her work. One mother needed to look after her daughter at home because her child was older than the maximum school age limited by special schools for children with ADHD (14 years). One father said that in order to care for his son, he should move

from his small village in a rural area to the city because his son, with autism, went to the hospital everyday.

In this study, it was found that some adolescents with MI have treatment from outpatient clinics by themselves, as their families did not know about their illness. Psychiatric mental health nurses should recognize and support such patients. However, in some cases, it is necessary to cooperate with their families.

Finally, a follow up system should be established for students who have MI. This system could be carried out by the counseling teachers, with the assistance from psychiatric mental health nurses.

6.3 Strengths of the Study

In this study, family adaptation was first investigated in Thai families of adolescents with MI. The findings noticed the following important issues.

1) Many of the previous studies in caregiving of individuals with MI in Thailand have focused on burden, psychological distress and pathology. In addition, the studies have looked at only caregivers' problems. This study looked at multidirectional interactions and identifying factors that influenced how some families faced with the adversity of illness and traumatic condition such as having adolescents with MI, emerge resilient, succeed, and even thrive as they recover from adversities.

2) Although this study used a cross-sectional correlation design, a causal effect could be examined because this study investigated families' perception in their family context in a retrospective condition. The results of the effect of family stress and patient's life skills on family adaptation occurred at the point of time that this study was conducted.

3) The family instruments for Thai culture were limited. This study fostered the development and testing of reliability and validity of the measurements to assess factors related to family adaptation issues in Thailand.

4) This study collected the data from families of adolescents with MI in four regions across Thailand. It avoided some of the bias associated within a local area. Having only one hospital setting may not provide comprehensive data on families' experiences.

5) The results of this study explained the mechanism of family stress, patient's life skills, family functioning, family appraisal of illness, and family

hardiness on family adaptation. This pattern of relationship among these factors increases the understanding of the adaptation process in families of adolescents with MI. It is interesting that family members could became experts of family care for their adolescent's illness. They were able to mange their stressful situation, using important sources of strength. These results plays a vital and positive role in explaining support in home care of families of adolescents with MI to promote adaptation of family members who may be threatened or affected by the situation.

6) The sample size of this study is large and justified as appropriate. Compared to the previous literatures, the size of sample was large enough for the investigation of Structural Equation Modeling (SEM) analysis. SEM was performed for the main analyses in this study, as it is a testing model of adaptation in Thai families of adolescents with MI. SEM analysis is a strong method in that it reflects the actual empirical relationships within data. This method can control measurement errors, measure multiple predictor variables at the same time, and provide information in the degree of fit to the entire model.

6.4 Limitations of the Study

1) The participants in this study were family members of adolescents with MI (schizophrenia, bipolar disorder, depression, ADHD, and autism) who attended the clinics at the selected hospitals. This study did not include families who could not access the tertiary care services. These participants may have had a more positive attitude toward caregiving for adolescents with MI.

Family members who cared for adolescent with MI in an acute stage were not involved in this study. Therefore, this model could only be generalized to families who care for adolescents with MI in a stable condition and receive services from the tertiary care settings. In addition, the participants might not be a proportionate representative of all the Thai population because this study was conducted in only four psychiatric hospitals in Thailand.

2) The potential participants in this study were displaying various types of symptoms and phases of illness, such as schizophrenia, bipolar disorder, major depression, autism, and ADHD. It is difficult, therefore, to explain experiences among

different groups of illnesses and the differences of family adaptation between groups. This question needs to be examined in future studies.

3) A number of approaches were performed in the unit of analysis but the consensus was not clear. The current study used the individual as a unit of analysis in a family context. However, the data of other family members may provide more insight into the families of adolescents with MI.

6.5 Recommendations for Future Research

The findings in this study enlighten several areas. Based on the causal model developed in this study, future direction for research is necessary to identify other family resources and capabilities, such as family coping, and family support, which may mediate against the pervasive influence of major risks for MI. Because this study on family functioning, family appraisal of illness, and family hardiness, had been carried out only in a quantitative way, future research could be on in-depth qualitative studies that focus on family resources and capabilities.

The findings from this study revealed that family functioning and family appraisal of illness could promote family adaptation. The family intervention program in future research should focus on family functioning and family appraisal of illness. Western literatures documented that when psychoeducational programs targeted the family as a unit, the benefits would be experienced by both the patient with MI and the family members (Moriarty & Shepard, 2005). Thus, research related to improvement of the content of psychoeducational programs and involving training families in communication and problem solving to improve family functioning would be suggested. In addition, the content should provide patients and families with detailed information about the illness, treatment plan, services, and management of patients' symptoms to improve negative family appraisal of illness. Moreover, more research should focus on interventions that prevent frequent relapses, decrease psychiatric symptoms with MI, and result in better outcomes for the families and adolescents with MI.

Future study should also replicate this study in other groups, such as adult patients with MI or other chronic illnesses. This would provide more evidence and be more generalized to a wider population in this area.

BIBLIOGRAPHY

Addington, J., & Marten, L. (2001). The psychological well-being of family members of individuals with schizophrenia. *Social Psychiatry Psychiatr Epidemology, 36*,128-133.

Alestalo, A., Munnukka, T., & Pukkuri, T. (2002). Problems of young people in community psychiatric care. *Journal of Psychiatric and Mental Health Nursing, 9*, 33-40.

American Psychiatric Association. (1994). *Diagnostic and Statistical Manual of Mental Disorders* (4th ed.). Washinton, DC.

American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders (DSM IV-TR)* (4th ed.). Washington, DC: American Psychiatric Association.

Anderson, L. R. (2003). Use of community-based services by rural adolescents with mental health and substance use disorders. *Psychiatric Services., 54*(10), 1339-1341.

Antonovsky, A., & Sourani, T. (1988). Family sense of coherence and family adaptation. *Journal of Marriage and the Family, 50*(February), 79-92.

Artinian, T. N. (1999). Selecting a Model to Guide Family Assessment. In D. G. Wegner, & Alexander, J.R. (Ed.), *Reading in Family Nursing* (2nd ed., pp. 447-459). Maryland: Lippincott Williams & Wilkins

Baronet, A. M. (1999). Factors associated with caregiver burden in mental illness: A critical review of the research literature. *Clinical Psychology Review, 19*, 819-841.

Baronet, A. M. (2003). The Impact of family relations on caregivers' positive and negative appraisal of their caretaking activities. *Family Relations, 52*(2), 137-142.

Barrowclough, C., Tarrier, N., & Johnston, M. (1996). Distress, expressed emotion, and attributions in relatives of schizophrenia patients. Schizophrenia Bulletin. 1996; 22(4):691-702.

Beavers, W., & Hampson, R. (1993). Measuring family competence: The Beaver System Model. In F. Walsh (Ed.), *Normal Family Processes* (pp. 73-103). New York: Guilford Press.

Beck, C. T., Bernal, H., & Froman, R. D. (2003). Methods to document semantic equivalence of a translated scale. *Research in Nursing & Health, 26*, 64-73.

Biegel, D. E., Milligan, S. E., Patnum, P. L., & Song, L. U. (1994). Predictors of burden among lower socioeconomic status caregivers of persons with chronic mental illness. *Community Mental Health Journal, 30*(5), 473-494.

Black, K., & Lobo, M. (2008). A conceptual review of family resilience factors. *Journal of Family Nursing, 14*(1), 33-55.

Borijun, P., Hutchapanom, W., Kaewaud, N., & Rachabut, S. (1993). Stressors that caused anxiety and coping behavior among relatives of psychotic patient: Khon Kaen Neuro-Psychotic Hospital.

Brady, N., & McCain, C. G. (2004). Living with schizophrenia: A family perspective. . *Journal of Issues in Nursing, November*.

Brislin, R. W. (1970). Back-translation for cross-cultural research. *Journal of Cross-Cultural Psychology, 1*(3), 185-216.

Burns, N., & Grove, K. S. (2009). *The Practice of Nursing Research: Appraisal, Synthesis, and Generation of Evidence*. (6th ed.). Missouri: Saunders Elsevier.

Campbell, T.A. (2006). Consent, competence, and confidentialiality related to psychiatric conditions in adolescent medicine practice. *Adolescent Medicine Clinics*, 17(1), 25-47.

Carey, P. J., Oberst, M. T., McCubbin, M. A., & Hughes, S. (1991). Appraisal and caregiving burden in family members caring for patients receiving chemotherapy. *Oncology Nursing Forum, 18*(8), 1341-1348.

Chabra, A., Chavez, F. G., Harris, S. E., & Shah, R. (1999). Hospitalization for mental Illness in adolescents: risk groups and impact on the health care system. *Journal of Adolescent Health, 24*, 349-356.

Chafetz, L., & Barnes, L. (1989). Issues in psychiatric caregiving. *Archives of Psychiatric Nursing, 3*(2), 61-68.

Chen, F., & Greenberg, S.J., (2004). A positive aspects of caregiving: The influence of social support on caregiving gains for family members of relatives with schizophrenia. *Community Mental Health Journal, 40*(5), 423-435.

Chen, S. P., Yang, K. Y., Liao, C. Y., Yeh, L., Tzung, Chen, C., et al. (2004). The psychological well-being and associated factors of caregivers of outpatients with schizophrenia in Taiwan. *Psychiatry and Clinical Neurosciences, 58,* 600-605.

Chesla, A. C. (1989). Mental illness and the family. In L. C. Gilliss, L. B. Highley, M. B. Roberts & M. I. Martinson (Eds.), *Towards a Science of Family Nursing* (pp. 374-393). Menlo Park: Addison-Wesley Publishing Company, Inc.

Chien, T-W., Chan, W. S., & Morrissy, J. (2007). The perceived burden among Chinese family caregivers of people with schizophrenia. *Journal of Clinical Nursing, 16,* 1151-1161.

Clark, P. C. (2002). Effects of Individual and family hardiness on caregiver depression and fatigue. *Research in Nursing & Health*, 25, 37-48.

Clawson, J. (1996). A child with a chronic illness in childhood: A nursing, health promotion model for rehabilitation in the community. *Rehabilitation Nursing, 120,* 318-322.

Cochran, W.G. (1963). *Sampling techniques.* Cambridge, MA: John Wiley & Son.

Conn, V. S. (2003). Working with families. In K. W. Mohr (Ed.), *Johnson's Psychiatric-Mental Health Nursing* (5th ed., pp. 169-189). Philadelphia: Lippincott Williams&Wilkins.

Conn, V. S., & Marsh, D. T. (1999). Working with families. In C. A. Shea, L. R. Pelletier, E. C. Poster, G. W. Stuart & M. P. Verhey (Eds.), *Advanced Practice Nursing in Psychiatric and Mental Health Care*. Missouri: Mosby, Inc.

Conn, V. S., & Stuart, W. G. (2005). Families as resources, caregivers, and collaborators. In W. G. Stuart & T. M. Laraia (Eds.), *Principles and Practice of Psychiatric Nursing* (8th ed., pp. 170-182). St.Louis: Elsevier Mosby.

Cook, J.A., Lefly, H.P., Pickett, S.A., & Cohler, B.J. (1994). Age and family burden among parents of offspring with severe mental illness. American Journal of Orthopsychiatry, *64*(3), 435-447.

Corcoran, C., Gerson, R., Sills-Shahar, R., Nickou, C., McGlashan, T., Malaspina, D., et al. (2007). Trajectory to a first episode of psychosis: a qualitative research study with families. *Journal Compilation, 1,* 308-315.

Costello, E. J., Copeland, W., Cowell, A., & Keeler, G. (2007). Service costs of caring for adolescents with mental illness in a rural community, 1993-2000. *American Journal of Psychiatry, 164*(1), 36-42.

Costello, E. J., Foley, D. L., & Angold, A. (2006). 10-Year research update review: The epidemiology of child and adolescent psychiatric disorders: II. development epidemiology. *Journal American Academic Child Adolescence Psychiatry, 45*(1), 8-25.

Cummings, M. E., Keller, S. P., & Davies, T. P. (2005). Towards a family process model of marternal and paternal depressive symptoms: exploring multiple relations with child and family functioning. *Journal of Child Psychology and Psychiatry, 46*(5), 479-489.

Czuchta, D. M., & McCay, E. (2001). Help-Seeking for parents of individuals experiencing a first episode of schizophrenia. *Archives Psychiatry Nursing, 15*, 159-170.

Danpakdee, S. (1999). Mental health status of secondary school children. *Journal of the Psychiatric Association of Thailand, 44*(3), 213-227.

DeMarco, R., Ford-Gilboe, M., Friedmann, M., McCubbin, I. H., & McCubbin, M. A. (2000). Stress, coping, and family health. In V. H. Rice (Ed.), *Handbook of Stress, Coping, and Health:Implications for Nursing Research, Theory, and Practice* (pp. 295-332). Thounsand Oaks: Sage Publications, Inc.

Doherty, W.J. & Campbell, T.L. (1988). Families and health. Newbury Park, CA:Sage.

Donelly, E. (1994). Parents of children with asthma: An examination of family hardiness, family stressors, and family functioning. *Journal of Pediatric Nursing, 9*(6), 398-408.

Doornbos, M. M. (1996). The strengths of families coping with serious mental illness. *Archives of Psychiatric Nursing, 4*(August), 214-220.

Doornbos, M. M. (1997). The problems and coping methods of caregivers of young adults with mental illness. *Journal of Psychosocial Nursing and Mental Health Services, 35*(9), 22-26.

Doornbos, M. M. (2001). The 24-7-52 job: family caregiving for young adults with serious and persistent mental illness. *Journal of Family Nursing, 7*(4), 328-344.

Doornbos, M. M. (2002a). Family caregivers and the mental health care system: reality and dreams. *Archives of Psychiatric Nursing, 1*(2), 39-46.

Doornbos, M. M. (2002b). Predicting Family Health in Families of Young Adults with Severe Mental Illness. *Journal of Family Nursing, 8*(3), 241-263.

Enns, R. A., Reddon, J. R., & McDonald, L. (1999). Indications of resilience among family members of people admitted to a psychiatric facility. *Psychiatric Rehabilitation Journal, 23*(2), 127-135.

Epstein, N. B., Ryan, C. E., Bishop, D. S., Miller, I. W., & Keitner, G. I. (2003). The McMaster model: A view of healthy family functioning. In F. Walsh (Ed.), *Normal Family Processes: Growing Diversity and Complexity* (3rd ed., pp. 581-607). New York: Guilford.

Erikson, E. H. (1993). *Childhood and society*. New York: W.W.Norton.

Failla, S. & Jones, L.C. (1991). Families of children with developmental disabilities: An examination of family hardiness. Research in Nursing & Health, 14, 41-50.

Ferriter, M., & Huband, N. (2003). Experiences of parents with a son or daughter suffering from schizophrenia. *Journal of Psychiatric and Mental Health Nursing, 10,* 552-560.

Fink, S. V. (1995). The influence of family resources and family demands on the strains and well-being of caregiving families. *Nursing Research, 44*(3), 139-145.

Flaherty, J. A., Gaviria, F. M., Pathak, D., Mitchell, T., Wintrob, R., Richman, J. A., et al. (1988). Developing instruments for cross-cultural psychiatric research. *The Journal of Nervous and Mental Disease, 176*(5), 257-263.

Fontaine, L. K. (2003). The family in mental health nursing. In *Mental Health Nursing* (5th ed., pp. 79-98). Upper Saddle River: Pearson Education, Inc.

Ford-Gilboe, M., & Cohen, A. J. (2000). *Hardiness : A model of commitment, challenge, and control.* Thounsand Oaks: SAGE Publications, Inc.

Friedmann, M. S., McDermut, W. H., Solomon, D. A., Ryan, C. E., Keitner, G. I., & Miller, I. W. (1997). Family functioning and mental illness: a comparison of psychiatric and nonclinical families. *Family Process, 36*(4), 357-367.

Gedaly-Duff, V. & Heims, L.M. (2005). Family child health nursing in Theoretical foundations for nursing of families. In S. M. H. Hanson, V. Gedaly-Duff & R. F. Kaakinen (Eds.), *Family Health Care Nursing: Theory, Practice, and Research* (3rd ed., pp. 37-59). Philadelphia: FA.Davis.

Gilliss, L. C. (1991). Family nursing research, theory, and practice. *Image, 23*(1), 19-22.

Gilliss, L. C., & Knafl, K. (1999). Nursing care in family in non-normative transitions: The state of scince and practice. In A. Hinshaw, S. Feetham & J. Shaver (Eds.), *Handbook on Clinical Research*. Newbury Park, CA: Sage.

Greeff, A. P., Vansteenwegen, A., & Ide, M. (2006). Resiliency in families with a member with a psychological disorder. *The American Journal of Family Therapy, 34*, 285-300.

Greenberg, J. S., Greenley, J. R., & Benedict, P. (1994). Contributions of persons with serious mental illness to their families. *Hospital and Community Psychiatry, 45*(5), 475-480.

Greenberg, J. S., Greenley, J. R., McKee, D., Brown, R., & Griffin-Francell, C. (1993). Mothers caring for an adult child with schizophrenia: The effects of subjective burden on maternal health. *Family Relations, 42*, 205-211.

Gutgesell, M. E., & Payne, N. (2006). *Issues of adolescent psychological development in the 21st century* (2nd ed.). Elk Grove Village: American Academy of Pediatrics.

Haberman, M. R., Woods, N. F., & Packard, N. J. (1990). Demands of chronic illness: Reliability and validity assessment of a demands of illness inventory. *Holistic Nursing Practices, 5*(1), 25-35.

Hair, F. J., Black, C. W., Babin, B.J., Anderson, R.E., & Tatham, L. R. (2006). *Multivariate Data Analysis* (6th ed.). New Jersey: Prentice-Hall, Inc.

Han, K., Lee, P., Park, E., Park, Y., Kim, Y., & Kang, H. (2007). Family functioning and mental Illness- a Korean correlational study. *Asian Journal Nurse, 10*(2), 129-136.

Hanson, S. M. H., Gedaly-Duff, V., & Kaakinen, R. F. (2005). Theoretical foundations for nursing of families. In S. M. H. Hanson, V. Gedaly-Duff & R. F. Kaakinen (Eds.), *Family Health Care Nursing: Theory, Practice, and Research* (3rd ed., pp. 37-59). Philadelphia: FA.Davis.

Hatfield, A. B., Coursey, R. O., & Slaugter, J. (1994). Family responses to behavior manifestation of mental illness. *Innovations & Research, 3*(4), 41-49.

Hentinen, M., & Kyngas, H. (1998). Factors associated with the adaptation of parents with a chronically ill child. *Journal of Clinical Nursing, 7*, 316-324.

Heru, A. M., & Ryan, C. E. (2002). Depressive symptoms and family functioning in the caregivers of recently hospitalized patients with chronic/recurrent mood disorders. *The International Journal of Psychosocial Rehabilitation, 7*, 53-60.

Hobfoll, E.S., & Spielberger, D.C. (1992). Family stress: Integrating theory and measurement. *Journal of Family Psychology*, 6(2), 99-112.

Hobfoll, E.S., & Spielberger, D.C. (2003). Process of family stress. In P. Boss, & C. Mulligan. *Family Stress: Classic and Contemporary Readings*. (pp. 171-174). Thousand Oaks, CA, Sage Publication, Inc.

Horowitz, A.J., Ladden, D.M., & Moriarty, J.H. (2002). Methodological challenges in research with vulnerable families. Journal of Family Nursing, 8(4), 315-333.

Horwitz, A. V., & Reinhard, S. C. (1995). Ethnic differences in caregiving duties and burdens among parents and siblings of persons with severe mental illness. *Journal of Health and Social Behavior, 36*(2), 138-150.

Horwitz, S., & Hoagwood, K. (2002). Children and Adolescents. *Mental Health Services Research, 4*(4), 239-243.

Hsiao, C-Y., & Van Riper, M. (2009). Individual and family adaptation in Taiwanese families of individuals with severe and persistent mental illness (SPMI). *Research in Nursing & Health*, 32, 307-320.

Huberman, M. R., Woods, N. F., & Packard, N. J. (1990). Demands of chronic illness: Reliability and validity assessment of a demands-of-illness inventory. *Holistic Nursing Practices, 5*(1), 25-35.

Hunt, K. C. (2003). Concepts in caregiver research. *Clinical Scholarship, First Quarter*, 27-32.

Jacobson, F.S.(2004). Evaluating instruments for use in clinical nursing research. In M.Frank-stromborg & S.J. Olson (Eds.), *Instruments for Clinical Health-Care Research* (3rd ed., pp. 3-19). Sudbury, MA: Jones and Barlett Publishers.

Johnson, D. E. (2000). Differences among families coping with serious mental illness: A qualitative analysis *American Journal of Orthopsychiatry, 70*(1).

Johnson, S. B., & Mohr, K. W. (2003). Inroduction to psychiatric-mental health nursing. In K. W. Mohr (Ed.), *Johnson's Psychiatric-Mental Health Nursing* (5th ed.). Philadelphia: Lippincott Williams & Wilkins.

Kakaki, M., Theleritis, C., & Roussos, A. (2007). Adolescent health and trauma: The Lancet.

Kaplan, D. W., Feinstein, R. A., Fisher, M. M., Klien, J. D., Olmedo, L. F., Rome, E. S., et al. (2006). Suicide and suicide attempts in adolescents. In C. B. Aten & E. M. Gotlieb (Eds.), *Caring for Adolescent Patients* (2nd ed., pp. 457-461). Elk Grove Village, IL: American Academy of Pediatrics.

Kashani, J. H., Beck, N. C., & Hoeper, E. W. (1987). Psychiatric disorders in a community sample of adolescents. *American Journal of Psychiatry, 144*, 584-589.

Keawma, S. (2002). *Family functioning of drinking husband families: studying in military families.* M.S.Thesis in Psychiatric and Mental Health, Faculty of Graduate Studies, Konkaen University.

Kendall, J., Leo, C.M., Perrin, N., & Hatton, D. (2005). Modeling ADHD child and family relationships. *Western Journal of Nursing Research*, 27(4), 500-518.

Klein, D. M., & White, J. M. (1996). *Family : An Introduction*. Thounsand Oaks: Sage.

Kline, R. B. (2005). *Principles and practice of structural equation modeling*. (2nd ed) New York: The Guilford Press.

Lakthong, P. (2005). *Effect of family counseling on family functioning in families of adolescent methamphetamine abuser*. Unpublished Master thesis, Mahidol University, Bangkok.

Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal and coping*. New York: Springer.

Leelakraiwan, J., Setthaphumirin, R., & Kaew-Ying, M. (1992). Family stressors: Khon Kaen University.

Lefley, H. P. (1989). Family burden and family stigma in major mental Illness. *American Psychologist, 44*(3), 556-560.

Lefley, H. P. (1996). *Family caregiving in mental illness*. Thounsand Oaks, CA: Sage Publications, Inc.

Leske, J. S., & Jiricka, K. M. (1998). Impact of family demands and family strengths and capabilities on family well-being and adaptation after critical injury. *American Journal of Critical Care, 7*(5), 383-392.

Leske, J. S. (2003). Comparison of family stresses, strengths, and outcomes after trauma and surgery. *AACN Clinical Issues*, 14 (1), 33-41.

Liu, M., Lambert, E.C., & Lambert, A.V. (2007). Caregiver burden and coping patterns of Chinese parents of a child with a mental illness. *International Journal of Mental Health Nursing*, 16, 86-95.

LoBiondo-Wood, G. (2003). The theory of family stress and adaptation. In M. J. Smith & P. R. Liehr (Eds.), *Middle Range Theory for Nursing* (pp. 91-109). New York: Springer Publishing Company. Inc.

LoBiondo-Wood, G., Williams, L., & McGhee, C. (2004). Liver transplantation in children: marternal and family stress, coping, and adaptation. *JSPN, 9(2), April-June*, 59-66.

Loukissa, A.D. (1995). Family burden in chronic mental illness: a review of research studies. *Journal of Advance Nursing*, 21, 248-255.

Lucas, C. R. (2000). Disorders of childhood and adolescence. In M. K. Fortinash & A. P. Holoday-Worret (Eds.), *Psychiatric Mental Health Nursing* (second nd ed., pp. 416-442). Misouri: Mosby.

Luthar, S.S., Cicchetti, D., & Becker, B. (2000). The construc of resilience: A critical evaluation and guidelines for future work. *Child Development, 71*(3), 543-562.

Marsh, D. T. (1992). *Families and mental illness: New directions in professional practice*. New York: Praeger.

Marsh, D. T., Lefley, H. P., Evans-Rhodes, D., Ansell, V. I., Doerzbacher, B. M., LaBarbera, L., et al. (1996). The family experience of mental illness: Evidence for resilience. *Psychiatric Rehabilitation Journal, 20*, 3-12.

Martens, L., & Addington, J. (2001). The psychological well-being of family members of individuals with schizohrenia. *Social Psychiatry and Psychiatric Epidemiology, 36*, 128-133.

Mays, G. O., & Lund, C. H. (1999). Male caregivers of mentally ill relatives. *Perspectives in Psychiatric Care, 35*(2), 19-28.

McCubbin, H. I., McCubbin, M. A., & Thompson, A. I. (1987). Family hardiness index. In H. I. mCcUbbin & A. J. Thompson (Eds.), *Family Assessement for Research and Practice*. Madison: University of Wisconsin.

McCubbin, H. I., & Patterson, J. (1983). The family stress process: The double ABCX model of adjustment and adaptation. In H. I. McCubbin, M. A. Sussman & J. Patterson (Eds.), *Social stress and the family: Advances and developments in family stress theory and research* (pp. 7-37). New York: Hayworth.

McCubbin, H. I., & Patterson, J. (1987). *FILE family inventory of life events and changes*. Madison: University of Wisconsin-Madison.

McCubbin, H. I., & Thompson, A. I. (1989). Predicting individual and family adaptation. In H. I. McCubbin & A. I. Thompson (Eds.), *In Balancing Work and Family Life on Wall Street* (pp. 141-156): Bellwether Press.

McCubbin, H. I., Thompson, E. A., Thompson, A. I., & Fromer, J. E. (1998). *Stress, coping and health in families: sense of coherence and resiliency*. London: SAGE Publications.

McCubbin, H. I., Thompson, I. A., Thompson, A. E., Elver, M. K., & McCubbin, M. A. (1998). *Ethnicity, schema, and coherence: Appraisal processes for families in crisis* (Resiliency in families series ed. Vol. 1). Thousand Oaks: Sage Publications.

McCubbin, M. A. (1993). Family stress theory and the development of nursing knowledge about family adaptation. In S. Feetham, S. Meister, J. Bell & C. Gillis (Eds.), *The Nursing of Families: Theory/Research/Education/Practice* (pp. 46-58). Newbury Park: Sage Publications.

McCubbin, M. A. (1999). Normative family transitions and health outcomes. In A. Hinshaw, S. Feetham & J. Shaver (Eds.), *Handbook of Clinical Nursing Research* (pp. 201-230). Newbury Park: Sage Publications.

McCubbin, M. A., & McCubbin, H. I. (1993). Families coping with illness: The resiliency model of family stress, adjustment, and adaptation. In C. B. Danielson, B. Hamel-Bissell & P. Winstead-Fry (Eds.), *Families Health & Illness: Perspectives on coping and intervention* (pp. 21-63). St. Louis: Mosby.

McCubbin, M. A., & McCubbin, H. I. (1996). Resiliency in families: A conceptual model of family adjustment and adaptation in response to stress and crisis. In H. I. McCubbin, A. I. Thompson & M. A. McCubbin (Eds.), *Family assessment: resiliency, coping and adaptation: inventories for research and practice* (pp. 1-64). Madison: University of Wisconsin Publishers.

McCubbin, M. A., McCubbin, H. I., & Thompson, A. I. (1991). *Family hardiness index*. Madison, Wisconcin: Unversity of Wisconsin.

McCubbin, M., Balling, K., Possin, P., Freierdich, S., & Bryne, B. (2002). Family resiliency in childhood cancer. *Family Relation, 51*(2), 103-111.

McLaughlin, P.D., & Harrison, A.C. (2006). Parenting practices of mothers of children with ADHD: The role of marternal and child factors. *Child and Adolescent Mental Health*, 11(2), 82-88.

Meijer, K., Schene, A., Koeter, M., Knudsen, C.H., Becker, T., Thornicroft, G., Vazquez-Barquero, L.J., & Tansella, M. (2004). Needs for care of patients with schizophrenia and the consequences for their informal caregivers results from the EPSILON multi center study on schizophrenia. *Soc Psychiatry Psychiatr Epidemiol, 39*, 251-258.

Mellon, S., & Northouse, L.L. (2001). Family survivorship and quality of life following a cancer diagnosis. *Research in Nursing & Health, 24*, 446-459.

Milliken, P. J. (2001). Disenfranchised mothers: Caring for an adult child with schizophrenia. *Health for Women International, 22*, 149-166.

Minuchin, S. (1974). Families and family therapy, *Harvard* Baltimore, Maryland: Harvard University Press.

Moriarty, J.H., & Shepard, P.M. (2005). Family mental health nursing in Hanson In S. M. H. Hanson, V. Gedaly-Duff & R. F. Kaakinen (Eds.), *Family Health Care Nursing: Theory, Practice, and Research* (3rd ed., pp. 301325). Philadelphia: FA.Davis.

Mohr, K.W., Lafuze, E.J., & Mohr, D.B. (2000). Opening caregiver minds: National alliance for the mentally ill's (NAMI) provider education program. *Archives of Psychiatric Nursing, 14*(5), 235-243.

Munkres, A., Oberst, M. T., & Hughes, S. H. (1992). Appraisal of illness, symptom distress, self-care burden, and mood status in patient receiving chemotherapy for initial and recurrent cancer. *Oncology Nursing Forum, 19*(8), 1201-1209.

Narrow, E.W., Regier, A.D., Goodman, H.S., Rae, S.D., Roper, T.M., Bourdon, H.K.,et al. (1998). A comparison of federal definitions of severe mental illness among children and adolescents in four communities. *Psychiatric Services, 49*(12), 1601-1608.

Niyomthai, N. (2002). *Caregiving duration, family life events, family hardiness, and well-being of family caregivers of stroke survivors.* Unpublished Master Thesis, Mahidol University, Bangkok.

Noh, S., & Avison, W. R. (1988). Spouses of discharged psychiatric patients: Factors associated with their experience of burden. *Journal of Mariage and Family, 50*, 377-389.

Noh, S., & Turner, R. J. (1987). Living with psychiatric patients: implication for the mental health of family members. *Social Science Medicine, 25*(3), 263-271.

Oberst, M. T., Hughes, S. H., Chang, A. S., & McCubbin, M. A. (1991). Self-care burden, stress appraisal, and mood among persons receiving rediotherapy. *Cancer Nursing, 14*(2), 71-78.

Oberst, M. T., Thomas, S. E., Gass, K. A., & Ward, S. E. (1989). Caregiving demands and appraisal of stress among family caregivers. *Cancer Nursing, 12*(4), 209-215.

Ohaeri, J. U. (2003). The burden of caregiving in families with a mental illness: A reveiw of 2002. *Current Opinion Psychiatry, 16*, 457-465.

Olson, D. H., & Gorall, D. M. (2003). Circumplex Model of marital and family systems. In F. Walsh (Ed.), *Normal family processes: Growing diversity*. New York: Guilford.

Olson, D.H., McCubbin, H. I., Barnes, H. L., Larsen, A. S., Muxen, M. J., & Wilson, M. A. (1989). *Families: What makes them work*. Newbury Park, CA.: Sage.

Olson, D. H., Sprenkle, D., & Russel, C. S. (1979). Circumplex model of marital and family systems: I. Cohesion and adaptability dimensions, family types and clinical applications. *Family Process, 18*, 3-28.

Oran, P. D. (2000). Children and adolescents. In M. K. Fortinash & A. P. Holoday-Worret (Eds.), *Pschiatric Mental Health Nursing* (2nd ed., pp. 176-194). St. Louis: Mosby.

Parker, G., Rosen, A., Emdur, N., & Hadzi-Pavlovic, D. (1991). The life skills profile: psychometric properties of a measure assessing function and disability in schizophrenia. *Acta Psychiatr Scand, 83*, 145-152.

Patel, V., Flisher, A. J., Hetrick, S., & McGorry, P. (2007). Adolescent health 3: mental health of young people: a global public-health challenge. *The Lancet, 369*, 1302-1313.

Patterson, J. M. (2002). Integrating family resilience and family stress theory. *Journal of Marriage and Family, 64*(2), 349-360.

Peck, C.M. & Scheffler, M.R. (2002). An analysis of the definitions of mental illness used in state parity laws**.** *Psychiatr Services*, 53, 1089-1095.

Pejlert, A. (2001). Being a parent of an adult son or daughter with severe mental illness receiving professional care: parents' narratives. *Health and Social Care in the Community, 9*(4), 194-204.

Picketett, S.A., Cook, J.A., Cohler, B.J., & Solomon, M.L., (1997). Positive parent/adult child relationships: Impact of severe mental illness and caregiving burden. *American Journal of Orthopsychiatry*, 67, 220-230.

Pillitteri, A. (2007). The family with an adolescent. In A. Pillitteri (Ed.), *Marternal & Child Health Nursing Care of the Childbearing & Childrearing Family* (5th ed.). Philadelphia: Lippincott Williams & Wilkins.

Pine, D. C., & Cohen, A. J. (2002). Trauma in children and adolescents: Risk and treatment of psychiatric sequelae *Biological Psychiatry, 51*, 519-531.

Planing Devision. (2008). The statistic of treated adolescent with severe mental illness in the mental health and psychiatric facilities under the Department of Mental Health from 2005 to 2007. Bangkok: Department of Mental Health, Ministry of Public Health.

Podolski, C., & Nigg, J.T. (2001). Parent stress and coping in relation to child ADHD severity and associated child distruptive behavior problems. *Journal of Clinical Child Psychology*, 30, 503-513.

Polit, F. D., & Beck, T. C. (2006). The content validity index: Are you sure you know what's being reported? Critique and recommendations. *Research in Nursing & Health, 29*, 489-497.

Polit, F. D., & Beck, T. C. (2008). *Nursing Research Generating and Assessing Evidence for Nursing Practice* (8th ed.). Philadelphia, PA.: Lippincott Williams & Wilkins.

Provencher, H. L., Fournier, J.-P., Perreault, M., & Vezina, J. (2000). Instruments measuring behavioral disturbance in relatives with schizophrenia *Community Mental Health Journal, 36*(3), 275-292.

Puotiniemi, T. A., & Kyngas, H. A. (2004). The coping of an adolescent who has been in psychiatric inpatient care and her mother in everyday life. *Journal of Psychiatric and Mental Health on Nurse, 11*, 675-682.

Reinhard, S. C. (1994). Living with mental illness: Effects of professional support and personal control on caregiver burden. *Research in Nursing and Health, 17*, 79-88.

Rienhard, S. C., & Horwitz, A. V. (1995). Caregiver burden: differentiating the content and consequences of family caregiving. *Journal of Marriage and the Family, 57*, 741-750.

Riesch, S., Jacobson, G., & Tosi, C. (1994). Young adolescent's identification of difficult life events. *Clinical Nursing Research*, 3, 393-413.

Rose, L. E. (1996). Families of psychiatric patients: A critical review and future research directions. *Archives of Psychiatric Nursing, 10*(2), 67-76.

Rose, L. E. (1998). Gaining control: Family members relate to persons with severe mental illness. *Research in Nursing & Health, 21*, 363-373.

Rose, L. E., Mallinson, K.R. & Gerson, D.L. (2006). Mastery, burden, and areas of concern among family caregivers of mentally ill persons. . *Archives of Psychiatric Nursing, 20*, 41-51.

Rose, L.E, Mallinson, R. K., & Watson-Moss, B. (2002). A grounded theory of families responding to mental illness. *Western Journal Nursing Research, 24*, 516-536.

Rosen, A., Hadzi-Pavlovic, D., & Parker, G. (1989). The life skills profile: A measure assessing function and disability in schizophrenia. *Schizophrenia Bulletin, 15*(2), 325-337.

Rosen, A., Hadzi-Pavlovic, D., Parker, G., & Trauer, T. (2006). *The Life Skills Profile: Background, Items and Scoring for the LSP-39, LSP-20 and the LSP-16.* Retrieved February 19, 2007, from Blackdog Institute Website: http://www.Blackdoginstitute.org.au/research/tools/index.cfm

Rosen, A., Trauer, T., Hadzi-Pavlovic, D., & Parker, G. (2001). Development of a brief form of the life skills profile: the LSP-20. *Australian and New Zealand Journal of Psychiatry, 35*, 677-683.

Rossler, W., Salize, H. J., Os, J. V., & Riecher-Rossler, A. (2005). Size of burden of schizophrenia and psychotic disorders. *European Neuropsychopharmacology, 15*, 399-409.

Rungkanchanasetr, S., Plitponkarnpim, A., Hetrakul, P., & Kongsakon, R. (2005). Youth risk behavior survey: Bangkok, Thailand. *Journal of Adolescent Health, 36*, 227-235.

Rungreangkulkij, S. (2000). *Experience of Thai families of a person with schizophrenia: family stress and adaptation.* Unpublished doctoral dissertation, The University of California San Francisco, San Francisco.

Rungreangkulkij, S., Chafetz, L., Chesla, C. A., & Gilliss, C. L. (2002). Psychological morbidity of Thai families of a person with schizophrenia. *International Journal of Nursing Studies, 39*(1), 35-50.

Rungreangkulkij, S., & Gillis, C. (2000). Conceptual approaches to studying family caregiving for persons with severe mental illness. *Journal of Family Nursing, 6*(4), 341-366.

Rutter, M. (2002). The interplay a nature, nurture and developmental influences: the challenge ahead of mental health. *Archives General Psychiatry*, 59, 996-1000.

Ryan, A. K. (1993). Mothers of adult children with schizophrenia: An ethnographic study *Schizophrenia Research 11*, 21-31.

Santati, S. (2005). *Asthma management abilities causal model: An empirical test among parent caregivers of the pre-school asthmatic children.* Unpublished Doctoral Dissertation, Mahidal University.

Saunders, J. C. (1999). Family functioning in families providing care for a family member with schizophrenia. *Issues in Mental Health Nursing, 20*(2), 95-113.

Saunders, J. C. (2003). Families living with severe mental illness: A literature review. *Issues in Mental Health Nursing, 24*, 175-198.

Saunders, J. C., & Byrne, M. M. (2002). A thematic analysis of families living with schizophrenia. *Psychiatric Nursing, 16*, 217-223.

Scahill, L. (1999). Child and adolescenct psychiatric nursing. In L. N. Keltner, H. L. Schwecke & E. C. Bostrom (Eds.), *Psychiatric Nursing* (3rd ed., pp. 616-637). St. Louis: Mosby.

Schieve, A.L., Blumberg, J.S., Rice, C., Visser, N.S., & Boyle, C. (2007). The relationship between autism and parenting stress. *Pediatrics*, 119(1), February, 114-121.

Scholler-Joquish, A. (2000). Persons with mental illness. In M. K. Fortinash & A. P. Holoday-Worret (Eds.), *Psychiatric Mental Health Nursing* (2nd ed., pp. 726-753). St. Louis: Mosby.

Schwartz, C., & Gidron, R. (2002). Parents of mentally ill adult children living at home: Rewards caregiving. *Health & Social Work, 27*, 145-154.

Seloilwe, S. E. (2006). Experiences and demands of families with mentally ill people at home in Botswana. *Journal of Nursing Scholarship Third Quarter*, 262-268.

Shatkin, P. J., & Belfer, L. M. (2004). The global absence of child and adolescent mental health policy. *Child and Adolescent Mental Health, 9*(3), 104-108.

Shannon, C.(1996). Dealing with stress: families and chronic illness. In L.C. Cooper, *Handbook of Stress, Medicine, and Health* (pp. 321-336).Florida:CRC Press, Inc.

Smith, M. D. (2001). HIV Risk in adolescents with severe mental illness: Literature review. *Journal of Adolescence Health, 29,* 320-329.

Solomon, P., & Draine, J. (1995). Subjective burden among family members of mentally ill adults: Relation to stress, coping, adaptation. *American Journal of Orthopsychiatry, 65*(3), 419-427.

Sombatkaew, U. (2002). *Perception of family functioning in amphetamine induce psychosis patient.* Unpublished an independent study in master degree in nursing science Chaing Mai University, Chaing Mai.

Song, L., Biegel, D. E., & Milligan, S. E. (1997). Predictor of depressive symptomatology among lower social class caregivers of persons with chronic mental illness. *Community Mental Health Journal, 33*(4), 269-286.

Sornpaisarn, B., Charusshing, A., & Boulek, A. (1998). The mental health survey by the time of economic crisis in Thailand. *Journal of Mental Health Thailand, 5*(1), 1-14.

Stephenson, C. (1999). Well-being of families with healthy and technology-assisted infants in the home: A comparative study. *Journal of Pedriatric Nursing, 14*(3), 164-170.

Stoep, V.A., Weiss, N.S., McKnight, B., Beresford, A.S., Cohen, P. (2002). Which measure of adolescent psychiatric disorder-diagnosis, number of symptoms, or adaptive functioning-best predicts adverse young adult outcome?. Journal *Epidemiol. Community Health*, 56, 56-65.

Suris, J.-C., Michaud, P.-A., & Viner, R. (2004). The adolescent with a chronic condition. Part I: developmental issues.

Suttiamnuaykul, W. (2002). *Measuring Family Functioning in Thailand: Developing the Thai Family Functioning Scale (TFFS) and Comparing Its Psychometric Properties to Those of the Thai Version of the Family Assessment Device (FAD).* Unpublished docteral dissertation, University of New York, Buffallo.

Svavarsdottir, E. K. (1997). *Family adaptation for families of an infant or young child with asthma.* Unpublished Doctoral Dissertation University of Wisconsin-Madison, Wisconsin.

Svavarsdottir, K.E. & Rayens, K.M. (2003). American and Icelandic parents' perceptions of the health status of their young children with chronic asthma. *Journal of Nursing Scholarship*, Forth quarter, 351-358.

Svavarsdottir, E. K., Rayen, M. K., & McCubbin, M. A. (2005). Predictors of adaptation in Iceland and American families of young children with chronic asthma. *Family & Community Health, 28*(4), 338-350.

Tepline, A. L., Elkington, S. K., McClelland, M. G., Abram, M. K., Mericle, A. A., & Washburn, J. J. (2005). Major disorders, substance use disorders, comorbidity, and HIV-AIDS risk behaviors in juvenile detainees *Psychiatric Services, 56*, 823-828.

Teschinsky, U. (2000). Living with schizophrenia: The family illness experience. *Issues in Mental Health Nursing, 21*, 387-396.

Thompson, R. J., Jr., Gil, K. M., Burbach, D. J., Keith, B. R., & Kinney, T. R. (1993). Psychological adjustment of mothers of children and adolescents with sickle cell disease: The role of stress, coping methods, and family functioning. *Journal of Pediatric Psychology, 18*(5), 549-559.

Thummathai, K. (2001). *Stress and coping patterns of primary caregivers of adolescent psychiatric patients.* Unpublished Master Thesis, Mahidol University, Bangkok.

Tohkani, M. (2005). *A comparative study of family fuction in family with adolescent psychiatric patient and family with healthy adolescent.* Unpublished Master Thesis, Mahidol University, Bangkok.

Trangkasombat, U. (1995). *Family therapy and family counseling*. Bangkok: Fungfa.

Trangkasombat, U. (2001). *Family therapy and fasmily counseling*. Bangkok: Family Research and Development Center.

Trangkasombat, U. (2006). Family functioning in the families of psychiatric patients: A comparison with nonclinical families. *Journal Medical Association Thai, 89*(11), 1946-1953.

Trangkasombat, U. (1997). *Psychopathology of family with Psychiatric patient.* Bangkok: Faculty of Medicine, Chulalongkorn University.

Tuck, I., Mont, D. P., Evans, G., & Shupe, J. (1997). The experience of caring for an adult child with schizophrenia. *Archives of Psychiatric Nursing, 11*(3), 118-125.

Tucker, C., Barker, A., & Gregoire, A. (1998). Living with schizophrenia: caring for a person with a severe mental illness. *Social Psychiatry Psychiatr Epidemiology, 33*, 305-309.

Van Riper, M. (1999). Maternal perceptions of family-provider relationships and well-being in families of children with Down syndrome. *Research in Nursing & Health, 22,* 357-368.

Van Riper, M. (2000). Family variables associated with well-being in sibling of children with Down syndrome. *Journal of Family Nursing, 6*(3), 267-286.

Van Riper, M. (2005). Factors influencing family function and the health of family members. In S. M. H. Hanson (Ed.), *Family Health Care Nursing: Theory, Practice, and Research* (pp. 123-145). Philadelphia: F.A. Davis Publishers.

Van Riper, M. (2007). Families of children with Down syndrome: Responding to "a change in plans" with resilience. *Journal of Pediatric Nursing,* 22, 116-128.

Walsh, F. (1996). The concept of family resilience: Crisis and challenge. *Family Process, 35*(3), 261-281.

Walsh, F. (2003a). *Changing families in a changing world: Reconstructing family normality*. New York: Guilford.

Walsh, F. (2003b). Family resilience: A framework for clinical practice. *Family Process, 42*(1), 1-18.

Waltz, C., Strickland, O., & Lenz, E. (2005). *Measurement in nursing research* (4th ed.). Philadelphia: F.A. Davis.

Watkins, P. (2001). *The working alliance with families and carers*. Oxford: Butterworth-Heinemann.

Welcher, J.T. (1997). *Factors Influencing Family Adaptation in Families of Deaf Children.* Unpublished Doctoral Dissertation, The Graduate College, University of Nebraska.

Wood, S. J. (2003). Working with the family. In L. N. Keltner, H. L. Schweeke & E. C. Bostrom (Eds.), *Psychiatric Nursing* (4thed., pp. 153-164). St.Louis: Mosby, Inc.

Woods, F. N., Haberman, R. M., & Packard, J. N. (1993). Demands of illness and individual, dyadic, and family adaptation in chronic illness. *Western Journal Nursing Research, 15*(1), 10-30.

Woods, N. F., Haberman, M. R., & Packard, N. J. (1987). Demands of illness inventory: partner version: Fred Hutchinson Cacer Research Center: Seattle, Washington.

World Health Organization. (1992). *International Staistical Classification of Diseases and Health Related Problems-ICD* (Tenth Revision ed.). Geneva: WHO.

World Health Organization. (2003a). *Caring for children and adolescents with mental disorders: setting WHO directions*. Geneva: World Health Organization Publication.

World Health Organization. (2003b). Family and health: 44th directing council 55th session of the reginal committee (pp. 1-18). Washington, D.C.: Pan American Organization: Reginal Office of the World Health Organization.

World Health Organization. (2005a). *Atlast: child and adolescent mental health resources: Global concerns, implication for the future.* . Geneva: World Health Organization, World Psychiatric Association, International Association for Child and Adolescent Psychiatry and Allied profession.

World Health Organization. (2005b). *Child and adolescent mental health policies and plans*. Geneva: World Health Organization.

Wright, L., & Leahey, M. (2005). *Nurses and Families: A Guide to Famiy Assessment and Intervention* (4th ed.). Philadelphia, PA.: F.A. Davis.

APPENDICES

APPENDIX A
INSTRUMENTS

Personal Profile of Participant

แบบบันทึกข้อมูลทั่วไป

คำชี้แจง: กรุณาทำเครื่องหมาย √ หรือกรอกข้อมูลลงในช่องว่างที่กำหนดในแต่ละข้อคำถามต่อไปนี้ให้สมบูรณ์

<u>ตอนที่ 1</u> ข้อมูลทั่วไปของผู้ดูแล

1. ปัจจุบันท่านอายุ.....ปี
2. เพศ ☐ หญิง ☐ ชาย
3. นับถือศาสนา ☐ พุทธ ☐ คริสต์
   ☐ อิสลาม ☐ อื่นๆระบุ.....
4. สถานภาพการสมรส ☐ สมรสอยู่ด้วยกัน ☐ สมรสไม่อยู่ด้วยกัน
   ☐ หย่า ☐ หม้าย
   ☐ โสด ☐ อื่นๆ ระบุ.....

.<u>ตอนที่ 2</u> ข้อมูลทั่วไปของผู้ป่วย (จากแฟ้มประวัติของผู้ป่วย)

1. ปัจจุบันผู้ป่วยมีอายุ.....ปี.....เดือน
2. เพศ ☐ หญิง ☐ ชาย

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. 3. จำนวนครั้งที่ผู้ป่วยจะต้องเข้ารับการรักษาในโรงพยาบาล.....ครั้ง (ตั้งแต่ได้รับการวินิจฉัย)

4. ผู้ป่วยได้รับการวินิจฉัย.....

The Thai Family Stress Inventory (TFSI)

แบบวัดความเครียดในครอบครัว

คำชี้แจง: แบบวัดนี้มีวัตถุประสงค์เพื่อสอบถามการเปลี่ยนแปลงในชีวิตครอบครัวของท่านว่ามีเหตุการณ์นั้นๆ เกิดขึ้นกับสมาชิกในครอบครัวของท่าน หรือตัวท่านหรือไม่ **ในระหว่าง 1 ปีที่ผ่านมา** แล้วทำเครื่องหมาย √ ในช่องคำตอบที่ตรงกับลักษณะภายในครอบครัวของท่านมากที่สุดเพียงข้อเดียวเท่านั้น (ข้อคำถามรวมทั้งหมด 15 ข้อ)

ไม่ตรงเลย หมายถึง ข้อความนั้นไม่ตรงกับสภาพครอบครัวของท่านเลย
ตรงเล็กน้อย หมายถึง ข้อความนั้นตรงกับสภาพครอบครัวของท่านเล็กน้อย
ตรงปานกลาง หมายถึง ข้อความนั้นตรงกับสภาพครอบครัวของท่านปานกลาง
ตรงมากที่สุด หมายถึง ข้อความนั้นตรงกับสภาพครอบครัวของท่านมากที่สุด

ลำดับที่	ข้อความ	ไม่ตรงเลย	ตรงเล็กน้อย	ตรงปานกลาง	ตรงมากที่สุด
1	สมาชิกในครอบครัวมีปัญหาเกี่ยวกับหน้าที่การงาน/กิจการส่วนตัว/เพื่อนร่วมงาน				
2	สมาชิกในครอบครัวไม่มีงานทำ/กำลังหางานทำ				
3	มีปัญหาค่าใช้จ่ายในครอบครัว				
4	สมาชิกในครอบครัวมีปัญหาเกี่ยวกับการเรียน/การสอบ				
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12	มีความขัดแย้งระหว่างสมาชิกในครอบครัว				
13	สมาชิกในครอบครัวเข้าใจโรคและอาการของผู้ป่วยไม่ตรงกัน				
14	สมาชิกในครอบครัวมีพฤติกรรมที่ก่อให้เกิดปัญหาทางกฎหมาย				
15	สมาชิกในครอบครัวใช้ยา/สารเสพติด (เช่น บุหรี่, เหล้า ฯลฯ)				

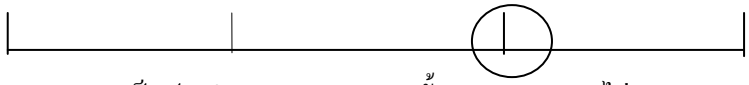
The Life Skills Profile- 20 (LSP-20)

แบบวัดทักษะชีวิตของผู้ป่วย

คำชี้แจง: กรุณาให้ความเห็นว่า ข้อความข้างล่างนี้ ตรงกับพฤติกรรมโดยทั่วไปของผู้ป่วย **ในระหว่าง 3 เดือนที่ผ่านมา** แต่ไม่ใช่ในระหว่างที่ผู้ป่วยอยู่ในระยะฉุกเฉินหรือเริ่มป่วย ให้ตอบโดยวงกลมตรงรายละเอียดที่เหมาะสม

ตัวอย่าง:

ถ้าท่านพิจารณาถึงพฤติกรรมของผู้ป่วย โดยทั่วไปผู้ป่วยแสดงพฤติกรรมนี้ ‘‘นานๆครั้ง’’ท่านควรจะต้องวงกลมตามข้างล่างนี้



ตลอดเวลา เป็นประจำ นานๆครั้ง ไม่เลย

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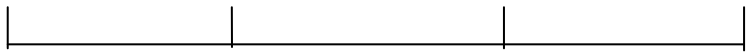
1. ผู้ป่วยมีปัญหาเกี่ยวกับการเริ่มต้นการสนทนาและการโต้ตอบในการสนทนาหรือไม่?

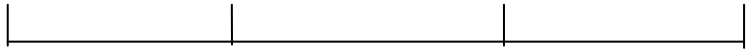


ไม่มีปัญหาในการสนทนา	มีปัญหาเกี่ยวกับการสนทนาเล็กน้อย	มีปัญหาเกี่ยวกับการสนทนาปานกลาง	มีปัญหาเกี่ยวกับการสนทนามาก

2. ผู้ป่วยแยกตัวจากการมีสัมพันธภาพทางสังคมมากน้อยเพียงใด?

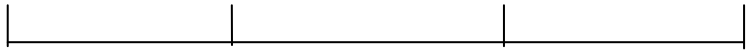
ไม่มีการแยกตัวแม้แต่น้อย	มีการแยกตัวเพียงเล็กน้อย	แยกตัวปานกลาง	แยกตัวค่อนข้างมากหรือแยกตัวเด็ดขาด

3. ผู้ป่วยมีปฏิสัมพันธ์กับคนอื่นอบอุ่นหรือไม่?



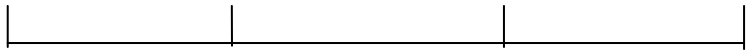
ค่อนข้างอบอุ่น อบอุ่นปานกลาง อบอุ่นเล็กน้อย ไม่อบอุ่นเลย

19. ผู้ป่วยมีความรับผิดชอบต่อบทบาทหน้าที่ของตนในครอบครัว และในหน้าที่การงาน หรือการเรียนหรือไม่?



มีบ่อยครั้ง มีเป็นบางครั้ง แทบจะไม่มี ไม่มีเลย

20. ผู้ป่วยสร้างและ/หรือรักษาสัมพันธภาพกับผู้อื่นหรือไม่?



สร้างหรือรักษาสัมพันธภาพกับผู้อื่นเป็นอย่างดี

มีปัญหาเล็กน้อยในการสร้างหรือรักษาสัมพันธภาพกับผู้อื่น

ค่อนข้างมีปัญหาในการสร้างหรือรักษาสัมพันธภาพกับผู้อื่น

ไม่มีการสร้างหรือรักษาสัมพันธภาพกับใคร

The Chulalongkorn Family Inventory (CFI)

แบบวัดการทำหน้าที่ของครอบครัว

คำชี้แจง: แบบวัดนี้มีวัตถุประสงค์เพื่อสอบถามความรู้สึกที่ครอบครัวของท่านมองเหตุการณ์ต่างๆที่เกิดขึ้นภายในครอบครัว โดยให้ท่านพิจารณาข้อความในแต่ละข้อว่า อธิบายเกี่ยวกับครอบครัวของท่านมากน้อยเพียงใด แล้วทำเครื่องหมาย √ ในช่องคำตอบที่ตรงกับลักษณะภายในครอบครัวของท่านมากที่สุดเพียงช่องเดียวเท่านั้น (ข้อคำถามรวมทั้งหมด 36 ข้อ)

ไม่ตรงเลย หมายถึง ข้อความนั้นไม่ตรงกับสภาพครอบครัวของท่านเลย
ตรงเล็กน้อย หมายถึง ข้อความนั้นตรงกับสภาพครอบครัวของท่านเล็กน้อย
ตรงปานกลาง หมายถึง ข้อความนั้นตรงกับสภาพครอบครัวของท่านปานกลาง
ตรงมากที่สุด หมายถึง ข้อความนั้นตรงกับสภาพครอบครัวของท่านมากที่สุด

ลำดับที่	ความคิดเห็น	ไม่ตรงเลย	ตรงเล็กน้อย	ตรงปานกลาง	ตรงมากที่สุด
1.	สมาชิกในครอบครัวช่วยกันแก้ไขปัญหาส่วนใหญ่ที่เกิดขึ้นในบ้านได้				
2.	มีการพูดคุยกันเสมอว่า วิธีการแก้ปัญหาที่ทำไปนั้นได้ผลหรือไม่				
3.	เมื่อคุณขอให้คนในครอบตรัวทำอะไรให้คุณมักไม่แน่ใจว่าเขาจะทำให้หรือเปล่า				
4	ครอบครัวของคุณแสดงความรักใคร่เอ็นดูต่อกัน				
33	ผู้ใหญ่ในครอบครัวออกคำสั่ง หรือควบคุมเด็กมากเกินไป				
34	คุณระบายความทุกข์ใจให้คนในครอบครัวฟังได้				
35	ครอบครัวของคุณให้ความสำคัญต่อความรู้สึกของสมาชิก				
36	ในครอบครัวของคุณมีความรู้สึกที่ไม่ดีเกิดขึ้นมากมาย				

The Demands of Illness Inventory (DOII)

แบบวัดการให้ความหมายต่อการเจ็บป่วยของสมาชิกในครอบครัว

คำชี้แจง: แบบวัดนี้มีวัตถุประสงค์เพื่อสอบถามการให้ความหมายของครอบครัวของท่านที่มองการเจ็บป่วยของสมาชิกในครอบครัว โดยให้ท่านพิจารณาข้อความในแต่ละข้อว่า อธิบายเกี่ยวกับครอบครัวของท่านถูกต้องมากน้อยเพียงใด แล้วทำเครื่องหมาย √ ในช่องคำตอบที่ตรงกับลักษณะภายในครอบครัวของท่านมากที่สุดเพียงข้อเดียวเท่านั้น (ข้อคำถามรวมทั้งหมด 19 ข้อ)

ไม่ตรงเลย หมายถึง ครอบครัวของท่านไม่เคยมีความคิดตรงกับข้อความนี้เลย

ตรงเล็กน้อย หมายถึง ครอบครัวของท่านมีความคิดตรงกับข้อความนั้นบ้าง

ตรงปานกลาง หมายถึง ครอบครัวของท่านมีความคิดตรงกับข้อความนั้นปานกลาง

ตรงมากที่สุด หมายถึง ครอบครัวของท่านมีความคิดตรงกับข้อความนั้นมากที่สุด

ผลจากการเจ็บป่วยของ.....ทำให้ครอบครัวของฉันคิดถึง

ลำดับที่	ข้อความ	ไม่ตรงเลย	ตรงเล็กน้อย	ตรงปานกลาง	ตรงมากที่สุด
1.	ฉันและสมาชิกในครอบครัวจะมีชีวิตอยู่อีกนานเท่าไหร่				
2.	จัดลำดับความสำคัญของสิ่งต่างๆในชีวิตของฉันและสมาชิกในครอบครัวใหม่				
3	ฉันและสมาชิกในครอบครัวไม่ได้รับการเตรียมตัวต่อประสบการณ์เช่นนี้มาก่อน				
4.	ความไม่แน่นอนที่ฉันและครอบครัวต้องเผชิญ				
15	คิดว่าชาวบ้านรังเกียจครอบครัวของฉันที่มีสมาชิกป่วยเป็นโรคทางจิตใจ				
16	รู้สึกว่าผู้ป่วยเป็นภาระต่อครอบครัว				
17	ฉันหรือสมาชิกคนอื่นๆในครอบครัวมีความเบื่อหน่ายต่อสมาชิกที่ป่วยเป็นโรคทางจิตใจ				
18	ฉันและครอบครัวของฉันอยากให้ผู้ป่วยอยู่ในโรงพยาบาลต่อไป				
19	ฉันคิดว่าสมาชิกในครอบครัวของฉันที่ป่วยจะหายเป็นปกติ				

The Family Hardiness Index (FHI)

แบบวัดความเข้มแข็งของครอบครัว

คำชี้แจง: แบบวัดนี้มีวัตถุประสงค์เพื่อสอบถามวิธีที่ครอบครัวของท่านมองเหตุการณ์ต่างๆ ที่เกิดขึ้นภายในครอบครัว โดยให้ท่านพิจารณาข้อความในแต่ละข้อว่า อธิบายเกี่ยวกับครอบครัวของท่านถูกต้องมากน้อยเพียงใด แล้วทำเครื่องหมาย √ ในช่องคำตอบที่ตรงกับลักษณะภายในครอบครัวของท่านมากที่สุดเพียงข้อเดียวเท่านั้น (ข้อคำถามรวมทั้งหมด 20 ข้อ)

ผิด หมายถึง ข้อความนั้นไม่ตรงกับสภาพครอบครัวของท่านเลย
ผิดเกือบทั้งหมด หมายถึง ข้อความนั้นตรงกับสภาพครอบครัวของท่านเล็กน้อย
ถูกเกือบทั้งหมด หมายถึง ข้อความนั้นตรงกับสภาพครอบครัวของท่านปานกลาง
ถูก หมายถึง ข้อความนั้นตรงกับสภาพครอบครัวของท่านมากที่สุด

ลำดับที่	ในครอบครัวของเรา.....	ผิด	ผิดเกือบทั้งหมด	ถูกเกือบทั้งหมด	ถูก
1	ปัญหาที่เกิดขึ้นเป็นผลมาจากความผิดพลาดที่ครอบครัวเราทำ				
2	ไม่มีการวางแผนล่วงหน้าและตั้งความหวังไว้เพราะถึงอย่างไรทุกสิ่งทุกอย่างก็เปลี่ยนแปลงไม่ได้				
3	ไม่ว่าครอบครัวเราพยายามหรือทำงานหนักเพียงใด งานและความพยามของครอบครัวเรามักไม่ได้รับความชื่นชม				
4	ในระยะยาวสิ่งที่ไม่ดีที่เกิดขึ้นกับครอบครัวเราจะถูกทำให้สมดุล ด้วยความดีที่เกิดขึ้น				
17	การกระตือรือร้นได้เรียนรู้สิ่งใหม่ๆเป็นสิ่งที่น่าส่งเสริม				
18	แก้ปัญหาร่วมกัน				
19	สิ่งที่ทำให้หมดความสุขส่วนใหญ่เกิดขึ้นจากโชคไม่ดี				
20	รู้สึกว่าความบังเอิญหรือโชคชะตาเป็นตัวกำหนดชีวิตของเรา				

The Family Adaptation Scale (FAS)

แบบวัดการปรับตัวของครอบครัว

คำชี้แจง: แบบวัดนี้มีวัตถุประสงค์เพื่อสอบถามระดับความพึงพอใจของท่านต่อเหตุการณ์ต่างๆที่เกิดขึ้นภายในครอบครัว โปรดพิจารณาข้อความในแต่ละข้อว่า ท่านมีระดับความพึงพอใจในระดับใดที่ท่านรู้สึก หากระดับความพึงพอใจตรงกับระดับใด โปรดวงกลมตัวเลขที่ตรงกับระดับความพึงพอใจของท่านมากที่สุด เพียงตัวเลขเดียวเท่านั้น (ข้อคำถามรวมทั้งหมด 11 ข้อ)

ตัวอย่าง

พึงพอใจน้อยมาก 1 2 3 4 5 6 (7) พึงพอใจมากที่สุด

หมายเลข 7 หมายถึงท่านรู้สึกพึงพอใจมากที่สุด

1.ท่านพึงพอใจในการเป็นสมาชิกของครอบครัว

พึงพอใจน้อยมาก 1 2 3 4 5 6 7 พึงพอใจมากที่สุด

2.ท่านพึงพอใจใน การอบรมเลี้ยงดูเด็ก เช่น การได้รับการศึกษาม ความประพฤติม การทำกิจกรรม

พึงพอใจน้อยมาก 1 2 3 4 5 6 7 พึงพอใจมากที่สุด

10. ท่านพึงพอใจในท่าที/ หนทางที่ครอบครัวเข้าไปช่วยเหลือเกี่ยวข้องกับความต้องการม ความคาดหวังและแผนการดำเนินชีวิตของสมาชิกทุกคนในครอบครัว

พึงพอใจน้อยมาก 1 2 3 4 5 6 7 พึงพอใจมากที่สุด

11. ให้ท่านคิดถึงครอบครัวในอุดมคติของท่าน ที่ปรับตัวได้ดี/ สมบูรณ์ ครอบครัวของท่าน ณ ขณะนี้ ระดับคะแนนการปรับตัวเป็นเท่าไร จากมารตวัด 1-7 เมื่อเปรียบเทียบกับครอบครัวในอุดมคติ

ไม่ปรับตัวเลย 1 2 3 4 5 6 7 ปรับตัวมากที่สุด

APPENDIX B
LISTS OF EXPERTS FOR TRANSLATION AND BACK-TRANSLATION PROCESS

The Life Skill Profile- 20

1. Associate Professor Dr. Yajai Sitthimongkol
   Associate Dean for Graduate Studies and International Relations
   Faculty of Nursing, Mahidol University
2. Dr. Atittaya Pornchaikate-Au-Yeong
   Faculty of Nursing, Mahidol University
3. Dr. Wannapa Suttiamnuaykul
   Faculty of Nursing, Mahidol University
4. Mr. Pete Hall
   Language Center Graduate Study, Mahidol University

The Family Adaptation Scale

1. Assistant Professor Dr. Usavadee Asdornwised
   Faculty of Nursing, Mahidol University
2. Assistant Professor Dr. Supinda Ruangjiratian
   Faculty of Nursing, Mahidol University
3. Mr. Pete Hall
   Language Center Graduate Study, Mahidol University

APPENDIX C
LISTS OF EXPERTS FOR CONTENT VALIDITY

1. Associate Professor Dr. Orapan Lueboonthavatchai
   Faculty of Nursing, Chulalongkorn University
2. Assistant Professor Dr. Prapha Yuttrai
   Department of Mental Health and Psychiatric Nursing
   Faculty of Nursing, Mahidol University
3. Associate Professor Dr. Sucheera Pattharayuttawat
   Department of Psychiatry, Faculty of Medicine,
   Siriraj Hospital, Mahidol University
4. Associate Professor Dr. Somporn Rungreangkulkij
   Department of Mental Health and Psychiatric Nursing
   Faculty of Nursing, Khon Kaen University
5. Associate Professor Dr. Pattaraporn Tungpunkhum
   Psychiatric Nursing Department
   Faculty of Nursing, Chiang Mai University

APPENDIX D

INSTITUTIONAL REVIEW BOARD APPROVAL

COA. No. MU-IRB 2008/154.0711

Documentary Proof of Mahidol University Institutional Review Board

Title of Project. Adaptation of Family with Mentally Ill Adolescents
(Thesis for Ph.D.)

Principle Investigator. Miss Siriorn Puasiri

Name of Institution. Faculty of Nursing

Approval includes. 1) MU-IRB Submission form version received date 3 October 2008
2) Participant Information sheet version date 7 November 2008
3) Informed consent form version date 7 November 2008
4) Questionnaire version received date 3 October 2008

Mahidol University Institutional Review Board is in full compliance with International Guidelines for Human Research Protection such as Declaration of Helsinki, The Belmont Report, CIOMSGuidelines and the International Conference on Harmonization in Good Clinical Practice (ICH-GCP)

Date of Approval. 7 November 2008

Date of Expiration. 6 November 2009

Signature of Chairman. .....
(Professor Rutja Phuphaibul)
Vice Chair for Chair

Signature of Head of the Institute. .....
(Associate Professor Sansanee Chaiyaroj)
Vice President for Research and Academic Affairs

Office of the President, Mahidol University, 999 Phuttamonthon 4 Rd., Salaya, Phuttamonthon District, Nakhon Pathom 73170. Tel. (662) 8496223-5 Fax. (662) 8496223

Documentary Proof of Mahidol University Institutional Review Board

This document is a record of review and approval/acceptance of a study protocol

Protocol Title. Adaptation of Family with Mentally Ill Adolescents

Protocol No.. 2008/191.0310

Type of approval/acceptance. Protocol Amendment

1) MU-IRB Submission form version received date 24 March 2009
2) Participant Information Sheet for Family version date 24 March 2009
3) Participant Information Sheet for Patient version date 24 March 2009
4) Informed Consent Form for Patient version date 24 March 2009
5) Informed Consent Form for Family version date 24 march 2009

Principle Investigator. Miss Siriorn Puasiri

Date of Approval. 26 March 2009

Mahidol University Institutional Review Board is in full compliance with International Guidelines for Human Research Protection such as Declaration of Helsinki, The Belmont Report, CIOMSGuidelines and the International Conference on Harmonization in Good Clinical Practice (ICH-GCP)

(Professor Shusee Visalyaputra)
Chairperson

26 March 2009
Date

Office of the President, Mahidol University, 999 Phuttamonthon 4 Rd., Salaya, Phuttamonthon District, Nakhon Pathom 73170. Tel. (662) 8496223-5 Fax. (662) 8496223

Certificate of Approval

No.363/2008

Name of Ethics Committee : Research Ethics Committee 3,
Faculty of Medicine, Chiang Mai University
Address of Ethics Committee : 110 Intavaroros Rd., Amphoe Muang,Chiang Mai, Thailand 50200

Principal Investigator : Siriorn Puasiri
Faculty of Nursing, Mahidol University.

Protocol title: Adaptation of Family with Mentally Ill Adolescents
Study code : 08OCT131123
Sponsor : -

Documents filed	Document reference
Research protocol	- Version date 4 November 2008
Informed consent documents / Patient information sheet	- Version date 4 November 2008
Case Report Form	- Version date 4 November 2008
Principal Investigator Curriculum vitae	- Version date 4 November 2008

Opinion of the Ethics Committee/Institutional Review Board : PLS. CHECK ONE

__✓__ Approval

_____ Conditional approval (Specify on space below)

.....

DECISION : By expedited review process

Date of Approval : November 4 , 2008 **Expiration Date:** May 3 , 2009

This Ethics Committee is organized and operates according to GCPs and relevant international ethical guidelines, the applicable laws and regulations.

Signed : .....

(Emeritus Professor Panja Kulapongs, M.D.)

Chairperson, Faculty of Medicine

Signed : .....

(Associate Professor Niwes Nantachit, M.D.)

Dean, Faculty of Medicine

โรงพยาบาลพระศรีมหาโพธิ์

แบบรายงานผลการพิจารณาด้านจริยธรรมการศึกษาวิจัยในมนุษย์

ชื่อโครงการวิจัย .....Adaptation of family with mentally ill adolescents.....

เจ้าของการวิจัย / ผู้ขออนุมัติศึกษาวิจัย ....น.ส.สิริอร พัวศิริ .....

ผลการพิจารณา

☑ อนุมัติ (โดยไม่มีเงื่อนไข)

☐ อนุมัติโดยมีเงื่อนไข ให้ปรับปรุงแก้ไข ในประเด็น

.....

.....

☐ ให้ปรับปรุงแล้วนำเสนอเพื่อพิจารณาใหม่ ยังไม่อนุมัติ

☐ ไม่อนุมัติ

ลงนาม .....

(นายแพทย์ธรณินทร์ กองสุข)

ประธานคณะกรรมการจริยธรรมการวิจัยในโรงพยาบาลพระศรีมหาโพธิ์

บันทึกข้อความ

ส่วนราชการ คณะกรรมการด้านการวิจัยโรงพยาบาลศรีธัญญา โทร ๒๑๓๑

ที่ สธ. ๐๘๐๗.๒๐๒ / ๐๓๒ **วันที่** ๒๗ มีนาคม ๒๕๕๒

เรื่อง การแจ้งผลการพิจารณางานวิจัยที่ขอดำเนินการเก็บข้อมูลเพื่อการวิจัยในโรงพยาบาลศรีธัญญา

เรียน นางสาวสิริอร พัวศิริ

ตามหนังสือเลขที่ ศธ ๐๕๑๗.๐๒ (ศย) / ๐๑๓๑ ลงวันที่ ๒๐ กุมภาพันธ์ พ.ศ.๒๕๕๒ จากบัณฑิตวิทยาลัย มหาวิทยาลัยมหิดล ได้ขอความอนุเคราะห์ให้ นางสาวสิริอร พัวศิริ นักศึกษาปริญญาเอก สาขาวิชาการพยาบาล (หลักสูตรนานาชาติ) ซึ่งอยู่ระหว่างการทำวิทยานิพนธ์เรื่อง Adaptation of family with mentally ill adolescents โดย

- ☐ อยู่ระหว่างรอการพิจารณาจากคณะกรรมการวิจัยในคน ของกระทรวงสาธารณสุข
- ☑ ผ่านการพิจารณาจากคณะกรรมการวิจัยในคน ของมหาวิทยาลัยมหิดลแล้ว
- ☐ ไม่ต้องผ่านการอนุมัติการทำวิจัยในคน ของกระทรวงสาธารณสุข

บัดนี้ คณะกรรมการด้านการวิจัยโรงพยาบาลศรีธัญญาขอแจ้งว่าเรื่องของ นางสาวสิริอร พัวศิริ ได้ผ่านการพิจารณาจากคณะกรรมการด้านการวิจัยโรงพยาบาลศรีธัญญาเมื่อวันที่ ๒๖ มีนาคม ๒๕๕๒ โดยคณะกรรมการฯ มีมติดังนี้

☑ อนุญาต โดยมีข้อเสนอแนะ/เงื่อนไข ดังนี้.....

๑. ขอให้ทบทวนเรื่องการใช้สถิติที่ใช้ในการคำนวณขนาดของตัวอย่างและวิเคราะห์ข้อมูลอีกครั้ง

๒. ให้ดำเนินการเก็บรวบรวมข้อมูลเป็นเวลา ๑ ปี (๒๖ มีนาคม ๒๕๕๒ ถึง ๒๕ มีนาคม ๒๕๕๓)

๓. ผู้วิจัยดำเนินการเก็บรวบรวมข้อมูลด้วยตนเอง โดยประสานงานกับหน่วยงานที่เกี่ยวข้อง นำเอกสารแจ้งผลการพิจารณานี้ แสดงต่อหน่วยงานที่ท่านต้องการเข้าเก็บรวบรวมข้อมูลก่อนดำเนินการ

๔. หลังจากดำเนินการศึกษาวิจัยเสร็จเรียบร้อยแล้ว กรุณาส่งเอกสารฉบับสมบูรณ์จำนวน ๑-๒ เล่ม ที่กลุ่มงานพัฒนางานวิจัย โรงพยาบาลศรีธัญญาเพื่อเผยแพร่ต่อไป

๕. คณะกรรมการวิจัยฯ มีอำนาจหน้าที่ในการกำกับ / ติดตามการดำเนินการวิจัยให้เป็นไปตามจริยธรรมการทำวิจัยในมนุษย์

☐ ไม่อนุญาต เนื่องจาก.....

ลงนาม.....

(แพทย์หญิงอรวรรณ ศิลปกิจ)

ประธานคณะกรรมการด้านการวิจัยฯ

วันที่ ๒๗ มีนาคม ๒๕๕๒

เอกสารเลขที่ 13/2552

คณะกรรมการจริยธรรมการวิจัยในคน
โรงพยาบาลสวนปรุง

โครงการวิจัย : การปรับตัวของครอบครัวที่มีวัยรุ่นป่วยด้วยโรคทางจิตเวช
Adaptation of Family with Mentally III Adolescents

ผู้ดำเนินการวิจัยหลัก : นางสาวสิริอร พัวศิริ

สถานที่ดำเนินการวิจัย : โรงพยาบาลสวนปรุง

เอกสารที่พิจารณา :

1. โครงร่างการวิจัย เรื่อง การปรับตัวของครอบครัวที่มีวัยรุ่นป่วยด้วยโรคทางจิตเวช
   Adaptation of Family with Mentally III Adolescents

คณะกรรมการจริยธรรมการวิจัยในคนโรงพยาบาลสวนปรุง ได้พิจารณาโครงการวิจัยแล้ว คณะกรรมการฯ พิจารณาในแง่จริยธรรมให้ดำเนินการศึกษาวิจัยเรื่องข้างต้นได้ ทั้งนี้โดยยึดตามเอกสารโครงการวิจัยเป็นหลัก

.....ประธานคณะกรรมการ
(นายปริทรรศ ศิลปกิจ)

.....ผู้อำนวยการโรงพยาบาลสวนปรุง
(นายสุวัฒน์ มหัตนิรันดร์กุล)

ที่ สธ ๐๘๑๒/ ๑๔๘๒

โรงพยาบาลสวนสราญรมย์
อ.พุนพิน จ.สุราษฎร์ธานี
๘๔๑๓๐

๒๒ เมษายน ๒๕๕๒

เรื่อง ผลการพิจารณาจริยธรรมการวิจัย

เรียน คณบดีบัณฑิตวิทยาลัย มหาวิทยาลัยมหิดล

อ้างถึง หนังสือที่ ศธ ๐๕๑๗.๐๒ (ศย) /๐๑๒๕ ลงวันที่ ๒๐ กุมภาพันธ์ ๒๕๕๒

สิ่งที่ส่งมาด้วย เอกสารโครงการวิจัย จำนวน ๑ ชุด

ตามหนังสือที่อ้างถึง บัณฑิตวิทยาลัย มหาวิทยาลัยมหิดล แจ้งความประสงค์ขอความอนุเคราะห์ให้ นางสาวสิริอร พัวศิริ นักศึกษาหลักสูตรปริญญาเอก สาขาวิชาการพยาบาล (หลักสูตรนานาชาติ) โครงการร่วม คณะแพทยศาสตร์โรงพยาบาลรามาธิบดี คณะพยาบาลศาสตร์ เก็บข้อมูลเพื่อประกอบการทำวิทยานิพนธ์ เรื่อง "ADAPTATION OF FAMILY WITH MENTALLY ILL ADOLESCENTS" ตั้งแต่วันที่ ๑๖ กุมภาพันธ์ ๒๕๕๒ ถึงวันที่ ๓๑ พฤษภาคม ๒๕๕๒ ณ โรงพยาบาลสวนสราญรมย์ ความละเอียดแจ้งแล้วนั้น

โรงพยาบาลสวนสราญรมย์ได้พิจารณาอนุเคราะห์ให้ นางสาวสิริอร พัวศิริ เก็บข้อมูลวิจัยเพื่อนำไปประกอบการทำวิทยานิพนธ์เรื่องดังกล่าว ดังรายละเอียดจากการพิจารณาจริยธรรมการวิจัย ตามเอกสารแนบท้าย

จึงเรียนมาเพื่อโปรดทราบ

ขอแสดงความนับถือ

(นายเจน บุญไพรัตน์สกุล)
ผู้อำนวยการศูนย์สุขภาพจิตที่ ๑๑ รักษาราชการแทน
ผู้อำนวยการโรงพยาบาลสวนสราญรมย์

กลุ่มพัฒนาวิชาการ
โทร ๐-๗๗๓๑-๑๓๐๘ ต่อ ๒๐๕๔ และ ๒๑๘๖
โทรสาร ๐-๗๗๓๑-๑๘๔๔, ๐-๗๗๒๔-๐๕๖๕

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