PERCEIVED STRESS' SPOUSAL SUPPORT, EMOTION REGULATION,
SUBJECTIVE WELL-BEING, AND MARITAL SATISFACTION
AMONG THAI FIRST-TIME PARENTS

Juntita Watcharakitipong

A Dissertation Submitted in Partial Fulfillment
of the Requirements for the Degree of

DOCTOR OF PHILOSOPHY IN COUNSELING PSYCHOLOGY

Graduate School of Psychology
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August 2016

The main purpose of the current study was to examine the direct and indirect influences of perceived stress and spousal support on marital satisfaction, being mediated by emotion regulation strategies and subjective well – being, among Thai first – time parents.

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ABSTRACT

Parenthood is new to first-time parents. While it brings excitement, hope, and joy, being a parent for the first time also brings stress and challenges as a result of the new roles and responsibilities that 'first-timers' have to confront during the early years of being parents. The current investigation attempted to examine the direct and indirect influences of perceived stress and spousal support on marital satisfaction, being mediated by emotion regulation strategies (cognitive reappraisal, expressive suppression) and subjective well-being (positive affect, negative affect, life satisfaction) among Thai first-time parents. Three separate but interrelated studies (Study I, II, and III) were conducted, each with its own objectives and methodology, to meet the purposes of the present research. In Study I and II, a total of 559 first-time parents with one child (or twin) aged no more than two years-old and living in Bangkok and suburbs participated. They were asked to complete a set of survey questionnaires in Thai, consisting of a demographic section, the Perceived Stress Scale, the Multidimensional Scale of Perceived Social Support-Significant Others subscale, the Emotion Regulation Questionnaire, the Positive and Negative Affect Schedule, the Satisfaction With Life Scale, and the Couples Satisfaction Index. Study III involved 58 first-time parents (N=28 in experimental group; N=30 in control group) in a skills training intervention program based on cognitive reappraisal strategies and effective communication skills to enhance the parents' levels of marital satisfaction and subjective well-being. The results revealed that the 'direct' path model is significantly better fitting and more parsimonious than the indirect or full path models, and that the structural path relationships between the variables operated differently for first-time fathers and mothers. On the whole, perceived stress and spousal support directly and indirectly influenced marital satisfaction. Additionally, emotion regulation played different roles between fathers and mothers. Finally, the intervention program proved effective in increasing marital satisfaction among Thai first-time parents.

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CHAPTER I

Introduction

Background of the Study

Children are parents' source of fulfillment and happiness. A large number of studies have attempted to discover the relationship between parenthood and happiness or well-being. By being mothers or fathers, parents report better mental health and lower distress (McKenzie & Carter, 2013; Nelson, Kushlev, English, Dunn, & Lyubomirsky, 2013). From a study of nationally representative sample of U.S. respondents in 1982, 1990, 1995, and 1999 between parents and nonparents, the results showed that parents are happier, more satisfied with life, and thinking more often about their meaning in life (Nelson et al., 2013). The folk theories that giving birth to a child and becoming a parent is one of the most precious role that many people expect to have, and that being childless is unfulfilling and lonely still receive strong support especially in non-Western societies (Hansen, 2012).

While it is true that having a child is a gift that most people expect, many studies found that parenthood does not only bring joy and happiness, but it also brings *stress* and challenge (e.g., Evenson & Simon, 2005; Nomaguchi & Milkie, 2003; Rizzo & Schiffrin, 2013; Twenge, Campbell, & Foster, 2003). A national survey of families and households involving parents and nonparents revealed that parents reported higher levels of depression than nonparents, especially those who have young children (Evenson & Simon, 2005). On a related note, Rizzo and Schiffrin (2013) demonstrated that specific ways of parenting were related to parents' level of *subjective well-being*. For example, mothers who believe that they are the most capable caregivers or who think that parenting is challenging reported higher levels of distress and lower levels of life satisfaction than mothers who

held other types of beliefs in intensive mothering. Furthermore, some parents reported a decrease in *marital satisfaction* and increase in work-family conflict. Most of all, the rise in financial strain is unavoidable for most.

From the aforementioned perspectives, it can be inferred that being a parent challenges all parents around the world, especially 'first-timers'. Parenthood is new to them and they must exert much effort to pass each stage of their child's development. According to a study by Crohan (1996), most new parents report a decrease in marital satisfaction and increase in conflict during the transition to parenthood. A study of first-time mothers' expectations on parenthood found that most mothers' expectations were matched or exceeded by their parenting experiences. However, those who have high sense of parenting efficacy but negatively experienced this new role reported higher scores on depression (Harwood, McLean, & Durkin, 2007). Past research on the relationship between first-time parents and well-being and marital satisfaction provided mixed results. For example, McKenzie and Carter (2013) studied 6,670 parents, including first-time parents, existing parents, and nonparents. Their findings from three waves (family, income, and employment) of a population-based panel study in New Zealand revealed that the transition to parenthood of first-time parents leads to an improvement in both mental health and levels of psychological distress. In other words, the results showed increasing degrees of good mental health and decreasing degrees of nonspecific psychological distress. On the other hand, it had been demonstrated that most first-time parents reported neither changes nor long-term effects on their life satisfaction in response to the birth of their first child. Moreover, some parents stated that their happiness levels depended on their education, income, and marital status at the time of childbirth (Galatzer-Levy, Mazursky, Mancini, & Bonanno, 2011).

Social support or, alternatively, psychological (emotional) and material resources received from others is one of the most important predictors of well-being (Cohen, Underwood, & Gottlieb, 2000). This support can be received from significant others such as a partner, close relative, and friend (Walen & Lachman, 2000; Zimet, Dahlem, Zimet, & Farley, 1988). *Spousal support*, in particular, plays an important role in first-time parents' well-being (Smith & Howard, 2008; Wolkoff, 2014). The results of a study on first-time parents' maternal mood, marital satisfaction, and paternal empathy showed that the mother's perception of the father's empathy is the most important contributor to marital satisfaction in the transition to first-time parents (Wolkoff, 2014).

According to Cutrona (1996b, as cited in Yedirir & Hamartab, 2015), spousal support is useful for increasing marital satisfaction and for the continuation of a marriage. In the same vein, Smith et al. (2008) concluded that higher paternal support leads to lower depressive symptoms in new mothers. Furthermore, once the mothers perceive that they would receive sustained support from their partner over time, their level of well-being increases.

Another predictor of subjective well-being is how individuals regulate their emotions. Research has shown that reappraisal or cognitive reevaluation of a specific situation, one form of *emotion regulation*, is positively related to well-being. In the process of reappraisal, individuals change their thinking before emotional responses are generated which would also change its emotional impact (Gross & John, 2003). A study by Côté, Gyurak, and Levenson (2010) established a significant positive relationship between emotion regulation ability and well-being. It can, thus, be inferred that people with higher level of ability to regulate their emotions have higher level of well-being, compared to those with low emotion regulation ability; in the same vein, those with high level of well-being are better able to regulate their emotions.

Statement of the Problem

Past studies presented inconsistent results regarding the relationship between stress and well-being in parents. While some studies indicated that being a parent generated higher level of well-being (e.g., Nelson et al., 2013), others reported otherwise (Evenson & Simon, 2005; Rizzo & Schiffrin, 2013; Twenge et al., 2003). Transition to parenthood can bring in unique challenges, particularly to first-time mothers and fathers, suggesting that being a parent for the first time can have negative influence on one's level of well-being. There have been many other studies that attempted to examine mental health and well-being of first-time parents, in particular. Most of these compared the level of well-being between parents and non-parents or childless couples (Aassve, Goisis, & Sironi, 2012; Hansen, Slagsvold, & Moum, 2009; Keizer, Dykstra, & Poortman, 2010; McLanahan & Adams, 1989; Nelson et al., 2013; Nomaguchi & Milkie, 2003). Others focused on the transition to parenthood which compared the level of well-being or other changes in parents before and after delivering a baby (Dyrdal & Lucas, 2013; Galatzer-Levy et al., 2011; Lawrence, Rothman, Cobb, Rothman, & Bradbury, 2008). Few research studies emphasized the experience and coping skills of first-time parents in their new role as mother or father. To the best of this researcher's knowledge, there has not been any study that attempted to investigate the interrelationships, specifically, among perceived stress, spousal support, emotion regulation, subjective well-being, and marital satisfaction in first-time parents in either the Western or Asian context.

In the present study, this researcher attempted to clarify the underpinnings and relationships between perceived stress, spousal support, and marital satisfaction in Thai first-time parents. In addition, this study attempted to clarify the role of emotion regulation and subjective well-being in relation to marital satisfaction. In the process of investigation, a first-time parent skill training program intervention using stress reduction techniques,

supportive communication skills to improve support to spouse, and emotion regulation strategies was developed and implemented to aid Thai first-time parents in improving the state of their well-being and marital satisfaction.

Purpose of the Study

The main purpose of the current study was to examine the direct and indirect influences of perceived stress and spousal support on marital satisfaction, being mediated by emotion regulation strategies and subjective well-being, among Thai first-time parents. More specifically, this study attempted to explore the interrelationships among eight latent variables, namely: perceived stress, spousal support, cognitive reappraisal, expressive suppression, positive affect, negative affect, life satisfaction, and marital satisfaction via path analysis. Furthermore, the study explored gender differences in these relationships. As stress reduction techniques and emotion regulation strategies are widely used to teach individuals coping effectively with stressful life events and giving support to spouse helps increase the level of relationship happiness, an intervention workshop that presented various techniques to reduce stress, supportive skills to increase spousal support, and improve emotion regulation was developed and applied to help enhance marital satisfaction and subjective well-being among Thai first-time parents.

In line with the foregoing purposes, the specific objectives of the current study were as follows:

1. To investigate which prediction model best explains the pattern of structural relationships hypothesized among perceived stress, spousal support, emotion regulation strategies, subjective well-being, and marital satisfaction among first-time parents.

2. To investigate gender differences in the pattern of structural relationships hypothesized among perceived stress, spousal support, emotion regulation strategies,

subjective well-being, and marital satisfaction between Thai first-time mothers and first-time fathers;

3. To investigate the effectiveness of a first-time parents' skills training intervention program workshop in enhancing the level of subjective well-being and marital satisfaction in Thai first-time parents.

Significance of the Study

There are several factors that contribute to the significance of this study. First, first-time parents would be made aware of experiences or factors that would enhance their levels of subjective well-being and marital satisfaction. For example, the affection and admiration for and from a spouse and the absence of disappointment in a marriage can strengthen marital friendship (Shapiro, Gottman, & Carrere, 2000) and, therefore, should be seriously considered and acted upon accordingly by counselors to help first-time parents adjust to a new role in life. In addition, as there is an empirically-proven positive relationship between emotion regulation ability and well-being in which higher emotion regulation ability leads to higher well-being and vice versa (Côté et. al., 2010), this research would help first-time parents develop stress reduction techniques such as emotion regulation skills and supporting techniques like supportive communication skills to improve their level of happiness and marital quality.

Second, it is anticipated that this study would serve as a valuable knowledge resource on the relationships among perceived stress, spousal support, emotion regulation, subjective well-being, and marital satisfaction in first-time parents. As this is a relatively new attempt to explore the subjective experience of perceived stress, support available from one's spouse, and the use of emotion regulation strategies to reappraise or suppress one's emotions to increase Thai first-time parents' well-being and understand their

associations, the result of this research can be used as a valuable reference material for future researchers who are interested in the study of first-time parents' subjective well-being and marital satisfaction within the Thai setting.

Finally, this study's database, findings, and discussions would benefit counseling psychologists and other helping professionals in allied fields in their attempt to better understand the associations among perceived stress, spousal support, and well-being with the use of appropriate emotion regulation strategies to enhance subjective well-being and marital satisfaction in Thai first-time parents. Furthermore, they would better understand how first-time mothers and fathers generally view their level of well-being in relation to spousal support and emotion regulation. It is also anticipated that this study would help raise awareness in both helping professionals and first-time parents of the effectiveness of intervention programs aimed at helping new parents develop and nurture psychosocial factors that predict subjective well-being and marital satisfaction, even during stressful times in the marriage.

Definition of Terms

Emotion regulation.

'Emotion regulation' refers to the process in which individuals develop an influence over their emotions; more specifically, influence over which emotions to have and how to experience and express them. This process can be automatic or controlled, conscious or unconscious (Gross, 1998b). In the present study, two strategies of emotion regulation were proposed: (1) *cognitive reappraisal* – a form of cognitive change to transform the situation to change its emotional impact, and (2) *expressive suppression* – response-focused emotion regulation strategy that involves inhibiting the way individuals express their emotions. Operationally, emotion regulation was measured by means of the

Emotion Regulation Questionnaire (ERQ), developed and published by Gross and John in 2003.

First-time parents.

'First-time parents' are new mothers and fathers who have had only one child or multiple children for the first-time. In the present study, targeted first-time parent participants must have a child or multiple children (e.g., twins) aged no more than two years-old.

Marital satisfaction.

'Marital satisfaction' is defined as an individual's global subjective evaluation of the quality of his or her marital relationship (Spanier, 1976). It can also be referred to as marital quality, marital happiness, or marital adjustment (Spanier & Lewis, 1980). Having a child is one of the life events that play an important role in marital satisfaction (Bradbury, Fincham, & Beach, 2000). In the present study, marital satisfaction was measured by means of the *Couples Satisfaction Index – Short Form* (CSI-16), developed and published by Funk and Rogge in 2007.

Perceived stress.

'Perceived stress' refers to one's perception and appraisal of the potential harm of certain environmental events that occur in one's life, especially those that exceed one's ability to cope. When individuals perceive that they do not have available resources to cope with a stressor, they appraise the situation as stressful and concurrently experience negative emotional responses (Cohen, Kessler, & Gordon, 1995). In the present study, perceived stress was measured by means of the *Perceived Stress Scale – Short Form* (PSS-10), developed by Cohen, Kamarck, and Mermelstein in 1983.

Spousal support.

'Spousal support', being one of three main sources of social support – family, friends, and significant other (Cohen, 2004; Zimet et al., 1988), refers to the social support received from a partner, specifically a spouse. It represents psychological (emotional) and material resources received which help individuals to better cope with their stress (Cohen, 2004). The spouse is the most close-at-hand contact and, therefore, the most able to deliver support when it is called for. Spouses have unparalleled knowledge of each other's specific support needs because of frequent mutual exposure and the usually open exchange of information that occurs in marital relationships (Cornwell, 2012). Spouses that express their emotions to each other may affect their behavior toward each other. For example, when a wife thanks and shows her appreciation to her husband for something he did in relation to their marriage, it will consolidate the behavior that is displayed and will cause her husband to display more positive behavior in the future (Miller, Caughling, & Huston, 2003, as cited in Yedirir & Hamartab, 2015). In the present study, spousal support was measured by means of the *Multidimensional Scale of Perceived Social Support* (MSPSS), developed and published by Zimet et al. (1988). Since the focus of this study was on spousal support, among all forms of social support, only the four-item 'significant other' subscale was used.

Subjective well-being.

'Subjective well-being' represents people's evaluation of their lives in terms of feelings and cognitions, whether they are leading a desirable and rewarding one or not (Deiner, 1984). It allows individuals to decide their own position whether they lead a good life that is full of happiness or not. According to Diener (2000), subjective well-being comprises the following separable components: positive affect, low levels of negative affect, and life satisfaction. The following segment briefly explains the three components.

Positive and negative affect. 'Positive affect' represents many pleasant moods and emotions that an individual experiences such as joy, elation, affection, and ecstasy. On the other hand, 'negative affect' refers to individuals' evaluation of unpleasant moods and emotions in their lives. For example, they might experience guilt and shame, sadness, stress, and depression. In this study, positive affect and negative affect was measured by means of the *Positive Affect and Negative Affect Scale* (PANAS), developed and published by Watson, Clark, and Tellegen in 1988.

Life satisfaction. 'Life satisfaction' refers to a global cognitive judgmental process of one's life (Diener, 2000; Diener, Emmons, Larsen, & Griffin, 1985). The significant characteristic of life satisfaction is that it is people's own opinion about themselves; that is, it is people's overall judgment of how satisfied they are with their present state of life, compared to their own standards. In the present study, life satisfaction was measured by means of the *Satisfaction With Life Scale* (SWLS), developed and published by Diener, Emmons, Larsen, and Griffin in 1985.

CHAPTER II

Literature Review

In this chapter, the five key variables of this study – perceived stress, spousal support, emotion regulation, subjective well-being, and marital satisfaction – are thoroughly discussed. The literature review comprises definitions, theoretical perspectives, empirical findings derived from related studies, and information on the scales used to measure the variables. The characteristics and experiences of first-time parents are also explained. Hypothesized relationships among the key variables are depicted by means of the conceptual framework of the study. The chapter concludes with the current investigation's overview, research questions, and stated research hypotheses generated for testing.

Perceived Stress

Stress is a topic that has been extensively studied among researchers interested in its biological and psychological effects on health. Various definitions of stress have been proposed through the years. It can be explained in terms of the stressful event itself, the responses received from stressors, or the stress appraisals of individuals on its effects. In spite of differing perspectives, various definitions of the phenomenon similarly share the process in which environmental demands exceed the capability of individuals to cope, leading to changes that may place individuals at risk for disease (Cohen et al., 1995).

Theoretical and empirical background.

Cohen et al. (1995) categorized the numerous definitions of stress into three broad traditions: environmental, biological, and psychological. The *environmental tradition* looks at an evaluation of stressors that objectively accompany the change in adaptive

demands. The *biological tradition* emphasizes the activation of physiological systems that are specifically triggered by physical and psychological demands. Finally, the *psychological tradition* focuses on the subjective assessment of one's adaptive capacity to deal with a particular event.

The environmental stress perspective stems from the view that stressful life events could lead to human diseases and illnesses. Life events are important events in life that produce serious and long-lasting effects on individuals. In the 1930s, Adolf Meyer encouraged physicians, during the medical examination of their patients, to fill out a "life chart" – a list of the patient's life events as a part of the examination procedure. Reviewing the chart could show that a specific life event might have a significant impact on the patient's illness (Meyer, 1951, as cited in Cohen et al., 1995). An important advancement in this area of research came in 1967 when Holmes and Rahe developed the Social Readjustment Rating Scale (SRRS) in which each life event was assigned a standardized judged weight of the degree of difficulty in adjusting to the event called "life change unit". Excessive adaptive demands from stressful life events lead to illness. Therefore, SRRS users would be more concerned with the magnitude of the change than the change being negative or positive life events (Cohen et al., 1995).

The biological stress perspective focuses on a physiological response to physical and psychological demands (Cohen et al., 1995). The recurrent and persistent activation of the sympathetic-adrenal medullary system (SAM) and the hypothalamic-pituitary-adrenocortical axis (HPA) are two interrelated bodily reactions to emergency situations which are viewed as important sources for the development of physical and psychological disorders. The bodily reactions by SAM activation can be seen in the fight-or-flight response, also called the fight-or-flight-or-freeze response (Cannon, 1929). This reaction leads to an increase in the secretion of the hormone epinephrine, blood pressure, heart rate,

and sweating. If the reaction is excessive and repetitive, it may result in illness. HPA responses, on one hand, were highlighted in the work of Hans Selye (1956) in which he argued that either deriving from physical or psychological sources, all stressors stimulated the same nonspecific physiological response pattern. This response was what he called "general adaptation syndrome" – a three-stage reaction to stress comprising alarm reaction, resistance, and exhaustion. If a stress response is prolonged, it may result in illness or even death (Selye, 1956; as cited in Cohen et al., 1995).

The psychological stress perspective focuses on the perception and evaluation by individuals of their available resources to cope with environmental experiences not only with the event but also the response. Individuals will experience stress when they appraise that environmental demands exceed their capability to cope, followed by negative emotional response (Cohen et al., 1995). The stress perceived by individuals from their own evaluation of the situation is called *perceived stress*. In other words, perceived stress stems from one's interpretation of the meaning of the environmental situation and the appraisal of available coping resources.

'Perceived stress', as defined by Cohen and associates (1995), refers to one's perception and appraisal of the potential harm of environmental events that occur in one's life, especially those that exceed one's ability to cope. When individuals perceive that they do not have available resources to cope with a stressor, they appraise the situation as stressful and concurrently experience negative emotional responses. It also refers to feelings or thoughts that an individual has about how much stress they are under at a given point in time or over a given time period. Perceived stress incorporates feelings about the uncontrollability and unpredictability of one's life, how often one has to deal with irritating hassles, how much change is occurring in one's life as well as confidence in one's ability to deal with problems or difficulties. However, it does not measure the type or

frequency of stressful events which have happened to a person but, rather, how individuals feel about the general stressfulness of their life and their ability to handle stress. Individuals may suffer similar negative life events but appraise the impact or severity of these to different extents as a result of factors such as personality, coping resources, and support.

The work on psychological distress and its appraisal process can be seen from work derived from the theory of psychological stress and coping developed by Lazarus and colleagues (Folkman, Lazarus, Dunkel-Schetter, DeLongis, & Gruen, 1986a; Lazarus, 1966; Lazarus & Folkman, 1984). Stress produces different effects on each individual. Some people are able to cope effectively with stress; at a given condition, stress is great for their development. On the other hand, others are weakened because of a stressful situation. On a related note, the same stressful situation affects each individual differently. Thus, the effect of stress can be further understood by looking at individual differences in motivational and cognitive goals which happen between the stressful event and the individual reaction (Lazarus, 1993).

There are three different kinds of psychological stress: harm, threat, and challenge, according to Lazarus (1993). *Harm* refers to the psychological damage received from the stimulus and which has already been done. *Threat* is the anticipation of harm that has not yet happened but is imminent. *Challenge* suggests the confidence that one is able to overcome somewhat difficult demands by effectively managing one's coping resources. These three kinds of stress are created by different antecedent conditions such as the environment and individual differences, producing different consequences (Lazarus, 1993).

The theory of psychological stress and coping is also explained by two processes: cognitive appraisal and coping. *Cognitive appraisal* is one's evaluation of an

environmental stimulus as to whether it has an effect on one's level of well-being and in what way. There are two types of cognitive appraisal: primary and secondary appraisal. *Primary appraisal* looks at the appraisal of an event as threatening or involving one's well-being or not. It occurs between the presentation of the stimulus and the stress reaction (Lazarus, 1966). Primary appraisal is assumed to be brought forth by different antecedent conditions such as perceived features of the environmental event (e.g., the magnitude and the duration of the stimulus) and the psychological structure within a person (e.g., one's values, beliefs, and commitments). In *secondary appraisal*, individuals appraise their coping resources to determine their potential to cope with the situation. Individuals evaluate what can be done to prevent or overcome harm, or to increase one's chances of getting more benefits (Cohen et al., 1995; Folkman et al., 1986a; Folkman, Lazarus, Gruen, & DeLongis, 1986b; Lazarus, 1993). Examples of coping resources include: changing the situation, accepting it, or finding more information (Folkman et al., 1986b). If available coping resources are perceived by the individual, there will be no stress; otherwise, stress will be experienced. In addition, primary and secondary appraisals of environmental demands not only occur at the beginning of the stressful life event, but also during the course of the event. Therefore, situations that are perceived as threatening, at first, might be seen as nonthreatening later on. Finally, the impact of major life events that might be perceived as stressful to all depends on an evaluation of the event and coping resources of each individual (Cohen et al., 1995).

Coping refers to one's cognitive and behavioral efforts to manage environmental demands that have already been appraised as exceeding one's coping resources. Folkman et al. (1986b) introduced two forms of coping: problem-focused and emotion-focused. *Problem-focused coping* occurs when individuals use their coping strategies to change the relationship between the person and the environment which results in a change in the level

of psychological stress. For example, if we are able to convince someone to remove whatever threats that person presents to us, we can reduce that particular harm or threat. Another coping process is *emotion-focused coping*. It happens when individuals change only the way they interpret or appraise the situation. Once they stop thinking about a potential threat, it will not bother them for some time (Lazarus, 1993). In short, cognitive appraisal and coping are products of the integration of both environment and the person.

Stress in first-time parents.

First-time parents are faced with a major transition in life where they have to cope with new roles and responsibilities. The birth of the first child can create a significant change in couples' lives such as in their lifestyle. A study involving dual earner couples examined leisure time and marital quality in the transition to parenthood and found that parents experienced an immediate decrease in both shared and independent leisure after the birth of their child. Their leisure activities increased once the wife returned to work, though not fully as in prenatal levels (Claxton & Perry-Jenkins, 2008). On a related note, a study by McKenzie and Carter (2013) found that first-time parents reported an improvement in their mental health and level of psychological distress.

Previous studies investigated the experience of first-time parents and found many reasons to support differences in experiences between mothers and fathers, relative to well-being. In an attempt to study parental emotions following the birth of the first child, Lutz and Hock (2002) involved 107 married couples who were first-time parents. Gender differences in depressive symptoms were examined and, as a result, it was found that first-time fathers who had heightened fear of loneliness were at risk for depressive symptoms after the birth of their first child. The research explained that it is because the wives increased their focus on child-related tasks, thus reducing their ability to support the first-time fathers.

Measuring perceived stress.

One of the most widely used scales to measure perceived stress is the *Perceived Stress Scale* (PSS) developed by Cohen and associates (1983). The PSS was designed to measure the degree to which situations in one's life are appraised as stressful (Cohen et al., 1983). Items in the PSS were designed to tap into three issues: how unpredictable, uncontrollable, and overloaded one's life is when one is faced with stressful situations. The PSS includes items that directly ask about the level of stress that respondents currently experience. The scale was designed for use with a community sample with at least junior high school education. Items are easy to understand, and so is the scoring of the scale. The original scale had 14 items that can be administered in a few minutes. Items in the PSS ask about how often respondents feel in a particular way during the last month. Daily hassles, major life events, and coping resources influence the level of appraised stress; therefore, the predictive validity of the PSS is expected to be from four to eight weeks (Cohen et al., 1983; Cohen & Williamson, 1988). The four-item (PSS-4) and 10-item (PSS-10) versions are also available. The PSS-10 (see Appendix E) was assessed with its psychometric properties showing that it can be used without any loss of psychometric properties over the original scale (Cohen & Williamson, 1988).

Spousal Support

Spousal support is one of the most significant factors influencing marital and life satisfaction (Burke & Weir, 1977). The authors further stated that a helping relationship between husband and wife acts as a 'buffer' against stress and enhances individual well-being. Spousal support refers to the support that individuals receive from their spouse. It is one of three major sources of social support: family, friends, and significant other (Cohen,

2004; Zimet et al., 1988). The following section expounds on the general construct of social support.

Social support.

Social support has received much attention in a number of studies related to well-being; however, the literature, still, has not provided a clear and conclusive definition of the term. According to House, Umberson, and Landis (1988), the terms "social support", "social network," and "social integration" are used interchangeably to explain the benefits of social relationships on the well-being of individuals. While it basically deals with social relationship, the transaction to well-being is defined in various ways. For example, Shumaker and Brownell (1984) defined social support as an exchange of resources between at least two people in an attempt to increase the well-being of the recipient. According to Cohen (2004), social support refers to the available psychological and material resources of individuals which can help them effectively cope with their stress. House et al. (1988) categorized social support into three types: instrumental, informational, and emotional. *Instrumental support* refers to the provision of material support such as financial aid; *informational support* refers to the provision of information, normally in the form of advice or guidance, to help individuals deal with their problems; and *emotional support* consists of various kinds of emotional expressions such as empathy, encouragement, caring, and trust.

Perceived social support is the belief individuals have regarding the quality and the quantity of support they receive from others. In other words, it is how individuals think about available help and support from others. It can also be divided in terms of the sources of support or relationship type; for example, from partner, family, and friends (Walen & Lachman, 2000).

Theoretical and empirical background.

House et al. (1988) also categorized "social relationship" into three general classes: social integration/isolation, social network structure, and relational content. *Social integration/isolation* represents the quantity and frequency of relationships, or the number of relationships individuals have with other people and the frequency of interaction with them; *social network structure* refers to the structural properties of relationships such as dyadic or network; and *relational content* refers to the functional content or quality of social relationships which can be differentiated in terms of sources (e.g., family, friends, and spouse).

Relational content itself is further categorized into three forms: social support, relational demands and conflicts, and social regulation or control. *Social support* refers to the positive, health-stimulating, and stress-buffering aspects of relationships such as financial aid and emotional concern, and provides what people need to be healthy and better able to cope with stress; *relational demands and conflicts* focus on the negative aspects of relationships that may impair health; and *social regulation and control* refers to regulating or controlling quality of social relationships that can either promote or damage health, depending on what is regulated or controlled. The social support and social regulation perspectives have some overlapping concepts. The social support perspective is explained by the provision of instrumental aid, information, and emotional support to individuals, whereas the social regulation perspective emphasizes constraints on the behavior of individuals by another individual. Although social support and social regulation can directly promote health, social support is more responsible for the reduction of stress and stress reactions (House et al., 1988). On the whole, the study of social support and health includes the study of the structure of social relationships, social integration/isolation and network structure, as well as the study of social processes (social

support, social regulation or control, and relational demand and conflict) (House et al., 1998).

Cohen and Wills (1985) introduced four types of support resources: esteem/emotional support, information support, social companionship, and instrumental support. *Esteem/emotional support* is the knowledge that individuals are valued for their own worth and are accepted the way they are; *information support* such as advice and guidance helps individuals cope more effectively with stressful events; *social companionship* translates into spending time with others in recreational activities which may help reduce stress by achieving the need for affiliation, thus, distracting people from worrying too much about their problems or by enabling positive moods; and *instrumental support* refers to help received in the form of financial aid or other services.

In the 1970s, literature on social relationships focused on whether social relationships and health were causally related, whether social relationships acted as a buffer or a moderator in the relationship between stress and health, or if they benefited health, regardless of whether stress occurs or not (Cohen & Wills, 1985; House et al., 1988). More specifically, past research had demonstrated the buffering effect of social support in the presence of stress and its role in protecting people's health and well-being. A positive relationship had been established between social support and health (Cohen & Wills, 1985; House et al., 1988). Additionally, House and associates (1988) reported that social support can reduce exposure to stress and other health hazards.

The main effect of social support on well-being stems from the notion that having a large social network generates positive experiences and affect, a sense of predictability and stability in individuals' life events, and recognition of self-worth. Moreover, social networks may benefit individuals by avoiding a drawback of negative experiences which may increase the chance of psychological disorders. This concept has been known to

psychologists as social interaction, social integration, or status support (Cohen & Wills, 1985). On the other hand, the buffering effect of social support in the relationship between stress and well-being can be seen and explained in terms of psychological stress. Appraised or perceived stress suggests that individuals appraise their life events as demanding, with little or no available coping resources (Lazarus, 1966). This concept of stress links psychological stress with feelings of helplessness and loss of self-esteem when individuals perceive their inability to successfully cope with stressful situations. Therefore, social support may play its role at two different points in time (see Figure 1). First, social support acts as a buffer in the stress appraisal process by preventing a particular event from being perceived as highly stressful. Once individuals perceive that their social networks can and will help provide necessary resources to cope with any stressful event, it may reduce the perceived severity level of harm posed by that situation. The first role which happens before events had been appraised as stressful. Second, social support may act as a buffer between the experience of stress and individuals' well-being by reducing stress reactions or by influencing the human body directly. For example, social support may be of good use by providing suggestions to help solve problems, reducing the perceived importance of a problem, or by promoting healthy behaviors (Cohen & Wills, 1985).
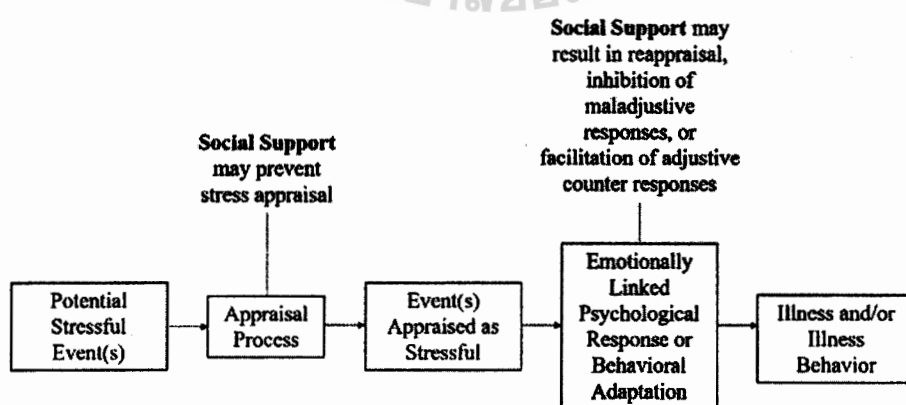
Figure 1. Two points at which social support may interfere with the hypothesized causal link between stressful events and illness.

Related studies on spousal support.

Social support is a dynamic process that involves the provision of coping resources, including companionship, emotional sustenance, information, and other forms of aid (Cornwell, 2012). Spouses are usually regarded as particularly reliable sources of support, especially as the need for support grows in later life (Cantor & Brennan, 2000, as cited in Cornwell, 2012). The spouse is the most close-at-hand contact and, therefore, the most able to deliver support when it is called for. Spouses have unparalleled knowledge of each other's specific support needs because of frequent mutual exposure and the usually open exchange of information that occurs in marital relationships (Cornwell, 2012).

It is a common opinion that spousal support affects the marital relationship. Many adults perceive marriage as a source of privileged support and emotional intimacy (Weiss & Halford, 1996, as cited in Yedirir & Hamartab, 2015). Lack of spousal support is the basis for many problematic marriages, whereas supportive behavior prevents the increase of marital conflicts. Perceived spousal support in stressful situations prevents emotional withdrawal which cause harm to marriages, and increases people's belief that they are not alone and that they can easily overcome the situation in question (Rugel, 1997, Cutrona, 1996a, all as cited in Yedirir & Hamartab, 2015).

Research suggests that certain factors condition the flow of support between spouses. The most widely studied of these is gender. Flows of support within marital relationships are asymmetrical in the sense that, on average, husbands receive more and beneficial support from their wives than women receive from their husbands (Neff & Karney, 2005). Relationship quality is another important factor. The amount of time spouses spend together, their happiness and satisfaction with each other, and other aspects of relationship strength are all central to mutual supportiveness (Dehle, Larsen, & Landers, 2001, as cited in Cornwell, 2012). Communication between spouses is another variable

related to satisfaction within marriage. Weak communication between spouses causes a series of problems and may decrease marital satisfaction (Yedirir & Hamartab, 2015). Furthermore, constructivist communication is a key component of satisfaction and adjustment in relationships, along with emotional expression which is also a kind of communication, whether in verbal or non-verbal form.

Spousal support was found to have a positive relationship with well-being and physical health (Walen & Lachman, 2000). It leads to spouses having a high level of happiness. A study revealed that 33% of respondents reported that their spouse is the source of their well-being, and that perceived support from the spouse is a protection against psychological distress (Markus, Ryff, Curhan, & Palmersheim, 2004). Another study showed that spousal support plays a significant role as a buffer against Asian American's negative psychological consequences, compared to other sources of social support (Rollock & Liu, 2016). Additionally, high level of paternal support (i.e., support from fathers) is associated with fewer depressive symptoms in mothers (Smith et al., 2008).

According to Cutrona (1996b, as cited in Yedirir & Hamartab, 2015), four aspects of spousal support are considered useful for increasing marital satisfaction and for the continuation of a marriage. Firstly, spousal support helps prevent emotional withdrawal and depression in stressful situations. In a research on the predictive effect of marital satisfaction on subsequent depressive symptoms, it was concluded that low levels of perceived partner support causes depression. Khan and Aftah (2013, as cited in Yedirir & Hamartab, 2015) studied the mediating role of perceived social support between marital satisfaction and depression, and concluded that perceived social support is an important variable which predicts marital satisfaction and depression. Secondly, spousal support prevents disputes from turning into destructive behavior and prevents increase of conflicts.

Thirdly, supportive communication strengthens emotional ties between spouses, and fourthly, it leads to a positive marital experience.

In a study conducted among Japanese mothers with preschool children, both wage-earners and stay-at-home mothers, Tanaka and Lowry (2013) found that both groups of mothers reported that they wished their husbands to be more involved in tasks relating to childrearing. A significant number of mothers reported experiencing at least one symptom of depression (e.g., no appetite, self-accusation, and irritation). The study also established that a positive relationship exists between mothers' report of unmet spousal support and perceived challenge to well-being. On a related vein, Dew and Wilcox (2011) examined the relationship between new mothers and marital satisfaction in the U.S. and reported that transition to motherhood is associated with more housework and childcare for wives, leading to an increase in perceived unfairness regarding housework which, subsequently, effected a decrease in marital satisfaction. Thus, it was recommended that support from husbands in the domain of housework and childcare is important in perceived fairness in division of labor to improve marital satisfaction.

Spouses primarily turn to each other in stressful situations and they regard their spouse as a supporter in all kinds of situations, initially as emotional support transferring empathy and interest because the support that married individuals obtain from their social network does not equal the support they obtain from their spouses (Coyne & DeLongis, 1986, as cited in Yedirir & Hamartab, 2015).

Measuring social (spousal) support.

There are many ways to measure social support perceived by individuals. It can be measured in terms of sources of the support, summing supportive behaviors, or counting the number of people in individuals' support network. One of the widely used instruments for perceived social support is the *Multidimensional Scale of Perceived Social Support*

(MSPSS) (Zimet et al., 1988). It was designed to measure respondents' perception of the social support they possess according to the resources they have. MSPSS measures three sources of social support: family, friend, and significant other. These three sources of support are formed into three subscales of MSPSS in which each subscale is assessed by means of four items. In the present study, only the four items of the 'significant other' subscale was used to measure the level of perceived spousal support.

Emotion Regulation

The topic of 'emotion' has been extensively studied in different perspectives and levels of analysis by numerous theorists and researchers (e.g., Lazarus, 1993; Mauss, Wilhelm, & Gross, 2004). Lazarus (1993) posited that each experienced emotion has its own story, stemming from differences in the appraisal process of particular individuals in relation to their environment. Emotion arises when a person appraises a situation as being significant to his/her active goals (Gross & Jazaieri, 2014). Gross (2015) attempted to explain basic commonalities and differences among "emotion," "mood," and "stress responses." Mood (e.g., feeling great or feeling down) and emotion (e.g., amusement or sadness) are normally triggered by specific situations, and have an influence on behavioral response tendencies towards these situations. However, mood has an influence on broad tendencies to approach or avoid and is related to cognition rather than behavior. Emotion may also be distinguished from a stress response. Emotion is a total body reaction to a significant event, and which can either be a positive or negative affective state, whereas a stress response is caused by the inability to cope with a specific situation and is, mostly, a negative affective state (Gross, 2015).

According to Gross (1998b), emotion regulation is defined as "the process by which individuals influence the emotions they have, when they have them, and how they

experience and express these emotions. Emotion regulatory processes may be automatic or controlled, conscious or unconscious, and may have an effect at one or more points in the emotion generative process" (p. 275). Emotion regulation involves changes in emotion dynamics (Thompson, 1990, as cited in Gross, 2007) and serve to suppress, intensify, or simply maintain emotion, depending on an individual's goals (Gross, 2007). Gross based his definitions on various aspects of emotion regulation. Positive and negative emotions are increased, decreased, and maintained by individuals. Also, the strategies used in regulating each emotion may not completely overlap.

Theoretical and empirical background.

Theories of emotion have long been studied by many researchers to find out how people experience their emotions. In 1884, William James and Carl Lange, independently of each other, published the same concept of the consciousness of emotion (James, 1894). This is widely known as the James-Lange theory explaining that emotion derived from physiological reaction like rapid heart rate resulting from a stimulus. It is not the situation or thought that directly affects emotion but the stimulus that leads to changes in physiological responses or immediate reflexes which, then, leads to emotion (James, 1894). The two-factor theory of emotion, or the Schachter-Singer theory, proposed that emotion states derived from physiological arousal and a cognition label of that arousal. In the situation that an individual could not understand his physiological response, the individual labels the body's physiological state and describes emotion according to the available cognition (Schachter & Singer, 1962).

According to Gross and Levenson (1993), emotions such as amusement and sadness are biologically-based reactions that direct one's responses to a particular event. They arise when one evaluates that the specific event is relevant to his or her active goals, regardless of whether they are about self-concept or only short-term goals. Emotions

comprise subjective, experiential, behavioral, and physiological responses (Mauss, Levenson, McCarter, Wilhelm, & Gross, 2005; Gross & Jazaieri, 2014). Emotions are multifaceted, and they can unfold over time from seconds to minutes. The malleability characteristic of emotions such as interrupting what one is doing and making the individual aware of a particular emotion, creates the chance for emotion regulation.

To understand the dynamics of emotions, Gross (1998a) proposed the "modal model of emotions" which explains how emotions arise and develop over time. The model consists of the sequence of situation, attention, appraisal, and response (see Figure 2). By using this model, emotion emerges from a person-situation transaction that people attend to, that is relevant to their current goals, creates meaning for them, and produces various facets of response.

Situation   Attention   Appraisal   Response
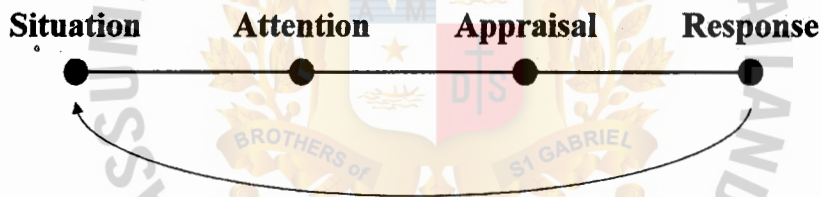
Figure 2. The modal model of emotion.
Source: "Emotion regulation: Conceptual and empirical foundations," by J. J. Gross (Ed.) (2007). In Handbook of Emotion Regulation (p. 5), New York, NY: The Guilford Press.

The modal model of emotion starts with a psychologically specific *situation* which is, often, the external environment but is, sometimes, internal representations of activation. This situation is, then, *attended to* in a number of ways which later have an effect on how individuals *appraise* or evaluate that situation. Changes in subjective experience, behavior, and physiology follow as a *response* from the appraisal process. This response serves as a feedback to the situation, and can even change the situation (Gross, 2008).

Emotion regulation is the manipulation of emotional antecedents or emotional responses of one's own self or of others (Gross & Levenson, 1993). It can be initiated by regulating one's own emotion (intrapersonal) or by regulating other people's emotions (interpersonal). Three common factors are found in any form of emotion regulation (Gross & Jazaieri, 2014). First, *awareness of emotions* is important in increasing the variety of presented strategies and the flexibility in using them. Second, the *emotion regulation goal* or objective that individuals try to achieve which serves to increase or decrease negative or positive emotion. Another important factor is *emotion regulation strategies* that may be employed in order to achieve the particular goal.

The idea of emotion regulation originated from stress and coping, of which one of the aims was 'to adapt' (Gross, 2007). The difference between emotion regulation and coping is that coping emphasizes more on stress alleviation and spans for long periods of time, whereas emotion regulation is quite similar to coping but emphasizes the effort to influence which emotions individuals have, when they have them, and how individuals express those emotions (Gross, 1998b; Gross, 2015).

Emotion regulation can be seen in everyday life. People try to regulate their emotions regularly such as when we have to show good spirits in a party even though we actually feel down, or when we have to repress our laughter from a very funny story because we are in a formal meeting (Gross, 1998a). This shows that one can influence, express, and repress one's emotions at will. Emotion regulation is rather common; thus, its effects have been widely explored. Gross (1998a) reviewed the literature on the consequences of emotion regulation and showed that emotion regulation can affect both physical and psychological health, where it may profit psychological health but may take a toll on physical health. Because of this inconclusive consequences, Gross (1998a) adopted "the consensual process model of emotion regulation" (see Figure 3) which identifies

major points of conjunction among those studies. According to the model, emotional cues,

both external and internal, were evaluated. This evaluation triggered a set of emotional

response tendencies, including behavioral, experiential, and physiological. The

combination of these tendencies assists the reaction to the perceived situations. However,

modulation can be performed on these emotional response tendencies which shape the

final manifestation of emotional responses.
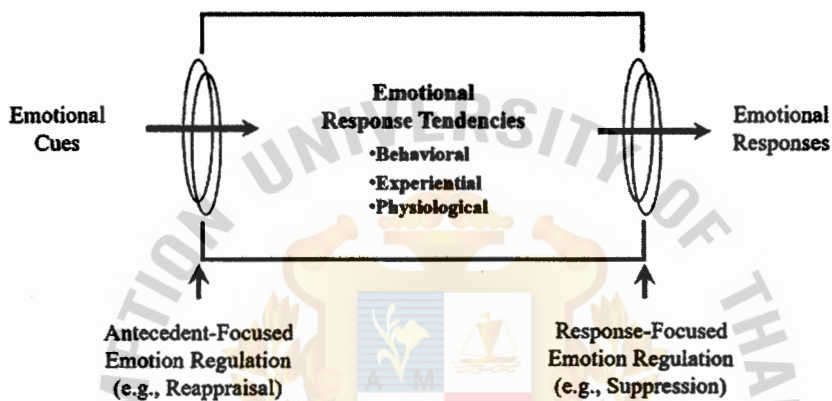
Figure 3. A consensual process model of emotion generation.
Source: From "Antecedent- and response-focused emotion regulation" by J. J. Gross (1998). *Journal of Personality and Social Psychology, 74*, p. 226.

The consensual process model of emotion depicted above, however, did not explain

all the complexities of emotions, nor provided means of representing individuals'

emotional differences. Still, the model suggested two broad means to regulate emotions.

Emotions may be regulated by influencing the input (emotional cues) using antecedent-

focused emotion regulation, or modulating the output using response-focused emotion

regulation. There two broad means of emotion regulation composed different strategies of

regulating emotions. For example, antecedent-focused emotion regulation includes

situation selection, situation modification, attention deployment, and cognitive change,

whereas response-focused emotion regulation contains various strategies that increase,

decrease, and prolong emotional experience, expression, and physiological responses

(Gross 1998a). A conclusion derived from the mixed results from the literature on emotion regulation was that the cognitive forms of antecedent-focused emotion regulation such as reappraisal was the primary concern among psychological health literature. On the other hand, the focus of physical health literature was on response-focused emotion regulation such as suppression (Gross 1998a).

Gross (1998b) explained the abovementioned emotion regulation strategies in the widely used model called "the process model of emotion regulation (see Figure 4). The model described emotion regulation strategies along the timeline of the emotional reaction (Gross & John, 2003). Referring to the foregoing consensual process model of emotion, the emotion regulatory process is divided into two broad components: antecedent-focused and response-focused emotion regulation strategies. *Antecedent-focused strategies* are concerned with what individuals do before emotion response tendencies are generated, composing the first four emotion regulation strategies, while *response-focused strategies* occur after emotion response tendencies have already been generated (Gross 1998a; Gross & John, 2003).

The process model of emotion regulation describes all five strategies: situation selection, situation modification, attentional deployment, cognitive change, and response modulation (Gross, 1998a; Gross, 1998b), and indicates the sequential steps in regulating emotions, as a reference. Each step in the modal model is treated as a potential target for emotion regulation. Five sets of strategies are categorized according to each point in the sequence of the modal model where the strategies are distinguished by the time they have an impact on the emotion-generative process. The model predicts that different consequences of how individuals feel, think, and act should be produced by different emotion regulation strategies (Gross, 2015).

| Situation Selection | Situation Modification | Attentional Deployment | Cognitive Change | Response Modulation |
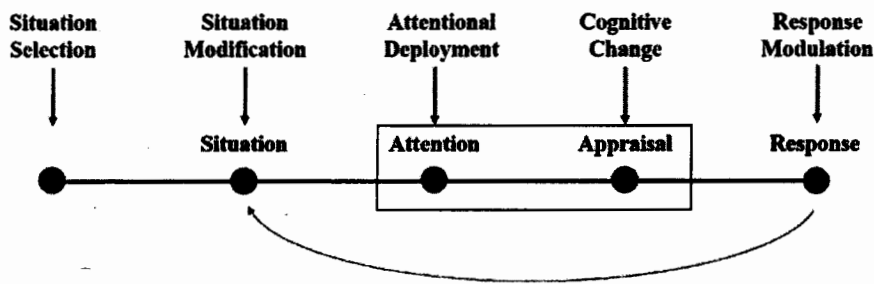
Figure 4. The process model of emotion regulation.
Source: Gross and Thompson's "Emotion regulation: Conceptual foundations" (2007). The Guilford Press. Reprinted with permission.

Based on Figure 4, *situation selection* means that individuals select approaching or avoiding strategies in dealing with people, places, or objects to regulate their emotions into desirable ones (e.g., inviting a friend to go shopping or avoiding an annoying salesperson). In other words, this strategy will choose the action and situation that will produce the emotion an individual would like to have later. According to the process model of emotion regulation, it happens in the first place because it has an effect on the situation and outlines the tendency of emotion response (Gross, 2008). Situation selection is a strategy that has been used as an intervention by many cognitive-behavioral therapists. This intervention is anticipated to increase exposure to supportive situations. Examples include interactions with friends or activities that increase positive emotions such as having coffee with a friend who is known to be cheerful before an interview. Other interventions are anticipated to decrease exposure to destructive situations such as staying away from drug use.

Situation modification is an effort to directly modify external features of the situation in order to change its impact on individuals' emotions. This is to modify or change an external environment, not an internal one. Situation selection and situation modification might sometimes be difficult to differentiate because an effort to modify the situation in the situation modification strategy might call for a new situation to emerge. For

example, once the rain interrupts a man and a woman from outdoor activities on their first

date, they modify the situation by watching a movie instead.

Attention deployment suggests changing people's attentional focus or redirecting

their attention in an attempt to influence one's emotional response. According to Gross

(2008), attention deployment can be seen as an 'internal version' of situation selection.

One of several attention deployment techniques is *distraction* where individuals move their

attention away from a particular situation or an emotional aspect of that situation, or

redirect their attentional focus within a specific circumstance. Other examples are

concentration which is drawing attention to other activities instead, and *rumination* or

focusing attention on their feelings and consequences. Attention deployment strategy is

being used throughout the life span, from infancy through adulthood.

Cognitive change is modifying one or more of the appraisal steps people make in

order to manage or revise the meaning of the perceived situation and its emotional impact

by changing how people think about the situation (Gross, 2008). It is normally internal in

nature; however, cognitive change strategy is sometimes applied to external situations.

Cognitive reappraisal is one good example of this. Reappraisal cognitively transforms a

situation by changing its emotional impact or the way to interpret the situation in terms

that change its impact (Lazarus & Alfert, 1964). Reappraisal aims to transform the

meaning of a situation or the relevancy of the situation towards oneself or one's significant

other. Other forms of cognitive change include changing the way one thinks about one's

capacity to manage an emotion eliciting situation, and reframing or cognitively finding

another good aspect of that same situation. The term "cognitive reappraisal" is so widely

used that it is seen as being equivalent to a cognitive change strategy.

Response modulation deals with an attempt to regulate the physiological,

experiential, or behavioral aspects of emotion after the emotion has become well

developed, such as exercising, using relaxation techniques, or using drugs. An example of response modulation strategies is *expressive suppression* which is the conscious inhibition of ongoing emotional expressive behavior (Gross & Levenson, 1993; Gross, 1998b; Gross, 2002; Gross, 2008; Gross, 2015). Examples include hiding angry feelings toward someone, or not showing disappointment after not doing well on a job interview.

According to Gross's process model of emotion regulation, emotion regulation strategies that take place early rather than later in the emotion-generative process produce different consequences (Gross, 1998a; Gross, 2008). When cognitive reappraisal occurs relatively early in the emotion-generative process and changes the experiential, behavioral, and physiological components of the emotional response, it will not interfere with other ongoing cognitive processes (Gross, 2008).

In the present study, two strategies of emotion regulation were explored: cognitive reappraisal and expressive suppression. *Cognitive reappraisal* is an antecedent-focused strategy, a form of cognitive change used to transform the situation in order to change its emotional impact, whereas *expressive suppression* is a response-focused emotion regulation strategy belonging to the response modulation stage that inhibits the way individuals express their emotions (Gross, 1998a & 1998b). The cognitive reappraisal strategy is described as interpreting a situation that might potentially elicit emotions within a non-emotional situation. In other words, it involves cognitively transforming the situation in order to change its emotional impact (Gross, 1998b). According to the process model of emotion regulation, reappraisal changes the entire emotional reactivity into less behavioral, experiential, and physiological responses (Gross, 2002). Past research has confirmed the role of cognitive reappraisal in reducing negative emotional experiences and expressive behavior (Gross, 1998a; Gross, 2008; Gross & John, 2003). On the other hand, the expressive suppression strategy is described as inhibiting the expressive behavior that

comes with ongoing emotions (Gross & Levenson, 1993; Gross, 1998a; Gross & Levenson, 1997; Gross, 2002; Gross, 2015). Past research had found that when an individual is emotionally aroused by an emotional stimulus and decides to suppress one's emotions as an emotional response, the individual's physiological response (e.g., heart rate) and subjective experience are greatly diminished. However, other studies reported that expressive suppression leads to an increase in other aspects of an emotional response as it might be discharged through other channels (Gross & Levenson, 1993). Numerous studies reported that people who employed emotional suppression are more likely to develop some kind of disease than those who are emotionally expressive (Gross, 2002; Gross & Levenson, 1993; Gross & Levenson, 1997). Gross and Levenson (1997) studied the acute effect of emotion regulation strategy by suppressing negative and positive feelings in female college participants using a film-watching method. Results revealed that suppression created a great reduction in expressive behavior, a corresponding decrease in somatic activity and heart rate associated with emotional stimulus in the films, and an increase in sympathetic nervous system activation.

Many studies demonstrated that using reappraisal as an emotional regulation strategy is more effective than suppression (Gross, 1998a; Gross, 2002; Gross & John, 2003). Gross (1998a) examined the comparison between *reappraisal* (a form of antecedent-focused emotion regulation) and *suppression* (a form of response-focused emotion regulation) with a control group. The objective was to study changes in all three response domains of experience, expression, and physiology. A total of 120 participants attended individual experimental sessions to watch a disgust-eliciting film under one of three conditions: reappraisal, suppression, and watch conditions. The participants were told what to do in the experiment. For example, participants under the reappraisal condition were told to "adopt a detached and unemotional attitude as you watch the film," whereas

participants in suppression condition were told not to show the feeling they had during the film clip so that the observers could not see what they were feeling. The results showed that participants under reappraisal conditions showed decreases in behavioral and subjective signs of emotional response and no increase in physiological response. The emotion regulation strategy used was quite effective. On the other hand, participants under suppression conditions showed a decrease in expressive behavior, an increase in sympathetic nervous system activation (physiological response), and no effect on subjective experience. Compared to watch participants, reappraisal participants showed fewer expressive signs of disgust and reported lower disgust experience, while suppression participants reported fewer expressive behaviors, experienced almost the same disgusting experience, and showed more sympathetic nervous system activation. To conclude, forms of antecedent-focused emotion regulation (e.g., reappraisal) may be better than forms of response-focused emotion regulation (e.g., suppression) in terms of subjective well-being.

Past research further showed that those who used the reappraisal strategy experienced and expressed greater positive emotion and lesser negative emotion, compared to individuals who employed suppression as an emotional regulation strategy (Gross & John, 2003). In addition, it was found that reappraisal is positively associated with sharing both positive and negative emotions to a social partner, suggesting that those who use this strategy have closer relationships with their peers. On the other hand, those who use suppression are less likely to share both positive and negative emotions to others, and are more inclined to avoid close relationships (Butler, 2004; Butler, Lee, & Gross, 2007; Gross & John, 2003). Furthermore, reappraisers exhibit fewer depressive symptoms, are more satisfied with their lives, are more optimistic, have higher self-esteem, higher levels of personal growth, and clearer purpose in life than those who habitually use suppression (Gross & John, 2003). In the same study, Gross and John (2003) found significant gender

differences in the use of suppression. More specifically, it was revealed that men reported greater use of suppression than women, and that there were no significant gender differences in the use of reappraisal. Corstensen, Gottman, and Levenson (1995) found that wives showed greater emotions and were more emotionally expressive than husbands who were more self-protective and defensive. In a review on emotion regulation, Nolen-Hoeksema (2012) reported gender differences in the use of emotion regulation strategies. While women were more likely to use various strategies to regulate their emotions such as rumination, fathers tended to use automatic non-conscious emotion regulation like non-conscious reappraisal.

Emotion regulation in parents.

The use of various emotion regulation strategies was found to be important for parents and to produce different effects. Previous research found that cognitive reappraisal used by parents had positive relationship with marital satisfaction, family warmth (Enebrink, Björnsdotterb, & Ghaderiab, 2013), effective discipline style (Buczek, 2015; Enebrink et al., 2013), and negative relationship with depressive symptoms and distress (Compas et al., 2015). Furthermore, the use of suppression is negatively correlated with marital satisfaction and family warmth (Enebrink et al., 2013).

Enebrink and associates (2013) attempted to examine the psychometric properties and norms of the Swedish-translated version of the Emotion Regulation Questionnaire (ERQ). The study involved 1,443 Swedish parents of children aged 10-13 years. The study found that the cognitive reappraisal subscale was positively correlated with marital satisfaction, family warmth, and appropriate discipline. On the other hand, the expressive suppression subscale was found to be negatively correlated with marital adjustment and family warmth, and had a negative relationship with harsh discipline. In addition, fathers were more likely to use expressive suppression than mothers in the study. Another study

examined the parents of children aged 5-17 years-old who were diagnosed with cancer in the previous two months from two hospitals in the Midwestern and Southern United States. It was found that in individual coping, the use of both primary coping (e.g., discussing treatment steps with medical staff, finding out information about the disease, etc.) and secondary coping (e.g., reappraisal, positive thinking, etc.) were associated with fewer depressive symptoms. Additionally, the use of secondary coping strategies by mothers and fathers in this study correlated with low level of distress both for themselves and their partner (Compas et al., 2015).

Emotion regulation and cultural context.

Previous research had shown that there are individual and group differences in the use of emotion regulation strategies (Gross, 2002; Gross & John, 2003). One aspect in which differences can occur is the deployment of emotion regulation strategies across cultures. Culture creates a value system that guides norms in regulating emotions such as emotion is a motivator of behavior (Matsumoto, Yoo, Nakagawa et al., 2008). The authors explored reappraisal and suppression across 23 countries and found that cultural values related to maintaining interpersonal relationship, valuing power differences, and supporting social order are highly associated with norms on the use of suppression. Suppression may be important in these cultures because it gives individuals time to think about the most appropriate emotional response in a particular situation. Another study compared differences in the level of well-being between two collectivistic ethnic groups in the use of suppression. The results showed that Mexican Americans who deployed suppression of positive emotions reported lower levels of well-being, whereas Chinese Americans did not. Suppression of negative emotions was not found to be related to well-being in both ethnic groups (Su et al., 2015).

In their literature review on cross-cultural validity of emotion suppression, Pisitsungkagarn and Busayaprateep (2013) explained two aspects of cross-cultural variation in emotion suppression. First, collectivism and individualism cultural orientations lead to different interpretations about emotion suppression. In individualistic cultures, people place more value on personal identity and independence; therefore, they are less likely to use emotion suppression because this strategy discourages them from expressing their true self and assertiveness. Thus, emotion suppression is viewed as less satisfying and inauthentic. It is also associated with poor psychological and physical adjustment. In terms of interpersonal effects, those who employ expressive suppression in individualistic cultures are regarded as less genuine and are less likely to receive social support. In short, individualism perceives suppression negatively. On the other hand, collectivistic cultures perceive suppression as being more congruent with their goals of maintaining social harmony and being interdependent. Suppressing negative emotions is a decent strategy to fulfill collectivistic goals and norms (Butler et al., 2007; Matsumoto et al., 2008; Soto, Perez, Kim, Lee, & Minnick, 2011; Zohar, 2013). Soto et al. (2011) revealed that expressive suppression is not linked to negative well-being in cultures in which suppression is very normative such as in East Asian cultures. In contrast, suppression leads to adverse psychological functioning for European Americans in whom expression is a norm. Second, Pisitsungkagarn and Busayaprateep (2013) upheld that "dialectical beliefs" or cultural scripts ease the destructive effect of suppression in collectivistic cultures. For example, the belief that reality can change makes people readily accept and tolerate negative emotions, viewing them as always changing and not stable. At the same time, people may use emotion suppression along with other emotion regulation strategies to balance out the adverse effects of suppression.

As suggested earlier, the degree of use of expressive suppression appeared to be significantly different across cultures. However, no difference emerged in the deployment of cognitive reappraisal (Gross & John, 2003; Soto et al., 2011). Gross and John (2003) revealed significant ethnic differences in the use of suppression among European Americans and three other minority ethnicities. Not surprisingly, European Americans showed the least usage of suppression whereas African Americans, Asian Americans, and Latinos did not differ from each other. Furthermore, no ethnic differences were detected in the use of reappraisal as an emotion regulation strategy.

Emotion regulation treatment and intervention.

Emotion regulation training has been effectively used in a number of psychotherapeutic approaches (Gross & Jazaieri, 2014; Pisitsungkagarn & Busayaprateep, 2013) such as: dialectical behavior therapy (Linehan, 1993), cognitive behavioral therapy (Beck, 1976), acceptance-commitment therapy (Hayes, Strosahl, & Wilson, 1999), and emotion-focused therapy (Greenberg, 2002). Skillful emotion regulation is believed to be important for everyone; therefore, psychoeducation on emotion regulation should be promoted before psychological problems are diagnosed (Gross & Jazaieri, 2014).

Measuring emotion regulation.

The most widely used measurement for emotion regulation process is the *Emotion Regulation Questionnaire* (ERQ), developed by Gross and John (2003). The ERQ measures individual differences in the use of the emotion regulation strategies of reappraisal and suppression. It is composed of two subscales: Reappraisal scale and Suppression scale. It is a 10-item measure in which the first six questions assess reappraisal factors and the last four assess suppression. Every item in the ERQ indicates clearly which emotion regulation strategy it intends to measure. Both subscales have items that ask about regulating positive and negative emotions, although the scales work

independently and are not related. Individuals who frequently regulate their emotions by reappraisal are less likely to use suppression, compared to those who occasionally use reappraisal.

Subjective Well-Being

In their book, *Well-being: Foundations of Hedonic Psychology*, Kahneman, Diener, and Schwarz (1999) equated well-being with hedonism (i.e., seeking pleasure and happiness). Hedonic psychology is the study of the causes of having a pleasant and unpleasant life or having pleasure or pain (Ryan & Deci, 2001). The pleasure-pain continuum in human experience can be assessed in different ways. The subjective definition of 'good life' is that people can use their own evaluation of their lives. They have a right to decide how worthwhile their lives are. By using this approach in defining good life, it resulted in the factor called "subjective well-being" (SWB) (Diener, 2000). SWB has been explored by researchers for a relatively long period of time (Diener, Suh, Lucas, & Smith, 1999). The construct is explained in different ways as SWB deals with cognitive judgments and affective aspects of positive experiences in people's lives (Diener, 1984). Hence, the literature on SWB used different words such as happiness, satisfaction, positive affect, and well-being.

According to Ed Diener (1984), one of the most prolific and influential writers on subjective well-being and life satisfaction, the terms happiness and well-being can, historically, be defined in three ways. First, external criteria or some standards have been used to define well-being. In other words, happiness and well-being are thought of as possessing some desirable objective states instead of being defined in terms of a subjective state. For example, happiness is defined as virtue, holiness, or success. It is defined in relation to some standards, according to the value judgment of the observers. Second, what

leads people to evaluate their life in positive terms is the focus of studies on happiness and well-being by social scientists. They look at the source of happiness that cause people to positively judge their lives or whatever made them satisfied with their lives. Thus, they included 'life satisfaction' in its definition. To get this evaluation of people's lives, researchers relied on the standard of self-assessment by respondents. Not unexpectedly, the subjective states of happiness and well-being have become popular. Third, the meaning of happiness and well-being led to the superiority of positive affect over negative affect. The focus of this definition is 'pleasant feelings', whether people are experiencing it at the moment or predisposed with it by not recognizing this kind of positive feeling at the present time (Diener, 1984).

Researchers have adopted the concept of 'satisfaction with life' and 'positive affect' in their studies on subjective well-being (Diener, 1984) and, subsequently, the structure of subjective well-being has been generally accepted in this way. Andrews and Withey (1976) posited that subjective well-being (SWB) is composed of life satisfaction judgment, positive affect, and negative affect. According to Diener, Larsen, Levine, and Emmons (1985), SWB has three separable components: (1) the presence of positive affect; (2) the absence of negative affect; and (3) life satisfaction. The first two components are affective aspects, whereas the latter component is a cognitive facet. Positive affect and negative affect are two independent factors that should be measured separately. *Positive affect* represents many pleasant moods and emotions that an individual experiences such as joy, elation, affection, and ecstasy. On the other hand, *negative affect* refers to individuals' evaluation of unpleasant moods and emotions in their lives. For example, they might experience guilt and shame, sadness, stress, and depression (Diener, Larsen et al., 1985). *Life satisfaction* refers to a global cognitive judgmental process of one's life (Diener, 2000; Diener et al., 1985). Shin and Johnson (1978) defined life satisfaction as "a global

assessment of a person's quality of life, according to his chosen criteria" (p. 475). Furthermore, the significant characteristic of life satisfaction is that it reflects individuals' own opinions about themselves; therefore, it is people's overall judgment of how satisfied they are with their present state of life, compared to their own standard.

Diener et al. (1999) defined subjective well-being (SWB) as "a broad category of phenomena that includes people's emotional responses, domain satisfactions, and global judgments of life satisfaction" (pp. 277). Diener (1984) posited that SWB has three hallmarks. First, it is subjective, which means that it stems from an individual's own experience (Campbell, 1976). Second, it includes the presence of positive factors. Third, it is an integrated judgment or a global assessment of the individual's life (Diener, 1984; Ryan & Deci, 2001).

In the current study, SWB was defined as people's evaluation of their lives, whether they are leading a desirable and rewarding one or not, in two broad aspects: an affective component, and a cognitive component. Operationally, SWB comprises the presence of positive affect, absence/low level of negative affect, and life satisfaction (global judgment).

Theoretical and empirical background.

A review by Wilson (1967, as cited in Diener et al., 1999) on avowed happiness in terms of measurements, dimensions, and correlations concluded that happy individuals arose from various advantages such as being young, healthy, well-educated, optimistic, and having high self-esteem and good social relations. According to Diener (2000), people's moods and emotions have an effect on how they react to the situations that happen in their lives. They also make broader judgments on how they satisfy their lives as a whole, as well as on each life domain such as work and marriage. SWB consists of the experience of many positive emotions and a few negative ones (positive affect and

negative affect), how they satisfy the important domains in their lives (domain satisfaction) such as work or marital satisfaction, and the global judgment of people's life (life satisfaction). In other words, SWB is composed of the 'affective' reactions of positive and negative affect and the 'cognitive' evaluation of life satisfaction and domain satisfaction. The components of positive and negative affect and life satisfaction are further explored in the following segment.

Positive and negative affects. People's emotional responses (e.g., moods and emotions) to what happens in their lives are called 'affects' (Diener, et al., 1999). In the 1960s, Bradburn developed a measurement for emotional well-being called *Affect Balance Scale* (ABS) which has since been widely used by happiness researchers. The author proposed that the component of happiness includes positive affect and negative affect which are actually independent of each other and, therefore, should be measured separately (Bradburn, 1969). Although they are independent, they showed incremental correlations with global well-being items. In using the ABS, the score is derived by subtracting negative affect from positive affect because, according to Bradburn's hypothesis, happiness is a global judgment derived by comparing people's positive affect with their negative affect. This means that having positive affect is not the same as not having negative affect. Therefore, to experience happiness, it is important to increase positive affect while decreasing negative affect.

Life satisfaction. Life satisfaction represents the evaluation process in which individuals cognitively judge their lives on the basis of their own unique standards (Pavot & Diener, 1993), suggesting that individuals may have different sets of standards for their own quality of life. Normally, people assign different weights to different components of their happiness. For example, good health and successful relationships are very important components of a good life, but people give importance to each component differently.

According to Diener et al. (1985), it is very important to assess people's overall judgment of their lives, not just specific domain satisfaction.

Theories on subjective well-being.

Relative to the study of well-being in past decades, a large amount of research derived the concept of well-being from two main theoretical perspectives: hedonic and eudaimonic approaches. *Hedonism* explains well-being in terms of subjective happiness and pleasure in life, whereas *eudaimonism* views well-being as being concerned with the existential challenges in life in order to fulfill one's own potential (Waterman, 1993). The hedonic view started with Aristippus, Hobbes, DeSade, and Bentham who believed that the goal of life came from the pursuit of pleasure, where individuals try to maximize pleasure, feel good, and satisfy self-interest (Ryan & Deci, 2001). Hedonic psychologists view well-being in terms of subjective happiness. A large amount of research on SWB in past decades focused on experiences individuals have when living their lives in pleasurable and positive ways, including affective and cognitive aspects (Diener, 1984). Researchers studied quality of life, happiness, life satisfaction, and positive affect (e.g., Diener, 1984; Keyes, Shmotkin, & Ryff, 2002). In short, SWB arose from the hedonic viewpoint stating that well-being relates to emotional state, both positive and negative affect, and life satisfaction. On a related vein, another concept, "psychological well-being" stemmed from the eudaimonic perspective that a good life is concerned with the existential challenges in life such as doing something worthwhile or following one's own potential (Ryan & Deci, 2001). While Bradburn (1969) translated it to mean happiness, eudaimonic psychologists interpreted well-being in another context, arguing that subjective happiness cannot be the same as well-being because pleasurable desires might not produce good outcomes for people (Ryan & Deci, 2001). According to the hedonic perspective, in looking at happiness in subjective terms, some people might consider themselves 'happy', despite

living a life full of obstacles and problems. Conversely, people who are surrounded with luxury and wealth might rate themselves as 'unhappy' (Lyubomirsky & Lepper, 1999).

Some theorists believe that people must satisfy their needs in order to be happy, and that prolonged unsatisfied needs lead to unhappiness (e.g., Maslow, 1954). *Needs theories*, such as that of Maslow, state that the fulfillment of universal needs will enhance individuals' level of happiness. Maslow proposed in his hierarchy of needs theory that individuals possess the same universal hierarchy of needs. Therefore, they should experience SWB if they are able to satisfy their needs at a particular level. For example, satisfying the need for belongingness and autonomy should lead to higher SWB. Tay and Diener (2011) examined the relationship between need fulfillment and SWB in terms of life satisfaction, positive affect, and negative affect. It was found that the fulfillment of needs was consistently associated with SWB across a sample of respondents in 123 countries. This means that there are universal need predictors of SWB.

Subjective well-being can be experienced when people achieve some of their important goals. Goals can be thought of as being more conscious than needs, with people being aware of them whereas, according to needs theories, some needs are inborn and unconscious (Diener et al., 1999). Michalos' (1985) *multiple discrepancy theory of satisfaction* suggests that individuals compare their current conditions with some standard such as other individuals' level of satisfaction or their own ideal level of satisfaction. The discrepancy between themselves and the standard affects their level of satisfaction (Michalos, 1985).

According to needs and goals theories, achieving needs or goals leads to happiness. It can be inferred that pleasure and pain, or happiness and unhappiness are closely related as people will have needs or goals only when they lack something they want. Therefore, the *pleasure and pain approach* suggests that missing something that one needs is a

living a life full of obstacles and problems. Conversely, people who are surrounded with luxury and wealth might rate themselves as 'unhappy' (Lyubomirsky & Lepper, 1999).

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prerequisite for happiness. The assumption in this approach is that the greater the

deficiency which absolutely creates sadness, the greater the happiness upon achieving the

goal (Diener, 1984). It can, thus, be said that people will be happiest when they experience

deficiency needs first, and then are able to satisfy those needs (Houston, 1981, as cited in

Diener, 1984). One of the reasons why pleasure and pain are closely related is because

people who experience high level of happiness are also those who initially experienced a

great amount of negative feelings (Diener, Larsen, et al., 1985). Another reason is because

of the level of goal commitment and investment. People will experience a high level of

unhappiness when they fail, especially if they had put high psychological investment and

effort to achieve their goals; but on the other hand, they will experience much happiness

when they succeed (Diener, 1984).

　　Top-down theory proposes that happy people are more likely to experience

situations in a positive way while *bottom-up approach* suggests that happiness is derived

from the accumulation of many small pleasures (Diener, 1984). The bottom-up approach is

concerned with identifying the external factors or situations that influence SWB. If

individuals can satisfy their needs as a result of a specific circumstance, they will be happy

(Diener et al., 1999). A number of pleasures have been reported as being linked to SWB;

however, the effect size produced by these external factors is very small (Andrews &

Withey, 1976). Therefore, researchers turn to the top-down approach, or the area that

focuses on characteristics of people, to explain the concept of SWB (Diener et al., 1999).

According to the same authors, one of the strongest and reliable predictors of SWB is

personality. Some people are predisposed with some personality traits that make them

happy or unhappy, because of inborn individual differences. This can be explained in

terms of long-term happiness which is influenced by stable personality factors rather than

external events (Diener et al., 1999). Some traits such as extraversion and neuroticism are

related to SWB, where extraversion has an effect on positive affect and neuroticism influences negative affect (Costa & McCrae, 1980; Watson & Clark, 1984). However, personality can also interact with the external environment to influence SWB.

Subjective well-being in parenthood.

The association between parenthood and well-being is still inconclusive. Some studies found that becoming a parent brings about happiness (Nelson et al., 2013). Others argued that becoming parents comes with a cost and it does not make them happier than before or happier than childless peers (Twenge et al., 2003).

On one note, parenthood relates to well-being because children influence many aspects in their parents' lives. Having children satisfies parents' basic human needs and fulfills parents' multiple social roles such as providing new goals for parents to achieve, giving meaning to life, and injecting positive emotions in parents' lives (Nelson et al., 2013). Having children can also influence parents' financial status and, by achieving or not achieving needs and goals, parenthood has an influence on well-being (Claxton & Perry-Jenkins, 2008; Galatzer-Levy et al., 2011; Nelson et al., 2013). In addition, past research had demonstrated that parenthood leads to an increase in level of happiness. More specifically, Nelson et al. (2013) compared parents with nonparents and found that parents were not only more satisfied with their lives and were happier, but they also reported more positive emotions than their nonparent counterparts.

On a different note, Nomaguchi and Milkie (2003) asserted that, compared to childless peers, becoming a parent can bring greater benefits and higher costs, depending on their social position. For example, becoming a mother brings greater costs like more housework and more disagreements in married women, compared to those who are childless; nonetheless, these mothers report lower level of depression. Some other studies

on parenthood and well-being found that there is no long-term effect on well-being over the course of the study (e.g., Galatzer-Levy et al., 2011).

Measuring subjective well-being.

Some researchers used only a single item to measure happiness. Especially in large-scale national surveys such as the European Social Survey and the British Household Panel Survey, a single item had been used to measure happiness. A sample question was, "how happy are you, taking all things together," using the rating scale 1 = *very happy* to 4 = *not at all happy* (Nelson et al., 2013). Other researchers used multi-item scales to measure subjective well-being such as the Positive Affect and Negative Affect Schedule (PANAS), the Satisfaction With Life Scale (SWLS), and the Subjective Happiness Scale.

The PANAS was developed by Watson et al. (1988) to assess positive affect and negative affect which comprise the affective state dimensions of subjective well-being. PANAS consists of two 10-item mood scales in which positive affect (PA) reflects mood descriptors about pleasurable engagements such as being enthusiastic and active, while negative affect (NA) represents subjective distress and unpleasurable engagements. There was an argument on using the labels 'positive affect' and 'negative affect' in that they were misrepresentative. Thus, the word "activation" was used interchangeably with 'affect' because PA and NA were defined to represent the activation of positive and negative affect, respectively (Watson, Wiese, Vaidya, & Tellegen, 1999). PANAS provides an independent measure between PA and NA. Their correlation is slight or moderate (Watson et al., 1988). There is an extended version of PANAS called PANAS-X (Watson, & Clark, 1994). It is a 60-item schedule of positive and negative affect which measures 11 specific affects such as fear, sadness, surprise, and self-assurance, together with the original PA and NA schedules. The children's form is also available as PANAS-C and PANAS-C/P.

Diener et al. (1985) developed the Satisfaction With Life Scale (SWLS) to measure respondents' global judgment of life satisfaction. The SWLS focuses on the cognitive component of subjective well-being, or satisfaction in life as a whole. Life satisfaction is a cognitive judgment of one's life in which people set their own unique standards for comparison. However, SWLS does not assess domain satisfaction such as work or health but it allows respondents to judge their domain satisfactions based on their own values and integrate them into their global judgment of life satisfaction (Pavot & Diener, 1993). The SWLS had been used to measure the levels of life satisfaction in many populations, including parents (Keizer et al., 2010).

Marital Satisfaction

The study of marital satisfaction has received much more attention than any topic in family studies, as can be seen from a number of scales and instruments designed to measure the aspects of marital quality (Johnson, 1995). Relationship satisfaction is a construct used to understand how relationship and marriage function both in marital research and treatment (Funk & Rogge, 2007). Spanier and Lewis (1980) used the term "marital quality" to refer to the concepts of marital satisfaction, adjustment, and happiness. The subjective evaluation of marital relationship has been labeled 'marital satisfaction' or 'marital happiness', whereas 'marital adjustment' can be explained in terms of both behavioral and evaluative aspects of the relationship. The degree of dyadic cohesion, troublesome dyadic differences, interpersonal tension, personal anxiety, and dyadic satisfaction are important indicators of the level of marital (dyadic) relationship (Spanier, 1976).

Theoretical and empirical background.

Bradbury et al. (2000) published a decade's review of key concepts and emerging trends in the nature of marital satisfaction and factors influencing it. The review was organized into two broad topics – interpersonal process in marriage and context of marital process. With regard to interpersonal process in marriage, most research focused on the aspects of marital interaction that is not immediately observed during marital conflict or problem-solving discussion. The key findings were in the areas of cognition, affect, and social support. In addition, to clearly understand such behavioral interactions, the context in which marital process operate must be considered.

According to Bradbury et al. (2000), most research on marital satisfaction in the 1980s and 1990s focused more on global patterns of marital interaction. In the cognitive dimension, fairly recent research found that the deterioration in marital relationship can arise from maladaptive attribution or interpretation of negative behaviors in spouses. Spouses in a satisfied marriage tend to attribute their partner's positive behavior as coming from his or her stable internal cause, and attribute negative behaviors as temporary external ones; in a dissatisfied marriage, negative behaviors are attributed as stemming only from their partner's internal cause. Having this kind of maladaptive attributions early in the marriage might adversely affect marital satisfaction. In addition, the relationship between attributions and marital satisfaction over time can predict deterioration in the marriage (Karney & Bradbury, 2000). In the social support dimension, past research had suggested that support processes in marriage plays an important role in marital satisfaction. The relationship between negative behaviors and marital outcomes is moderated by spouses' expression of affection, resulting in lower levels of marriage conflict (Bradbury et al., 2000). For example, husbands' expression of affection towards their wives and husbands' awareness of the wife and their relationship predict an increase in marital

satisfaction (Shapiro et al., 2000). In addition, compared to single-earner families, dual-income families reported greater stability and slightly more positive processes in marital satisfaction, father involvement, and partner support during the transition to parenthood (Menéndez, Hidalgo, Jiménez, & Moreno, 2011). In a similar vein, dual-income families created a benefit in terms of spouses helping each other to deal with problems arising from outside the marriage (Bradbury et al., 2000).

One of the most common contexts which new couples experience is the transition to parenthood. Children are believed to play an important role in how couples experience their marriage (Bradbury et al., 2000; Twenge et al., 2003). LeMasters (1957) opined that becoming a parent is one of the most difficult adjustments for married couples. The family must be reorganized for the addition of a new family member and, if seen as a crisis, may disrupt intimacy and communication in the marital relationship. Many studies indicated that the arrival of the first child leads to a decrease in marital satisfaction (Cowan & Cowan, 1992; Lawrence et al., 2008; Nomaguchi & Milkie, 2003), and which might affect couples' cognition to divorce (Cowan & Cowan, 1992). During the transition to parenthood, a number of difficulties can arise which, in turn, can have a detrimental effect on marital satisfaction. Some problems that couples experience are lack of sleep (LeMasters, 1957), more housework (Nomaguchi & Milkie, 2003), decline in leisure time (Belsky, Spanier, & Rovine, 1983; Claxton & Perry-Jenkins, 2008; Kurdek, 1993). In terms of gender differences, feeling guilty from not being a better mother (Rizzo & Schiffrin, 2013), unfair division of household labor (Dew & Wilcox, 2011), and more disagreement with one's spouse (Nomaguchi & Milkie, 2003) can happen in wives, whereas decrease in wife's sexual responsiveness and economic pressure can be experienced by husbands (LeMasters, 1957). These factors may lead to a decline in marital satisfaction. On a contrasting note, however, not all couples become less satisfied with

their marriage after the arrival of their first child (Dew & Wilcox, 2011; Shapiro et al., 2000).

In a meta-analytic review of parenthood and marital satisfaction, Twenge et al. (2003) found that, compared to nonparents, parents reported lower marital satisfaction and this difference in marital satisfaction could be seen noticeably among mothers of infants, in which 38% of them had high marital satisfaction compared to 62% of nonparents. The study also suggested that a decline in marital satisfaction after the birth of a child came significantly from role conflicts and restriction of freedom. The following section elaborates on the models of role conflict and restriction of freedom.

Role conflict model. The role conflict model explains that transition into parenthood can lead to social role reorganization. Traditionally, new mothers need to be responsible for caregiving and new fathers, mostly, are expected to work for the family. The value conflict arises when couples cannot agree on their traditional roles. For example, women might not want to abandon their own prestigious work to stay home and raise their child. Furthermore, having a new role as parents might add some stress and conflict to the relationship. Furthermore, women might perceive that they do not receive enough help from their husbands.

Restriction of freedom model. The restriction of freedom model explains that parents will sacrifice their own leisure time to take care of their children, inasmuch as children need a large amount of time and attention. In this sense, having children will lead to restriction of freedom for parents. They have to give away their own pleasure and leisure time to nurture their children. It had been concluded that two main reasons for decline in marital satisfaction after the arrival of the first child are: reduction in parents' time for their own pleasure (Dew & Wilcox, 2011; Twenge et al., 2003; Perry-Jenkins &

Claxton, 2008) and increase in perception of unfair division in housework (Dew & Wilcox, 2011).

Prior research had discovered factors that acted as buffers against changes in marital satisfaction over the transition to parenthood (e.g., Lawrence et al., 2008; Shapiro et al., 2000). Shapiro et al. (2000) conducted a longitudinal study on newlywed couples over six years to explore a number of aspects, namely: factors that can predict increase or stability in marital satisfaction for new mothers, husbands' expression of fondness and admiration toward their wives, husbands' awareness of their wives and their relationship, and wives' awareness of their husbands and their relationship. In addition, the study also attempted to examine husbands' negativity and criticism toward their wives, husbands' disappointments in marriage, and whether the chaotic life perceived by the husband or the wife decreased marital satisfaction for new mothers. On a related note, a study by Lawrence et al. (2008) found that planned pregnancy couples experienced stable marital satisfaction, whereas couples with unplanned pregnancies reported a decline in their marital satisfaction.

A review of the literature revealed that emotion regulation is one of the predictors of marital satisfaction (English, John, & Gross, 2013). For example, when partner employed emotional withdrawal, this way of regulating emotions led to a decrease in marital satisfaction (Levenson & Gottman, 1985). Husband who withdrew their emotion reported low levels of both negative and positive affect led to a decline in marital satisfaction. The most significant reduction in marital satisfaction was when husbands did not reciprocate their wives' negative feelings while wives responded to husbands' negative moods. One of the intervention that was conducted with couples during their transition to parenthood found that the two-day psycho-communicative-educational intervention provided to couples was effective in maintaining marital quality at one-year follow-up

condition (Shapiro & Gottman, 2005). The intervention had the objectives to help expectant and new parents strengthen their positive relationship while make a smooth transition in becoming a family. The workshop consisted of emotional communication, marital communication, turning toward one another, self-soothing and conflict management.

Measuring marital satisfaction.

A number of self-report measurements for marital or relationship satisfaction have been developed and made available. The *Marital Adjustment Test* (MAT) by Locke and Wallace (1959), the *Dyadic Adjustment Scale* (DAS) by Spanier (1976), and the *Couples Satisfaction Index* (CSI) by Funk and Rogge (2007) are examples of such measures. Among these, the CSI was created by using a pool of items from eight self-report measurements in relationship satisfaction, including the MAT, DAS, the *Quality of Marriage Index* (QMI) by Norton (1983), the *Relationship Assessment Scale* (RAS) by Hendrick (1988), the *Kansas Marital Satisfaction Scale* (KMS) by Schumm, Nichols, Schectman, and Grinsby (1983), the DAS-7 (Sharpley & Cross, 1982), the DAS-4 by Sabourin, Valois, and Lussier (2005), and the *Semantic Differential* (SMD) by Karney and Bradbury (1997). The CSI scale was developed by using item-response theory to reduce contaminating variances and redundancy from those scales and keep only items that offer the greatest precision in measuring relationship satisfaction. Funk and Rogge (2007) found that the CSI has higher levels of precision and greater power for detecting differences in satisfaction measurement than the MAT and the DAS.

Related Studies on the Key Variables

Perceived stress, spousal support, and marital satisfaction in first-time

mothers.

An investigation by Dew and Wilcox (2011) of first-time mothers aimed to find the

reasons behind a decline in their marital satisfaction. The study was done by gathering

information via telephone interviewing. Participants who completed the first two waves of

a survey from a nationally representative longitudinal sample called the National Survey of

Families and Households (NSFH) were randomly called. Participants must be married

women at childbearing age between 18 and 45 years, and are first-time mothers. They

should also have participated in both the first and second wave surveys, and must have

remained married through the second wave. There were a total of 569 participants who

were all first-time mothers. The research revealed three major findings. First, it was found

that, compared to their childless peers, the new mothers were more likely to face a decline

in marital satisfaction because after childbirth, they spent considerably less time with their

husbands. The researchers suggested that new mothers felt that motherhood came with a

reduction in time spent with their husbands and that many wives were unprepared for the

decline in their relationship intimacy after giving birth. Spousal time made couples

communicate, feel greater intimacy, and share valued activities together. This translates

into spousal time being viewed as one of the most important sources of marital happiness

for women. For many couples, marriage is a path to personal fulfillment and emotional

intimacy, and not just a path to childbearing, social support, and economic cooperation.

This outcome was basically derived from couples who had children shortly after their

marriage. Second, the research also found that changes in perceived unfairness regarding

housework mediated the link between motherhood and marital change. Perception of

unfairness arose when there was an increase in housework for new mothers. In short, this

perceived unfairness in housework reduced their marital satisfaction. Third, it was found that religiosity might have moderated the relationship between transition to motherhood and marital satisfaction. This was because the result was nearly significant in that new mothers who attended worship services below mean levels reported negative relationship in marital satisfaction. The researchers mentioned the limitations of their research in terms of using old data and single-item measurements in their study. Dew and Wilcox (2011) suggested that the couples could maintain their marital satisfaction after the arrival of their child if they wisely managed their time for their marriage, if mothers resisted the cultural value of intensive motherhood, and if fathers equally involved themselves in childrearing and housework.

Milkie (2011) commended the analysis of Dew and Wilcox on social and cultural influences on the marriage of new mothers. Milkie noted an interesting thing about parenthood; that is, even though some new mothers might report a decline in their satisfaction in marriage, their satisfaction in family life and finding meaning in life may increase, and that this increase may be higher than in childless wives. This is because new mothers are pleased with their new roles in spite of their being exhausted and overwhelmed with childcare and housework. Therefore, marital satisfaction should be treated as another aspect of new mothers' well-being. In her study, Milkie proposed three forms of social and cultural resources that can predict the type of mothers who can easily benefit from the recommendation of Dew and Wilcox (2011) about time allocation with spouses and more housework for husbands. First, new mothers can seek extended social support from family and friends who can help clean the house, babysit, prepare meals, and do some housework. Second, new mothers who already had prestigious careers before and after childbirth can use their bargaining power to maintain fair division of labor in terms of

housework. Third, living in a culture that is flexible about mothering would make possible the allocation of more time to sustain the marriage relationship.

An investigation of the changes in leisure patterns across the transition period to parenthood was attempted by Claxton and Perry-Jenkins (2008). The results showed that shared leisure time changed over time and that couples with high shared leisure time before the birth of the child exhibited the largest decrease in shared leisure time over the first year of parenthood, but still higher than that of couples with low shared leisure time at every time point. In addition, higher shared leisure time before the birth predicted more love and less conflict one year later. However, looking at changes in leisure time alone does not predict marital quality. Both level and change in shared leisure time are important in predicting marital outcomes. Shared leisure time such as a date night protects marital quality, according to Claxton and Perry-Jenkins (2011). The authors also suggested that shared leisure time can serve as a protective factor for marriage and the children. More specifically, spending time together can mean for a couple having a great time together with their child (e.g., taking care of their baby at home or in the park, or going out on vacation together). Another interesting result has to do with the unshared leisure time of fathers. Wives whose husbands continue to have the same amount of independent leisure time with friends throughout the year after the birth of their child reported lower marital quality. This is because the husbands did not allot much time for the family, as expected by their wives.

Perceived stress, spousal support, and marital satisfaction in the transition to parenthood.

Many previous studies on the decline in marital satisfaction after the arrival of the first child found that the transition to parenthood brought with it a decrease in marital interchange and an increase in marital conflict (Crohan, 1996; Twenge et al., 2003).

However, not all couples experience this decline. Shapiro et al. (2000) identified factors existing at the beginning of marriage which predicted a decline as well as stability in marital satisfaction over the transition to parenthood, or factors that buffer against decline in marital satisfaction after the first baby arrives. The participants of the longitudinal study had been followed for six years since they were married to identify factors that had an influence on the stability and decline in marital satisfaction. In Shapiro's study, 43 newlywed couples became parents and were designated as the experimental group, whereas the other 39 couples remained childless and were assigned to the control group. The couples were interviewed by means of the Oral History Interview (OHI) developed by Krokoff (1984, as cited in Shapiro et al., 2000). They were interviewed in their first year of marriage about their married life, their philosophy about it, and changes in their marriage over time. The participants were followed each year and were interviewed about their marriage and marital status. They were also asked to complete the Marital Adjustment Test (MAT) developed by Locke and Wallace (1959). When the wives were six-month pregnant and when their baby was three months old, they were asked to complete the MAT again.

The research reported that during the transition to parenthood, 67% of wives experienced a decline in their marital satisfaction, whereas 33% stated that their marital satisfaction was stable or has increased. The study also found that wives who became mothers reported a greater decline in marital satisfaction, compared to their childless counterparts. The wives who became mothers reported higher marital satisfaction in the beginning of their marriage, compared to their childless peers. In other words, high marital satisfaction in the early years of marriage may decline exponentially over time. Over the six years of the transition to parenthood in the study, the OHI was administered to predict decline *vs.* stability in the wives' level of marital satisfaction. The authors attributed

stability in marital satisfaction among wives who became mothers to factors such as the fondness and admiration received from their husbands and the level of awareness each spouse had on their partner. These factors may act as buffers against decline in marital satisfaction through stressful life transitions such as the birth of a child. Over the transition to parenthood, husbands who provide fondness and admiration should be more aware of this difficult time and try to hold the relationship together. And the wives who become mothers should also be more aware of their husbands' effort to be supportive, to ensure more satisfaction within their marriage. On the other hand, husbands' negativity towards their spouses, disappointments in their marriage, and chaos perceived by the couples indicate a decline in marital satisfaction, particularly for the wives who will become mothers. These factors reveal vulnerabilities in the relationship particularly in times of stress. It comes as no surprise if wives who become parents develop greater sensitivity to their husbands' negativity, marital disappointments, and perceived chaos and, subsequently, develop the thinking that their married life is out of control.

Perceived stress, positive affect, and life satisfaction in parents.

Nelson et al.'s (2013) investigation presented three distinct studies in an attempt to examine the relationship between well-being and parenthood. Study 1 used data from four waves of nationally representative U.S. respondents to compare overall happiness levels between parents and nonparents. In Study 2, the researchers compared the subjects' happiness levels on a moment-to-moment basis. And in Study 3, parents were examined on whether they derived more positive feelings from activities related to taking care of their children than other daily activities.

In Study 1, the researchers used the data from respondents who completed the World Values Survey (WVS) in which four waves of data were gathered in 1982, 1990, 1995, and 1999. The focus of this study was to look at the happiness levels of parents and

nonparents; in the process, single-item measures of happiness, life satisfaction, and thoughts about meaning in life were considered. The following questions were asked: (1) "Taking all things together, how happy are you?" (happiness); (2) "All things considered, how satisfied are you with your life as a whole these days?" (life satisfaction); (3) "How often, if at all, do you think about the meaning and purpose of life?" (meaning in life). The results showed that parents reported higher levels of all three aspects than nonparents. In addition, only fathers reported increased happiness and life satisfaction. Also, mid-range aged parents (ages 26-62 years) were more satisfied in their lives than their childless peers, whereas young parents (ages 17-25 years) were less satisfied.

Study 2 used an experience-sampling study to test respondents' emotional experience. All respondents were given an electronic pager and were requested to complete a response sheet once they were paged for the next seven days, five times a day, and returned back their response sheet every day. The response list included both positive and negative emotions. At the end of day 7, respondents completed the four-item Subjective Happiness Scale (Lyubomirsky & Lepper, 1999) for global happiness and the Center for Epidemiologic Studies Depression Scale (CES-D) developed by Radloff (1977). The results showed that parents reported higher levels of global well-being, momentary well-being (positive emotions), and fewer depressive symptoms than nonparents.

Study 3 compared the feelings of parents who take care of their children and perform other daily activities by using the within-subjects approach. Parents with at least one child aged 18 years old or younger and living together are the participants of this study. They completed the Day Reconstruction Method (DRM) developed by Kahneman, Krueger, Schkade, Schwarz, and Stone (2004) on their previous day activities from a list of 15 common daily activities. The researchers found that parents reported more positive

emotions and higher sense of meaning in life when they were taking care of their children than any other daily activity.

The Current Investigation

Overview.

In order to meet the objectives of the current investigation, three separate but interrelated studies were conducted, each with its own purpose and design.

Study I. Study I employed the correlation approach to investigate, compare, and identify which prediction model (direct, indirect, or full model) best explained the pattern of structural relationships hypothesized among perceived stress, spousal support, and marital satisfaction. It involved the multi-model analysis of three models.

Model 1 (see Figure 5) investigated the structural relationships among perceived stress, spousal support, and marital satisfaction. This hypothesized model derives from the role of stress in relation to marital satisfaction. Parents will experience stress when they appraise that environmental demands, such as demands from having a child, exceed their ability to cope. Most new parents report decreases in marital satisfaction and increases in conflict during the transition to parenthood (Crohan, 1996). However, House et al. (1988) reported that social support can act as a buffer to reduce exposure to stress and protect people's health and well-being. Moreover, spousal support was found to be one of the significant factors influencing marital satisfaction (Burke & Weir, 1977).

Model 2 (see Figure 6) investigated the direct and indirect structural relationships among perceived stress, spousal support, and marital satisfaction, being mediated by the emotion regulation strategies of cognitive reappraisal and expressive suppression. According to the theory of psychological stress and coping developed by Lazarus and his colleagues, stress produces different effects on each individual (Lazarus, 1993). The

cognitive appraisal and coping processes acted as mediators between stress and well-being (Folkman et al., 1986a). Emotion regulation also originates from this stress and coping theory (Gross, 2007). It is the manipulation of emotional antecedents or emotional responses of one's own self or of others (Gross & Levenson, 1993). According to the consensual process model of emotion regulation, the evaluation of emotional cues will trigger a set of emotional response tendencies. However, the modulation can be performed on these emotional response tendencies which will shape the final emotional responses (Gross, 1998a). Cognitive reappraisal (antecedent-focused strategy) and expressive suppression (response-focused strategy) were the emotion regulation strategies used in this present study. These emotion regulation strategies can affect both physical and psychological health. Therefore, two emotion regulation strategies were added to the model as mediators between perceived stress, spousal support, and marital satisfaction.

Model 3 (see Figure 7) investigated the direct and indirect structural relationships among stress, spousal support, and marital satisfaction, being mediated by (1) the emotion regulation strategies of cognitive reappraisal and expressive suppression and (2) the subjective well-being (SWB) components of positive affect, negative affect, and life satisfaction. Perceived social support was found to have both direct and indirect impact on life satisfaction through positive affect and negative affect (Matsuda, Tsuda, Kim, & Deng, 2014), where social support directly leads to positive affect, or an emotional aspect of SWB, and having positive affect consequently leads to an increase in level of well-being (Grennglass & Fiksenbaum, 2009, as cited in Matsuda et al., 2014). Therefore, the SWB components of positive affect and negative affect were added to the model. Life satisfaction represents the evaluation process in which individuals cognitively judge their lives with their own standards (Pavot & Diener, 1993). For example, happy marriage and successful career are important components of happiness but people give importance to

each component differently. Individuals may be happy with their lives even though their relationships are not successful. Therefore, to measure happiness, it is important to assess life satisfaction, not just specific domain (Diener et al., 1985). In addition, the top-down theory of SWB proposes that happy people are more likely to experience situations in a positive way. A person enjoys pleasures in life domains because he or she is happy. Therefore, domain satisfaction may derive from global life satisfaction, not vice versa (Andrews & Whitney, 1974 as cited in Diener, 1984).

Multi-model path analysis, confirmatory factor analysis, and structural equation modeling (SEM) were employed in achieving the aims of Study I. These procedures allow the direct comparison of the three models' goodness-of-fit.

Study II. Study II employed the identified best model of the causal relationship among perceived stress, spousal support, and marital satisfaction (from Study I) as the theoretical framework to assess the differences and similarities between Thai first-time mothers and fathers. Multi-group path analysis (via SEM) was used to achieve this.

Study III. Study III aimed to develop an intervention that reduces first-time parents' stress and promotes an increase in first-time parents' levels of spousal support, emotion regulation, subjective well-being, and marital satisfaction. A pretest-posttest randomly assigned two-group comparison study of measured outcomes from participants of the workshop was conducted. The use of pretest and posttest measures was required as the foundational research question revolved around within-subject changes in a combination of subjective well-being components (i.e., positive affect, negative affect, and life satisfaction) and marital satisfaction. The intervention entailed the use of an experimental and control group. The inclusion of a control group was required to examine whether any observed changes were attributed to participation in the workshop and were not likely due to outside factors.

Conceptual framework.

The conceptual framework of the current investigation comprises three models (see Figures 5-7) showing the hypothesized links among the core variables.
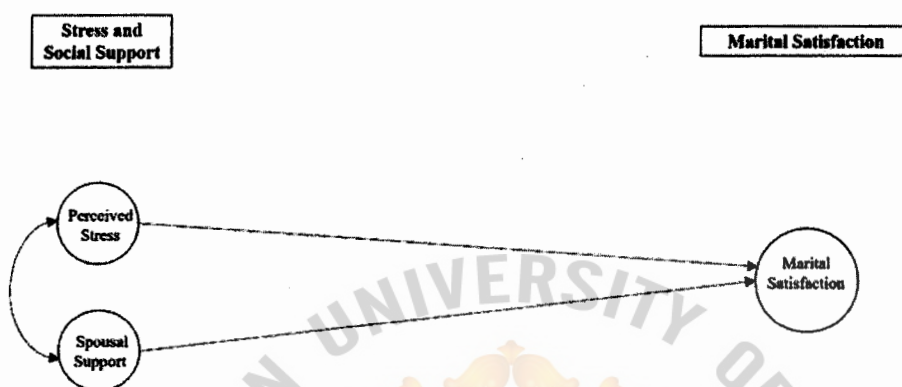
Figure 5. Model 1 shows the hypothesized direct impact of perceived stress and spousal support on marital satisfaction.
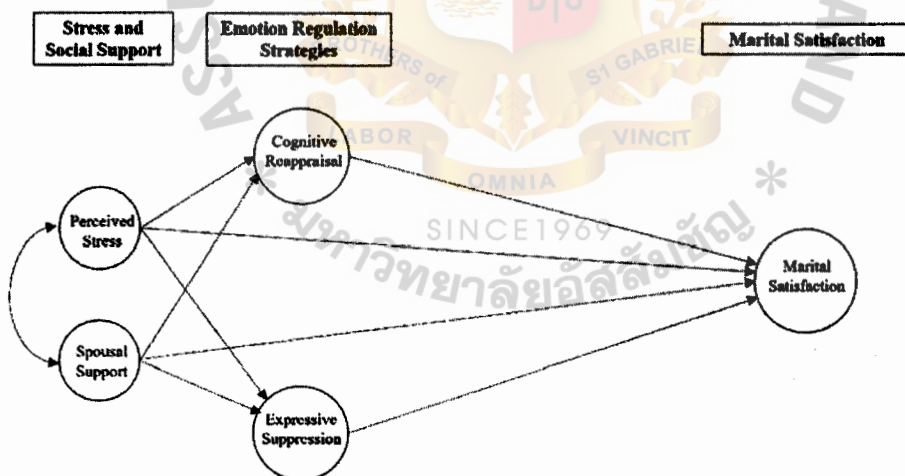
Figure 6. Model 2 shows the hypothesized direct and indirect impact of perceived stress and spousal support on marital satisfaction, being mediated by the emotion regulation strategies of cognitive reappraisal and expressive suppression.
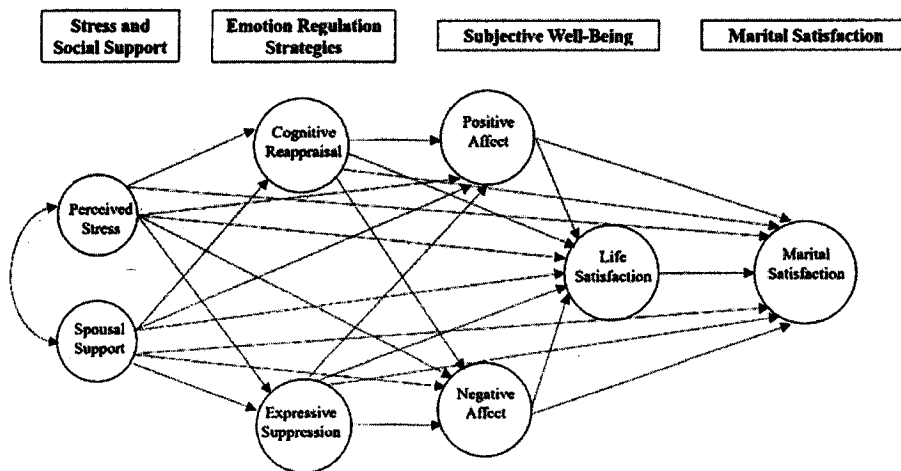
Figure 7. Model 3 shows the hypothesized direct and indirect impact of perceived stress and spousal support on marital satisfaction, being mediated by (1) the emotion regulation strategies of cognitive reappraisal and expressive suppression, (2) the subjective well-being components of positive affect, negative affect, and life satisfaction.

Research questions.

Based on the literature review and conceptual framework of the study, the

following research questions were generated:

1. Which prediction model (Model 1, Model 2, or Model 3) best explains the pattern

    of structural relationships hypothesized among perceived stress, spousal support,

    emotion regulation strategies (cognitive reappraisal, and expressive suppression),

    subjective well-being (positive affect, negative affect, and life satisfaction), and

    marital satisfaction in Thai first-time parents?

2. Are there gender differences in the pattern of structural relationships hypothesized

    among perceived stress, spousal support, emotion regulation strategies (cognitive

    reappraisal, and expressive suppression), subjective well-being (positive affect,

    negative affect, and life satisfaction), and marital satisfaction between Thai first-

    time mothers and fathers?

3. Is the first-time parent program workshop based on the results of the comparative analysis of conceptual models in Study I and Study II effective for Thai first-time parents? Does attending the workshop enhance the level of marital satisfaction in Thai first-time parents?

Research hypotheses.

Based on the research questions, the following research hypotheses were generated for testing.

H1:   Perceived stress and spousal support will have a *direct* influence on the level of marital satisfaction among Thai first-time parents.

H2:   Perceived stress and spousal support will have *indirect* influences on the level of marital satisfaction, being mediated by (1) the emotion regulation strategies of cognitive reappraisal and expressive suppression, and (2) the subjective well-being components of positive and negative affect and life satisfaction.

H3:   There are significant gender differences in the pattern of structural relationships hypothesized among perceived stress, spousal support, the emotion regulation strategies of cognitive reappraisal and expressive suppression, the subjective well-being components of positive and negative affect and life satisfaction, and marital satisfaction between Thai first-time mothers and fathers.

H4:   The first-time parent program intervention will enhance the level of marital satisfaction among Thai first-time parents, such that (1) first-time parents in the experimental group will have higher outcome variable scores than those in the control group; and (2) first-time parents in the experimental group can retain their outcome variable scores immediately, at post-intervention and two-week post-intervention.

CHAPTER III

Research Methodology

The current investigation utilized a quantitative research design comprising three separate but interrelated studies, each with its own set of objectives and methodology. Overall, this research aimed to examine the relationship among perceived stress, spousal support, and marital satisfaction in Thai first-time parents. This investigation also aimed to test the mediating effect of emotion regulation and subjective well-being on this relationship. Subsequently, out of three hypothesized path models, the identified best fit model was used to test for group differences between Thai first-time mothers and fathers in terms of the causal relationships among the key variables of perceived stress, spousal support, and marital satisfaction with the strategies of emotion regulation and the components of subjective well-being as mediators. Finally, the implementation of emotion regulation strategies and other significant factors from Study I and II by means of a researcher-developed intervention program was conducted via a pretest-posttest control group design. The following section describes the research design, participants, instrumentation, data collection procedure, and data analysis utilized in each study.

Study I and II

    Research design.

    Study I employed multi-model path analysis to evaluate and compare the efficacy of the aforementioned three models (see Figures 5-7) in order to identify the best-fit model that can best explain the pattern of structural relationships hypothesized among perceived stress, spousal support, and marital satisfaction. Subsequently, Study II employed the best-fit model identified in Study I as the theoretical framework to evaluate and compare the

influence of perceived stress and spousal support on marital satisfaction among Thai first-time mothers and fathers. Multi-group path analysis was used to achieve this.

Participants of the study.

Participants. Participants in Study I and II consisted of 599 Thai first-time parents living in Bangkok and suburbs, who are heterosexual and aged between 18 and 51 years.

Inclusion criteria. Thai first-time parents (mothers and fathers) were recruited, using a set of criteria. The inclusion criteria consisted of the following conditions: (1) must have a first child/children aged not older than 2 years old; (2) must be a heterosexual parent in either a marital or co-habitation relationship; (3) must be aged between 18 and 60 years; (4) must be able to read and write in Thai; (5) must participate in the study voluntarily; (6) has not been diagnosed as having depressive symptoms or is under mental health medication; and (7) their child/children must not have a chronic health or developmental issue. Convenience sampling technique was employed as the sampling method to recruit participants for the study. The target locations for the conduct of the survey were public places usually frequented by first-time parents such as hospitals, child-care centers, temples, parks, government and nongovernmental offices, and online parent communities.

Sample size. There has not been a definite definition or clarification of about how big the sample size for structural equation modeling (SEM) should be. In general, the sample size for SEM commonly runs in the 200-400 range for models with 10 to 15 indicators (Meyers, Gamst, & Guarino, 2013). Loehlin (1992) recommended collecting at least 100 cases, with 200 preferably for SEM model with two to four factors. Yet, the number of participants is to increase along the complexity of the model (Ho, 2006). Consequently, the sample size used in Study I and II was 559 participants consisting of first-time mothers ($N = 389$) and first-time fathers ($N = 170$).

Research instrumentation.

The research instrument employed in Study I was a self-administered survey

questionnaire in Thai. It can be said that the present study attempted to extend the

applicability of the selected standardized measures in a different cultural context. Detailed

description of each part of the survey questionnaire is presented in the following section.

Part 1. Personal Information. A researcher-constructed demographic

questionnaire was utilized to ask participants about demographic information such as

gender, age, education, marital status, occupation, income, and so on. Personal information

which can directly identify the respondent were excluded from the questionnaire.

Part 2. Perceived Stress Scale – Short Form (PSS-10). The original PSS,

developed by Cohen, Kamarck, and Mermelstein in 1983, is a widely accepted 14-item

instrument used to measure the degree to which events in one's life are perceived as

stressful (Cohen et al., 1983). The questions ask how often each situation happened in the

last month, using a five-point Likert-type scale ranging from 0 = *Never* to 4 = *Very often*.

In this study, the 10-item short form (PSS-10) was used. A sample question is, "*In the last*

month, how often have you been upset because of something that happened unexpectedly?"

The PSS-10 has good internal reliability, with a Cronbach's alpha of .78 in the

Harris Poll (Cohen & Williamson, 1988), and .91 in the eNation samples in 2006 and 2009

(Cohen & Janicki-Deverts, 2012) and good convergent and divergent validity was also

supported (Roberti, Harrington, & Storch 2006). The PSS-10 was translated for use with

Thai populations by Professor Nahathai Wongpakaran and Professor Tinakon

Wongpakaran of Chiang Mai University, Thailand. The Thai version of PSS-10 (T-PSS-

10) also has good internal reliability, with a Cronbach's alpha of .85 (Wongpakaran &

Wongpakaran, 2010).

Part 3. Multidimensional Scale of Perceived Social Support (MSPSS). The original MSPSS, developed by Zimet, Dahlem, Zimet, and Farley in 1988, is a 12-item scale used to measure perceived emotional and instrumental support and the perceived adequacy of the support received across three factors: family, friends, and significant other. For the purpose of this study, only four items from the 'significant others' subscale was utilized to measure spousal support and re-labeled as 'your spouse'. This is because the support received only from one's spouse is a focus of the study. Each item in the MSPSS is rated on a seven-point scale ranging from 1 = *Very strongly disagree* to 7 = *Very strongly agree*. Participants are asked to indicate how they feel about each statement. A sample item from the original measure is, "*There is a special person who is around when I am in need.*"

Zimet et al. (1988) found that the MSPSS has good internal reliability, with a Cronbach's alpha of .88 for the total scale, .91, .87, and .85 for the significant other, family, and friends subscales, respectively. The test-retest reliability for the whole scale is .85. The scale has a significant inverse relationship between participants' scores on perceived support from family and depression and anxiety. The MSPSS was translated for use with Thai populations by Professor Tinakon Wongpakaran and Professor Nahathai Wongpakaran of Chiang Mai University, Thailand. The revised Thai version of MSPSS also has good internal reliability, with a Cronbach's alpha of .92 (Wongpakaran & Wongpakaran, 2012).

Part 4. Emotion Regulation Questionnaire (ERQ). The ERQ, developed by Gross and John in 2003, measures individual differences in the use of two emotion regulation strategies: cognitive reappraisal and expressive suppression. This measure consists of 10 items focusing on how participants control their emotions, using a scale ranging from 1 = *Strongly disagree* to 7 = *Strongly agree*. The questions ask about

emotional experience and emotional expression. A sample item is, "*When I want to feel more positive emotion (such as joy or amusement), I change what I'm thinking about.*" Gross and John (2003) found that the ERQ has good internal reliability, with Cronbach's alphas of .79 and .73 for 'reappraisal' and 'suppression', respectively. Test-retest reliability for both scales is .69. ERQ also has a good convergent and discriminant validity (Grsoo & John, 2003). The ERQ was translated for use with Thai populations by Dr. Saovanee Noppaprach, with Cronbach's alpha of .79 and .57 for 'reappraisal' and 'suppression' subscales, respectively (Noppaprach, Blauw, & Tuicomepee, 2015).

  ***Part 5. Positive and Negative Affect Schedule* (PANAS).** The PANAS, developed by Watson, Clark, and Tellegen in 1988, is a 20-item measure of mood states, including both positive affect and negative affect. It is used to measure the extent to which participants have experienced each feeling and emotion during a specified timeframe. Positive affect (PA) refers to the general dimensions of mood descriptors such as 'active' and 'enthusiastic', whereas negative affect (NA) reflects the extent to which a person feels distressed and unengaged, leading to aversive mood states. Participants are asked to respond to a number of words that describe feelings and emotions where 10 descriptors of the PA scale include: attentive, interested, alert, excited, enthusiastic, inspired, proud, determined, strong, and active. The NA scale consists of: distressed, upset, guilty, scared, hostile, irritable, ashamed, nervous, jittery, and afraid. The PANAS is measured on a scale ranging from 1 = *Not at all* to 5 = *Extremely*. Computed Cronbach's alphas ranged from .86 to .90 for PA and from .84 to .87 for NA. The test-retest reliability for PA ranged from .47 to .68 and .39 to .71 for NA. It also reported a good convergent validity with various mood scales (Watson et al., 1988).

  ***Part 6. Satisfaction with Life Scale* (SWLS).** The SWLS, developed by Diener, Emmons, Larsen, and Griffin in 1985, is widely used to measure global life satisfaction.

Participants are asked to indicate how much they agree with the test items on a Likert-type scale ranging from 1 = *Strongly disagree* to 7 = *Strongly agree*. A sample item is, "*I am satisfied with my life*." In the original investigation, Cronbach's alpha was .87 and test-retest correlation coefficient was .82. SWLS achieved moderately strong correlations with other subjective well-being scales (Diener et al., 1985). The SWLS was translated for use with Thai populations by Dr. Itsara Boonyarit of Chiang Mai University, Thailand. The SWLS (Thai version) revealed good internal reliability with a Cronbach's alpha from .71 to .83.

Part 7. Couples Satisfaction Index – Short Form (CSI-16).   The original CSI, developed by Funk and Rogge in 2007, is a 32-item scale that aims to measure relationship satisfaction. The scale has various types of question formats and response scales derived from the use of item-response theory to keep only items that offer the greatest precision in measuring relationship satisfaction from a pool of items from eight self-report measurements such as the Marital Adjustment Test (MAT; Locke & Wallce, 1959) and the Dyadic Adjustment Scale (DAS; Spanier, 1976). Two short forms of CSI contain 16 items (CSI-16) and four items (CSI-4), respectively. One global item on a 7-point Likert scale is, "*Please indicate the degree of happiness, all things considered, of your relationship…*," with a scale ranging from 0 = *Extremely unhappy* to 6 = *Perfect*. Other questions ask the respondents how much they agree with the test item (e.g., "*My relationship with my partner makes me happy*.") on a 6-point Likert-type scale ranging from 0 = *Not at all true* to 5 = *Completely true*. The CSI-16 has good internal reliability, with a Cronbach's alpha of .98. CSI scales also achieved a good convergent validity with other satisfaction measures and excellent construct validity (Funk & Rogge, 2007).

Translation of the PANAS and CSI-16. For use with Thai respondents in the current study, the PANAS and CSI-16 were forward-translated from English to Thai and,

subsequently, back-translated from Thai to English. The processes of forward translation and back translation were conducted with the aim of achieving the greatest possible semantic and content equivalent to the original questionnaire by progressing through the following stages. First, the English version of the measurement was translated into Thai by the researcher (Juntita Watcharakitipong). Second, the Thai version was translated back into English by a Thai psychology professor fluent in English and Thai. Third, two English versions of each set of questionnaires (original and back translation) were rated by two bilingual and bicultural professionals in English and Thai. The professionals were asked to rate their agreement with the translated version. Finally, the inter-rater reliability between the agreements of the two professionals were calculated. The agreed Thai version questionnaires were administered to the participants only after the rate of agreement was satisfied and any differences in the process have been resolved.

Pretest. A pretest of the Thai version of all the instruments used in Study I and II were conducted prior to the data collection process on 10 participants (Thai first-time mothers and fathers). The pretest aimed to (1) ensure the readability, clarity, and comprehension level of the translated questionnaires from English to Thai; (2) test for internal consistency; and (3) evaluate potential discomforts that might arise while completing the questionnaires. As a result of the pretest, changes in the wordings of some questionnaire items were made. Upon the completion of questionnaire modification, the actual study involving 559 participants was conducted.

Data collection procedure.

The data collection procedure for Study I and II were basically conducted via the convenience sampling method with first-time parents living in greater Bangkok and suburbs, using a set of self-report structured questionnaires. Informed consent and the confidentiality clause were clarified to participants before data collection. Upon the

completion of data collection, every completed questionnaire was audited and screened; only valid ones were subjected to data analysis. A research assistant verified and inputted all the data entries in order to avoid any researcher bias or data manipulation.

Data analysis.

Scores from the completed questionnaires were encoded. In testing the best-fit of the causal model, structural equation modeling (SEM) was performed, being the widely used technique in looking into the relationships among the latent constructs which is, according to Lei and Wu (2007), well applicable to both experimental and non-experimental data across groups.

The model's goodness-of-fit (GFI) of SEM was examined so as to verify that the proposed causal model fits with the empirical literature using the GFI, chi-square value, and the root mean square error of approximation (RMSEA). Additional fit indices, namely: the Tucker-Lewis index (TLI), normed fit index (NFI), relative fit index (RFI), incremental fit index (IFI), and the comparative fit index (CFI) were calculated. According to Ho (2006), this is necessary in order to evaluate or verify that the causal model is correctly specified and that the hypotheses are ready for testing.

In Study II, multi-group path analyses (via SEM) were used to compare the path coefficients hypothesized for the best-fit model between first-time mothers and fathers.

Study III

Research design.

In Study III, a pretest-posttest, control group research design was employed. The study was carried out through a combined online course and workshop at the Salle De' Expo Exhibition Hall at Assumption University. The whole intervention took around six hours to complete. An online course was used because it was deemed more suitable for

first-time parents of very young children who have time constraints and unable to attend an all-day workshop. The selected workshop venue was deemed appropriate because of its provision of optimum privacy as well its being academically-oriented. The independent variable was a parenting program for Thai first-time parents, based on significant and salient variables from Studies I and II, whereas the dependent variables comprised subjective well-being, and marital satisfaction.

Participants were randomly assigned to the experimental or control group. The objective of random assignment was to ensure that the allocation of participants in either group involved equal chances. In the present study, the workshop was set for two rounds or two batches, and two weeks apart, in which participants had the option to register for the more convenient batch. Consequently, those who registered for the first batch belonged to the experimental group and those in the second batch belonged to the control group.

To increase external validity, the current study used several strategies to maximize intervention integrity, by trying to deliver the intervention as intended, as suggested by Horner, Rew, and Torres (2006). These techniques included developing an intervention detailed manual (see Appendix H), and maintaining consistency during the implementation of the intervention by training the research assistants and using the same researcher to deliver the intervention program in order to eliminate potential discrepancies in the delivery of the intervention. Furthermore, compliance of participants with intervention rules, as suggested by Horner et al. (2006), was duly monitored and reinforced.

Participants of the study.

The participants of the study consisted of Thai first-time parents (both fathers and mothers) living in Bangkok and suburbs who met the prescribed set of inclusion criteria. Power analyses was based on normative standard deviations for a primary outcome measure – the well-being scale at a significance level of .05, a desired power of .8, and a

medium to large effect size (i.e., Cohen's $d = .6$ indicating that at least 26 persons per group would be required to detect a significant difference for the intervention *vs.* control group (Cohen, 1992). On this note, the intended total number for this study was aimed at 52 participants (26 in each group) to determine the impact of the intervention program. Finally, the experimental group was composed of 28 participants (male: n=15, 54%; female: n=13, 46%), while the control group was composed of 30 participants (male: n=10, 33%; female: $n = 20$, 67%).

Trainers and training program.

The trainers of the intervention program consisted of two graduate students in counseling who have passed basic and advanced skills courses at the Assumption University Graduate School of Psychology program. These trainers were trained to follow the manual specifications on the experimental procedure and demonstrated their ability and accuracy in implementing the procedure in a role-play situation. Two independent raters consisting of counseling psychology professors assessed their performance and accuracy.

A six-hour first-time parent skills training program designed to enhance the well-being and marital satisfaction of Thai first-time parents was developed and implemented. The contents of the program were based on the results of Study I and II, where stress reduction, spousal support, emotion regulation strategies, and components of subjective well-being were hypothesized to play important roles in increasing the level of marital satisfaction in Thai first-time parents. Cognitive behavior theory was utilized as a basis in the conduct of the program. Furthermore, the findings of Study I and II on emotion regulation strategies (i.e., cognitive reappraisal), stress reduction techniques, and support from spouse were integrated in the process of program development. Additional contents of the program were adapted from *And Baby Makes Three*, an official book for the "Bringing Baby Home Program", devised by John Gottman and Julie Gottman (2007). As

depicted in the workshop manual, the program embraces three steps as follows (see Appendix H):

    Step 1. Knowledge. A first-time parent knowledge orientation was set up for two hours. Its contents were all delivered online comprising slide presentations (online courses) and comprehensive tests. Participants were, then, checked for their knowledge before moving to Step 2. The initial session started with an introduction about the workshop, pretest, four-module online course, and online tests to check for participants' understanding. The topics included:

    a) *The truth about the transition to parenthood and the importance of healthy relationship between parents.* Theoretical perspectives and research findings on the transition to parenthood were presented. For example, having a new baby brings happiness to parents; however, it may also be so stressful that some parents cannot go through with it or, in some cases, they experience a decline in their couple relationship, increase in conflict, and hostility in their family life. Happy and strong relationship between parents leads to a healthy baby.

    b) *Stress.* Stress and its effects were presented. The sources of stress derived from both positive and negative major life events were explored. Parental stressors were mentioned along with the fact that each individual differently evaluates the level of stress from the same situation. Additionally, various stress reduction techniques were introduced.

    c) *Emotion regulation:* Topics included the definition of emotion, forms of basic emotions, and knowing that emotions are important. This module introduced the 'cognitive triangle' in which our thoughts, emotions, and behaviors are interrelated. Emotion regulation strategies were introduced with examples.

d) *Spousal support:* Topics included possible changes in intimacy and the need for spousal support. The role of support that can buffer against stress and increase the effectiveness of coping strategies was explored. Various techniques aimed at increasing support for our partner were introduced.

Step 2. Skills training. The participants were asked to attend a three-hour workshop that included various activities aimed at practicing stress reduction, emotion regulation, and supportive communication. The emotion regulation strategy of cognitive restructuring or reframing was introduced, along with techniques to soften the bringing up of problems, calm oneself down by self-soothing, being an active listener, using 'I'-message, and so on. A variety of activities were facilitated as part of skill training, including role play, scenarios, exercises, and games.

Step 3. Application and practice. Within one hour, the participants discussed with trainers how best to apply parenting skills in their daily lives as well as in teaching their children. This will help ensure that participants will apply the techniques learned in skills training. There was a review of the workshop and, finally, the posttest which entailed the final completion of the same questionnaires to determine any changes in the participants, as a result of the intervention. At two weeks after the intervention, participants were requested, via email or telephone, to complete the same set of questionnaires to assess program effectiveness.

Research instrumentation.

All the Thai versions of the instruments selected for use in Study I and II were distributed to the participants for completion. Moreover, demographic information (e.g., age, gender, marital status, etc.) were gathered at this stage.

Data collection procedure.

Prior to the start of the first-tine parent skill training program, all trainers underwent a 16-hour training session facilitated by this researcher on how to run and implement the program. To ensure their high performance and accuracy, they were assessed by two independent raters during the program.

The researcher recruited 60 Thai first-time parents who met the inclusion criteria presented in Study I and II to participate in the study. This process was accomplished by sending emails to participants who voluntarily gave their contact information in the survey conducted in Study I and II, inviting them to participate in the program. In addition, they were informed that the study involves an outreach skill training program which may help them become happier persons. Information about the workshop was set up using Facebook page "Happy Life for New Parents Workshop" and was shared by many parents' clubs, parents' communities, and psychologists' network to prospective participants. On the day of registration, participants were asked to voluntarily sign a consent form, complete a pretest questionnaire, and register themselves to either the first batch (treatment group) or second batch (control group), with approximately 30 parents in each group.

The first-time parents in the experimental group received links to the online course and comprehensive test, which took about two hours to complete, and were required to finish the test before the workshop day. On the workshop day, participants received the structured skills training program which lasted for four hours, while those in the control group were asked to complete the posttest questionnaires online before watching online courses. Finally, all participants in the experimental group were asked to complete the same set of questionnaires as a posttest exercise. Two weeks later, they were asked to complete the follow-up questionnaires. All data were collected and analyzed. The summary of the experimental research design applied in Study III is presented in Table 1.

Table 1

The Pretest-Posttest Control Group Research Design for Study III

Group	Pretest	Couple Skills Training Intervention	Posttest	Follow-up Test (2 weeks)	Couple Skills Training Intervention
Experimental Group	O_1	X	O_2	O_3	
Control Group	O_1		O_2	O_3	X

Data analysis.

Descriptive statistics such as percentages and means $\pm$ S.D. or S.E were conducted to analyze the subjects' characteristics and well-being scores. To test the hypotheses, the following inferential statistical methods were employed:

1) MANOVA was utilized to test hypothesis 4 (part 1), "First-time parents in the treatment group will have higher outcome variable scores than those in the control group."

2) MANOVA with repeated measurement was utilized to test hypothesis 4 (part 2), "First-time parents in the treatment group can retain their outcome variable scores immediately at post-intervention and two-week post-intervention."

CHAPTER IV

Results

Overview (Objectives of the Study)

As stated in Chapter I, the primary objectives of the present research include the following:

1. To investigate which prediction model (Model 1 – direct model, Model 2 – indirect model, or Model 3 – full path model) best explains the pattern of structural relationships hypothesized among perceived stress, spousal support, emotion regulation strategies (cognitive reappraisal, expressive suppression), subjective well-being (positive affect, negative affect, life satisfaction), and marital satisfaction among Thai first-time parents;

2. To investigate gender differences in the pattern of structural relationships hypothesized among perceived stress, spousal support, emotion regulation strategies (cognitive reappraisal, expressive suppression), subjective well-being (positive affect, negative affect, life satisfaction), and marital satisfaction between Thai first-time mothers and first-time fathers;

3. To investigate the efficacy of a first-time parents' skills training intervention program workshop (based on the results of the comparative analysis of the three conceptual path models in Study I and Study II) in enhancing the level of subjective well-being and marital satisfaction in Thai first-time parents.

Pretest.

Prior to the actual study, a pretest of the Thai version of the study's questionnaire was conducted to check for errors and for readability. A total of 10 first-time parent participants, 4 males and 6 females aged between 28 and 39 years from a playgroup and a child care center were invited to fill in the Thai version of the study's questionnaire and, in

particular, to report any errors and/or difficulties in the readability of the questionnaire items. Upon verifying that the questionnaire was free from errors and comprehension problems, the researcher proceeded to conduct the actual study.

Missing data analysis.

After the study's data were inputted into the statistical program, a frequencies analysis was conducted to check the percentage of missing data associated with the 65 items generated from the Perceived Stress Scale (PSS-10), the Multidimensional Scale of Perceived Social Support (MSPSS) – Significant Others subscale, the Emotional Regulation Questionnaire (ERQ), the Positive and Negative Affect Scale (PANAS), the Satisfaction with Life Scale (SWLS), and the Couple Satisfaction Index (CSI-16). Missing data generally occur because some participants refuse to answer some of the scale items, or may have become recalcitrant, tired, or bored. Whatever the reasons may be for their refusal to answer the scale items, the existence of missing data can be problematic for data analysis. However, as pointed out by Tabachnick and Fidell (2001), for large data sets (as in the present study), the problems are less serious if only a few data points, say 5% or less, are missing. However, for small to moderately sized data sets, the problems caused by many missing data points can be very serious.

In order to check for the percentage of missing data for the questionnaire items, 'missing values' analysis (via a statistical program) was conducted. Table 2 presents the pattern of missing data for the questionnaire items. It can be seen from Table 2 that there are no items with 5% or more missing values. The frequency of missing values is 1 (0.2%).

Table 2

Percentage of Missing Values for the Questionnaire's Items

Univariate Statistics

	N	Mean	Std. Deviation	Missing		No. of Extremes	
				Count	Percent	Low	High
pss1	559	1.8426	.94863	0	.0	0	25
pss2	559	1.6261	1.02028	0	.0	0	24
pss3	559	1.8873	1.02644	0	.0	0	0
pss4	559	1.5295	1.04664	0	.0	0	31
pss5	559	1.6762	.95826	0	.0	0	28
pss6	559	1.5546	.96543	0	.0	0	13
pss7	559	1.6673	.96545	0	.0	0	30
pss8	558	1.5591	.96020	1	.2	0	20
pss9	559	1.7996	1.05372	0	.0	0	36
pss10	559	1.4544	1.11409	0	.0	0	28
ss1	559	5.7370	1.51477	0	.0	32	0
ss2	559	5.8873	1.45290	0	.0	23	0
ss3	558	5.3620	1.59492	1	.2	0	0
ss4	559	5.3900	1.61033	0	.0	41	0
erq1	559	5.3345	1.37074	0	.0	55	0
erq2	559	4.8587	1.68370	0	.0	29	0
erq3	559	5.4562	1.32435	0	.0	52	0
erq4	559	2.8140	1.71157	0	.0	0	0
erq5	559	4.9982	1.49131	0	.0	11	0
erq6	559	4.4150	1.62734	0	.0	0	0
erq7	559	5.4061	1.34459	0	.0	45	0
erq8	559	5.3220	1.22258	0	.0	40	0
erq9	559	4.8479	1.49436	0	.0	9	0
erq10	559	5.3596	1.23620	0	.0	40	0
p1	558	3.4140	.91993	1	.2	21	0
p2	559	2.3113	.99266	0	.0	0	13
p3	559	2.8301	1.03076	0	.0	0	0
p4	559	2.5045	1.04533	0	.0	0	22
p5	559	3.7782	.95085	0	.0	9	0
p6	559	2.4079	1.13039	0	.0	0	0
p7	559	2.0107	1.06250	0	.0	0	0
p8	558	1.8011	.97814	1	.2	0	34
p9	558	3.5591	.99509	1	.2	17	0
p10	558	3.8154	1.03093	1	.2	0	0
p11	559	2.6082	1.12578	0	.0	0	38
p12	559	3.3578	1.01286	0	.0	31	0

p13	559	2.0250	1.14037	0	.0	0	0
p14	559	3.5814	1.13754	0	.0	30	0
p15	558	2.1380	1.01193	1	.2	0	0
p16	559	3.5456	1.07479	0	.0	25	0
p17	559	3.9857	.95591	0	.0	0	0
p18	559	2.4007	1.15953	0	.0	0	31
p19	559	3.4919	1.01927	0	.0	19	0
p20	558	2.0645	1.02191	1	.2	0	0
swls1	559	4.5725	1.50912	0	.0	29	0
swls2	559	4.9374	1.39302	0	.0	17	0
swls3	559	5.1986	1.38538	0	.0	71	0
swls4	559	4.9141	1.51449	0	.0	18	0
swls5	559	4.2880	1.87639	0	.0	0	0
csi1	559	3.3274	1.21600	0	.0	36	15
csi2	559	3.4973	1.16532	0	.0	32	0
csi3	559	3.2147	1.39137	0	.0	0	0
csi4	559	3.2004	1.39992	0	.0	0	0
csi5	558	3.2061	1.43269	1	.2	0	0
csi6	559	3.0555	1.52593	0	.0	0	0
csi7	559	3.2558	1.38114	0	.0	0	0
csi8	558	3.1129	1.35183	1	.2	0	0
csi9	559	2.9106	1.42653	0	.0	0	0
csi10	559	3.2719	1.36039	0	.0	0	0
csi11	559	3.3649	1.28651	0	.0	53	0
csi12	558	3.6756	1.30617	1	.2	18	0
csi13	559	3.6351	1.26686	0	.0	20	0
csi14	559	3.6762	1.32686	0	.0	21	0
csi15	558	3.6487	1.37374	1	.2	27	0
csi16	558	3.6201	1.30009	1	.2	26	0

For the present data set with a sample size of 559 participants, the presence of so few missing values obviously posed no serious problems for the study's data analyses. However, given the possibility of non-randomness in the pattern of missing data (i.e., the refusal to endorse one item could have affected the decision not to endorse another item in the questionnaire), it was decided to employ an imputation method that preserve all cases for further analysis. According to Tabachnick and Fidell (2001), the EM (expectation-

maximization) method offers the simplest and most reasonable approach to imputation of missing data. As such, this method was employed to impute values to replace the missing data points. The EM method is an iterative process which uses two steps for each iteration. The E step computes expected values conditional on the observed data and the current estimates of the parameters. The M step calculates maximum likelihood estimates of the parameters based on the values computed in the E step.

The psychometric properties of the Thai-translated versions of the Positive and Negative Affect Scale (PANAS) and the Couple Satisfaction Index (CSI-16).

As the above two scales were translated into the Thai language for the present study, it was necessary to investigate their psychometric properties in order to ensure both their cross-cultural reliability and construct validity prior to their use in the present study. This involved the following steps.

Step 1: Reliability analysis. In order to investigate the internal consistency of the Thai-translated versions of the PANAS and the CSI-16, as well as the other four scales of the PSS-10, the MSPSS – Significant Others subscale, the ERQ, and the SWLS, the items representing these six scales were item analyzed. Two criteria were used to eliminate items from these factors. First, an item was eliminated if the inclusion of that item resulted in a substantial lowering of Cronbach's alpha (Walsh & Betz, 1985). Second, an item was considered to have an acceptable level of internal consistency if its corrected item-total (I-T) correlation was equal to or greater than 0.33 (Hair, Anderson, Tatham, & Black, 1997). Table 3 presents the items for the six scales, together with their I-T coefficients and Cronbach's alphas. (See Appendix I-1)

Table 3

*The PANAS, the CSI-16, the PSS, the MSPSS, the ERQ, and the SWLS Factor Items Together
With Their Corrected Item-Total Correlations and Cronbach's Alphas*

The Positive and Negative Affect Scale (PANAS) – Positive affect.

Item-Total Statistics

	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
• Interested (p1)	.337	.912
• Excited (p3)	.513	.903
• Strong (p5)	.637	.895
• Enthusiastic (p9)	.718	.890
• Proud (p10)	.751	.887
• Alert (p12)	.679	.892
• Inspired (p14)	.753	.887
• Determined (p16)	.767	.886
• Attentive (p17)	.695	.891
• Active (p19)	.718	.890

Cronbach's alpha = .903

The Positive and Negative Affect Scale (PANAS) – Negative affect.

Item-Total Statistics

	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
• Distressed (p2)	.642	.867
• Upset (p4)	.647	.866
• Guilty (p6)	.591	.870
• Scared (p7)	.665	.865
• Hostile (p8)	.553	.873
• Irritable (p11)	.631	.867
• Ashamed (p13)	.508	.877
• Nervous (p15)	.569	.872
• Jittery (p18)	.665	.865
• Afraid (p20)	.619	.868

Cronbach's alpha = .881

Couple Satisfaction Index.

Item-Total Statistics

	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
• Degree of happiness of your relationship (csi1)	.736	.968
• Things between you and your partner are going well (csi2)	.680	.969
• Our relationship is strong (csi3)	.852	.966
• My relationship with my partner makes me happy (csi4)	.876	.966
• I have a warm and comfortable relationship with my partner (csi5)	.883	.966
• I really feel like part of a team with my partner (csi6)	.867	.966
• How rewarding is your relationship with your partner? (csi7)	.868	.966
• How well does your partner meet your needs? (csi8)	.859	.966
• To what extent has your relationship met your original expectations? (csi9)	.827	.967
• In general, how satisfied are you with your relationship? (csi10)	.883	.966
• Interesting – Boring (csi11)	.724	.968
• Bad – Good (csi12)	.748	.968
• Full – Empty (csi13)	.798	.967
• Sturdy – Fragile (csi14)	.737	.968
• Discouraging – Hopeful (csi15)	.735	.968
• Enjoyable – Miserable (csi16)	.732	.968

Cronbach's alpha = .969

Perceived Stress Scale (PSS-10).

Item-Total Statistics

	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
• In the last month, how often have you been upset because of something that happened unexpectedly? (pss1)	.558	.784
• In the last month, how often have you felt that you were unable to control the important things in your life? (pss2)	.637	.773
• In the last month, how often have you felt nervous and "stressed"? (pss3)	.623	.775
• In the last month, how often have you felt that things were going your way? (pss5)	.284	.816

	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
• In the last month, how often have you found that you could not cope with all the things that you had to do? (pss6)	.472	.794
• In the last month, how often have you been able to control irritations in your life? (pss7)	.294	.815
• In the last month, how often have you felt that you were on top of things? (pss8)	.385	.804
• In the last month, how often have you been angered because of things that were outside of your control? (pss9)	.597	.778
• In the last month, how often have you felt difficulties were piling up so high that you could not overcome them? (pss10)	.682	.765

Cronbach's alpha = .809

Perceived Spousal Support (MSPSS).

Item-Total Statistics

	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
• There is my spouse who is around when I am in need (ss1)	.836	.931
• There is my spouse with whom I can share my joys and sorrows (ss2)	.898	.913
• I have my spouse who is a real source of comfort to me (ss3)	.886	.915
• There is my spouse who cares about my feelings (ss4)	.828	.935

Cronbach's alpha = .942

Emotion Regulation Questionnaire (ERQ) – Cognitive Reappraisal.

Item-Total Statistics

	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
• When I want to feel more positive emotion (such as joy or amusement), I change what I'm thinking about (erq1)	.511	.802
• When I want to feel less negative emotion (such as sadness or anger), I change what I'm thinking about (erq3)	.589	.785
• When I'm faced with a stressful situation, I make myself think about it in a way that helps me stay calm (erq5)	.481	.811
• When I want to feel more positive emotion, I change the way I'm thinking about the situation (erq7)	.635	.774
• I control my emotions by changing the way I think about the situation I'm in (erq8)	.641	.775

	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
• When I want to feel less negative emotion, I change the way I'm thinking about the situation (erq10)	.644	.774

Cronbach's alpha = .816

Emotion Regulation Questionnaire (EQR) – Expressive Suppression.

Item-Total Statistics

	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
• I keep my emotions to myself (erq2)	.391	.694
• I control my emotions by not expressing them (erq6)	.583	.427
• When I am feeling negative emotions, I make sure not to express them (erq9)	.479	.577

Cronbach's alpha = .668

Satisfaction with life (SWLS).

Item-Total Statistics

	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
• In most ways my life is close to my ideal. (swls1)	.746	.856
• The conditions of my life are excellent. (swls2)	.785	.849
• I am satisfied with my life. (swls3)	.799	.846
• So far I have gotten the important things I want in life. (swls4)	.724	.861
• If I could live my life over, I would change almost nothing. (swls5)	.623	.895

Cronbach's alpha = .886

Examination of the Cronbach's alphas for the PANAS, the CSI-16, the PSS-10, the MSPSS, the ERQ, and the SWLS and their items' I-T correlations showed that one item from the PSS (pss4: *In the last month, how often have you felt confident about your ability to handle your personal problems?*) and one item from the ERQ (eqr4: *When I am feeling*

positive emotions, I am careful not to express them) have very low corrected item-total

correlations and that their deletion would increase their respective scale's Cronbach's

alpha substantially. These two items were deleted from their respective scales. Thus, the

Perceived Stress Scale (PSS-10) is represented by 9 items, the Multidimensional Scale of

Perceived Social Support (MSPSS) – Significant Others subscale is represented by 4 items,

the Emotional Regulation Questionnaire (ERQ) is represented by 9 items, the Positive and

Negative Affect Scale (PANAS) is represented by 20 items (positive affect – 10 items,

negative affect – 10 items), the Satisfaction With Life Scale (SWLS) is represented by 5

items, and the Couples Satisfaction Index (CPI-16) is represented by 16 items. Each of the

eight factors of perceived stress, spousal support, cognitive reappraisal, expressive

suppression, positive affect, negative affect, life satisfaction, and marital satisfaction was

then computed by summing across the items that make up that factor and their means

calculated. Table 4 presents the means and standard deviations for these 8 computed

variables as a function of the participants' gender. (See Appendix I-2)

Table 4

Means and Standard Deviations for the Eight Computed Variables as a Function of the
Participants' Gender

	First time fathers		First time mothers		
	Mean	*SD*	*Mean*	*SD*	Md-pt.
• Spousal support	5.79	1.29	5.51	1.47	4
• Life satisfaction	4.86	1.21	4.75	1.31	4
• Marital satisfaction	3.55	0.95	3.27	1.17	3.5
• Perceived stress	1.51	0.57	1.74	0.64	2.0
• Cognit. reappraisal	5.32	0.95	5.31	0.97	4.0
• Express. suppress.	4.95	1.12	4.60	1.28	4.0
• Positive affect	3.67	0.69	3.48	0.76	3.0
• Negative affect	2.17	0.71	2.25	0.76	3.0

As can be seen from Table 4, both first-time fathers and mothers (1) perceived that they received high spousal support from their respective spouses (mean scores are above the scale's mid-point), (2) reported high satisfaction with their lives (mean scores are above the scale's mid-point), (3) reported that they experienced low level of stress (mean scores are below the scale's mid-point), (4) reported that they employed both cognitive reappraisal and expressive suppression to regulate their emotions (mean scores are above the scales' mid-point), and (5) reported high positive affect (mean score is above the scale's mid-point) and low negative affect (mean score is below the scale's mid-point.) In terms of their reported level of marital satisfaction, first-time fathers reported higher level of satisfaction (mean score is above the scale's mid-point) than first-time mothers (mean score is below the scale's mid-point.)

Step 2: Confirmatory factor analysis (CFA). Confirmatory factor analysis was carried out to evaluate the factor structures of the PANAS and CSI-16. These two scales were translated into Thai for the purpose of the present study. CFA, unlike exploratory factor analysis, allows the researcher to explicitly posit an *a priori* model (e.g., on the basis of the factors identified in the western-based original scale) and to assess the fit of this model to the observed data.

Participants and procedure.

The total sample of 559 participants (male: $n=170$, 30.4%; female: $n=389$, 69.6%) participated in this stage of the study. Their ages ranged from 18 to 51 years, with a mean age of 32.97 years. In terms of their education status, 76 participants (13.6%) do not have a university degree, 285 participants (51.0%) have a Bachelor's degree, 177 participants (31.7%) have a Master's degree, and 21 participants (3.8%) have a degree higher than a Master's degree.

In terms of their marital status, the majority of the participants were married (n=525, 93.9%); 21 of the participants (3.8%) reported that they were separated, 9 were divorced (1.6%) and 4 were widowed (0.7%). In terms of the length of time they have been married, the majority of the participants reported that they have been married between 1 to 4 years (n=357, 63.8%), 96 participants (17.2%) reported that they have been married between 4 to 6 years, and 82 participants (14.7%) reported that they have been married for more than 6 years.

In terms of the number of hours worked per week, the majority of the participants (n=335, 59.9%) reported that they worked more than 30 hours per week, 62 participants (11.1%) reported that they worked between 11 to 30 hours per week, 71 participants (12.7%) reported that they worked between 1 to 10 hours per week and 91 participants (16.3%) reported that they did not work. In terms of their family income the majority of the participants (n=342, 61.2%) reported they earned less than 100,000 Baht per month, 124 participants (22.2%) reported they earned 100,001 Baht to 200,000 Baht per month, and 93 participants (16.6%) reported they earned more than 200,000 Baht per month.

In terms of the participants' children's ages, nearly one-third of the children (n=182, 32.5%) were aged between 1 and 6 months, 122 children (21.8%) were aged between 7 months and 1 year, 118 children (21.1%) were aged between more than 1 year and 1.5 years, 121 children (21.7%) wee aged more than 1.5 years to 2 years, and 15 children (2.7%) were aged more than 2 years to 2.5 years. In terms of the main responsibility of taking care of their children, the majority of the participants (n=353, 63.1%) reported that they have the main responsibility of taking care of their children, while 206 of the participants (36.9%) reported they were not primarily responsible for taking care of their children. Of the 559 participants, 219 (39.2%) reported that their spouses have the main responsibility of taking care of their children, and 340 (60.8%)

reported that their spouses do not have the main responsibility of taking care of their children; 247 (44.2%) reported that other family members have the main responsibility of taking care of their children, and 340 (60.8%) reported that other family members do not have the main responsibility of taking care of their children; 81 (14.5%) reported that the nanny has the main responsibility of taking care of their children, and 478 (85.5%) reported that the nanny does not have the main responsibility of taking care of their children; and 3 (0.5%) reported that other people, like child care centers, have the main responsibility of taking care of their children, and 555 (99.5%) reported that other people do not have the main responsibility of taking care of their children. (See Appendix I-3)

Materials.

Participants responded to the questionnaire described earlier in Chapter III.

Assumptions underlying confirmatory factor analysis.

As Study I employed confirmatory factor analysis (CFA) to confirm the factor structures of the PANAS and the CSI-16, it was necessary to determine whether the collected data meet the assumptions of this multivariate statistical test. Failure to meet the test's underlying assumptions could lead to either a loss of statistical power (i.e., the test is less sensitive) or an increase in the probability of committing Type I error. The most important assumptions underlying confirmatory factor analysis include:

- *Normality* - Departures from normality can diminish the observed correlations between measured variables, and thus degrade the factor solution.

- *Outliers* – The presence of outliers can have a substantial impact on the factor solution. Thus, it is prudent to examine all results for the presence outliers and to eliminate significant outliers before conducting CFA.

Tests of assumptions.

- *Normality* - A simple diagnostic test for normality is based on the skewness value.

The statistical *z* value for the skewness value is calculated as:

$$Zskewness = \frac{skewness}{\sqrt{s.e.\ skewness}}$$

If the calculated *z* value exceeds the specified critical probability value, then the distribution is non-normal. For example, a calculated *z* value exceeding $\pm$ 2.58 will result in a rejection of the assumption of normality at the .01 critical probability (alpha) level. A calculated *z* value exceeding $\pm$ 1.96 will result in a rejection of the assumption of normality at the .05 alpha level. Based on the obtained skewness statistics, the *z* values for the 65 measurement items (p1 to csi16) are less than $\pm$ 2.58. The data file containing the computed *z* scores for the first 10 items (p1 to p10) are presented here.

Variable	skewness	se	z_skewness
p1	-.493	.103	-1.54
p2	.625	.103	1.95
p3	-.020	.103	-.06
p4	.456	.103	1.42
p5	-.536	.103	-1.67
p6	.420	.103	1.31
p7	.869	.103	2.01
p8	1.077	.103	2.36
p9	-.397	.103	-1.24
p10	-.696	.103	-2.17

Thus, it can be concluded that the distribution of these 10 items (and all 65 items) does not depart significantly from normality.

- *Outliers* – Outliers are cases with very large *z* (standardized) scores on the variables. For large samples (such as in the present study), cases with *z* scores of 3.29 or greater ($p<.001$) are potential outliers. The equation for converting data values to standard scores is:

$$z = \frac{\text{(data point - mean)}}{\text{standard deviation}}$$

A section of the data file containing the computed z scores for the variables p1 to

p10 is presented here (**Zp1** to **Zp10**.)

	Zp1	Zp2	Zp3	Zp4	Zp5	Zp6	Zp7	Zp8	Zp9	Zp10
1	-2.4252	-.31357	2.10519	-1.4392	.23329	-.36082	-.01010	-.82004	1.44986	1.15085
2	-.44953	-.31357	.16487	-1.4392	.23329	.52383	-.01010	-.82004	-.56124	.18053
3	.63829	-1.3210	-.80528	-1.4392	1.28499	-.36082	-.95127	-.82004	.44431	.18053
4	.63829	-.31357	.16487	-.48259	-.81840	-.36082	-.95127	-.82004	-.56124	-.78980
5	-.44953	-.31357	.16487	-.48259	-.81840	-.36082	.93107	-.82004	-2.5723	-1.7601
6	-.44953	-.31357	-.80528	-.48259	.23329	-1.2455	-.95127	-.82004	-.56124	.18053
7	1.72611	.69382	-.80528	-1.4392	.23329	.52383	-.01010	-.82004	.44431	-.78980
8	1.72611	-.31357	.16487	-.48259	.23329	.52383	-.01010	-.82004	.44431	.18053
9	.63829	-1.3210	.16487	-1.4392	.23329	-1.2455	-.95127	-.82004	.44431	-.78980
10	.63829	-.31357	2.10519	1.43067	.23329	-1.2455	-.95127	-.82004	-.56124	1.15085

Examination of these z values (and all 65 z values) showed no outliers, i.e., there

are no cases with z scores of 3.29 or greater ($p<.001$).

After determining that the data set meets the assumptions of the technique of

confirmatory factor analysis, CFA was conducted to evaluate the factor structures of the

PANAS and the CSI-16.

For the 3-factor measurement model, the three latent constructs of positive affect,

negative affect, and marital satisfaction were represented by the following number of

items: PANAS: positive affect – 10 items, negative affect – 10 items; CSI-16 – 16 items.

While it can be argued that a greater number of indicators per latent construct will

represent that latent construct to a higher degree than fewer indicators, in practice,

however, too many indicators make it difficult, if not impossible, to fit a model to data

(Bentler, 1980). Based on Hair et al.'s (1997) suggestion that three is the preferred

minimum number of indicators to represent a construct, it was decided to limit the number

of indicators to three for each of the model's latent construct. This was achieved by using

item parcels to represent the original number of items for each latent construct.

Item parcels. This technique involves summing responses to individual items and then using scores on these summed parcels in the latent variable analysis. For example, on the basis of a reliability analysis of the 10 items representing positive affect (PANAS), the items were divided into three parcels (3 items for 2 parcels and 4 items for 1 parcel), and the items in each parcel were then summed to form three measured variables to operationalize the latent construct. Adapting the procedure described by Russell, Kahn, Spoth, and Altmaier (1998), the development of these item parcels involved the following steps:

1. A reliability analysis on the 10 items assessing 'positive affect' was conducted.

2. The items were rank-ordered on the basis of their corrected item-total (I-T) correlation coefficients.

3. Items were assigned to parcels in a way that equated the average I-T coefficient of each parcel of items with the factor.

Specifically, items ranked 1, 2, and 10 were assigned to parcel 1; items ranked 9, 8, and 3 were assigned to parcel 2; and items ranked 4, 5, 6, and 7 were assigned to parcel 3. This procedure ensured that the resulting item parcels reflected the underlying latent factor of 'positive affect' to an equal degree. Item parceling was also applied to the Perceived Stress Scale (PSS-10) – 9 items, the Emotional Regulation Questionnaire (ERQ): Cognitive Appraisal – 6 items, the Positive and Negative Affect Scale (PANAS): Positive Affect – 10 items, Negative Affect – 10 items; and the Couple Satisfaction Index (CSI-16) – 16 items.

Figure 8 presents the 3-factor measurement model representing the three latent constructs of positive affect, negative affect (PANAS), and marital satisfaction (CSI-16). For this model, all factor loadings were freed, indicators were allowed to correlate with only one factor, and the three factors were allowed to correlate (equivalent to oblique

rotation).
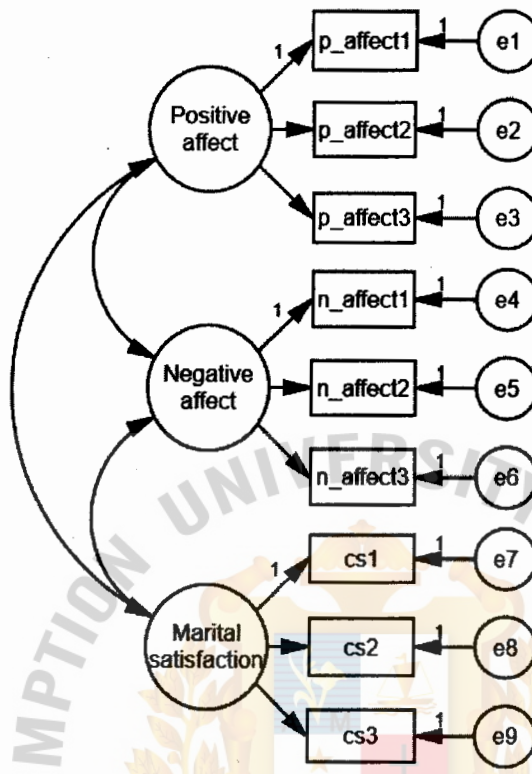
Figure 8. 3-factor measurement model (with item parcels) representing the latent constructs of positive affect (PANAS), negative affect (PANAS), and marital satisfaction (CSI-16).

Results.

Test of construct validity (CFA). The purpose of this phase of the study was to

evaluate the 'fit' of the 3-factor measurement model (with item parcels) representing the

latent constructs of positive affect (PANAS), negative affect (PANAS), and marital

satisfaction (CSI-16) (Figure 8). The χ^2 goodness-of-fit test (via structural equation

modeling) was employed to test the null hypothesis that the sample covariance matrix for

the model was obtained from a population that has the proposed model structure. Table 5

presents the goodness-of-fit indices for this 3-factor model. (See Appendix I-4)

Table 5

χ² Goodness-of-Fit Value, Normed Fit Index (NFI), Incremental Fit Index (IFI), Tucker-Lewis Index (TLI), Comparative Fit Index (CFI), and Root Mean Square Error of Approximation (RMSEA)

Model	χ² (*N*=559)	*df*	*p*	NFI	IFI	TLI	CFI	RMSEA
Null Model	4705.290	36	<.001	0.00	0.00	0.0	0.00	0.482
3-Factor Model	174.518	24	<.001	0.963	0.968	0.952	0.968	0.106

The chi-square goodness-of-fit value for the 3-factor model is statistically significant, χ^2 (*df*=24) = 174.518, *p*<.001, suggesting that the co-variance matrix for this posited model does not fit the sample co-variance matrix well. However, the incremental fit indices (Normed Fit Index – NFI, Incremental Fit Index – IFI, Tucker-Lewis Index – TLI, Comparative Fit Index – CFI) are all above 0.90 (range: 0.952 – 0.968). These fit indices indicate that the 3-factor model provided a very good fit relative to its null or independence model (i.e., the posited model represented between 95.2% to 96.8% improvement in fit over its null or independence model), and support the hypothesized structure of the posited 3-factor model. The RMSEA value of 0.106 is just outside the range suggested by Browne and Cudeck (1993) and indicates that the model has some error of approximation, compared to the population covariance matrix.

While the above fit indices can be used to evaluate the adequacy of fit in CFA, it must be noted that this is only one aspect of model evaluation. As pointed out by Marsh and his colleagues (e.g. Marsh, 1996; Marsh & Balla, 1994; Marsh, Hau, & Wen, 2004), model evaluation should be based on a subjective combination of substantive or theoretical issues, inspection of parameter estimates, goodness-of-fit, and interpretability. Table 6 presents the standardized regression weights, residuals, and explained variances for the 3-factor model.

Table 6

Standardized Regression Weights, Explained Variances, and Residual Variances for the Three Latent Constructs' (Positive Affect, Negative Affect, Marital Satisfaction) Indicator Variables

Parameter	Standardised Regression Weights	Explained Variances	Residual Variances
Positive affect (PANAS)			
p_affect1<--- Positive affect	.872	.761	.239
p_affect2<--- Positive affect	.840	.705	.295
p_affect3<--- Positive affect	.869	.755	.245
Negative affect (PANAS)			
n_affect1<--- Negative affect	.859	.738	.262
n_affect2<--- Negative affect	.834	.696	.304
n_affect3<--- Negative affect	.824	.679	.321
Marital satisfaction (CSI-16)			
cs1<---Marital satisfaction	.951	.905	.095
cs2<---Marital satisfaction	.978	.957	.043
cs3<---Marital satisfaction	.973	.946	.054

The standardized regression coefficients (factor loadings) for the measurement indicators are all positive and significant by the critical ratio test, $p<.001$. Standardized loadings ranged from 0.824 to 0.978 ($M = 0.889$). These values indicate that the indicator variables hypothesized to represent their respective latent constructs – positive affect, negative affect, marital satisfaction – did so in a reliable manner. The percentage of residual (unexplained) variances for the 9 indicator variables ranged from 4.3% (i.e. 95.7% of the variance explained) (cs2) to 32.1% (i.e. 67.9% of the variance explained) (n_affect3). (See Appendix I-4)

Test of convergent validity. Convergent validity of the Thai-positive affect, negative affect, and marital satisfaction scales can be assessed from the confirmatory

factor analysis model by determining whether each indicator variable's estimated standardized loading/coefficient with its underlying latent construct is significant (greater than twice its standard error) (Anderson & Gerbing, 1988). In other words, a standardized coefficient is significant ($p<.05$) if its associated critical ratio (C.R.) value is $\geq \pm 1.96$. Examination of the standardized loadings for the indicator variables representing positive affect, negative affect, and marital satisfaction showed that they are all statistically significant by the C.R. test, indicating convergent validity for these three scales.

Convergent validity of the Thai-translated positive affect, negative affect, and marital satisfaction scales can also be assessed via the Pearson's product-moment correlation analysis to investigate the direction and strength of the relationships between positive affect, negative affect, and marital satisfaction with the participants' reported levels of perceived stress, spousal support, and life satisfaction. Table 7 presents the results of this analysis. (See Appendix I-5)

Table 7

Pearson's Product-Moment Correlation Coefficients Between Positive Affect, Negative Affect, and Marital Satisfaction With the Participants' Reported Levels of Perceived Stress, Spousal Support, and Life Satisfaction

Correlations

		Perceived stress	Spousal support	Life satisfaction
Positive affect	Pearson Correlation	-.306	.239	.332
	Sig. (2-tailed)	.000	.000	.000
	N	559	559	559
Negative affect	Pearson Correlation	.600	-.227	-.355
	Sig. (2-tailed)	.000	.000	.000
	N	559	559	559
Marital satisfaction	Pearson Correlation	-.443	.776	.652
	Sig. (2-tailed)	.000	.000	.000
	N	559	559	559

It can be seen from Table 7 that positive affect and marital satisfaction are positively and significantly correlated with the participants' reported levels of spousal support and life satisfaction. It can also be seen that negative affect is positively and significantly correlated with the participants' reported level of perceived stress. The direction and significance of these relationships are in line with the conceptual definitions of positive and negative affect and marital satisfaction and support the convergent validity of the Positive and Negative Affect Scale and the Couples Satisfaction Index-16.

Results of Study I

Which prediction model (Model 1 – direct model, Model 2 – indirect model, or Model 3 – full path model) (see Chapter II) best explains the pattern of structural relationships hypothesized among perceived stress, spousal support, emotion regulation strategies (cognitive reappraisal, expressive suppression), subjective well-being (positive affect, negative affect, life satisfaction), and marital satisfaction among first-time parents?

Three hierarchical models were posited and were evaluated and compared as to their efficacy in explaining the influence of the identified antecedent factors of perceived stress and spousal support on the participants' level of marital satisfaction, both directly and indirectly, being mediated by their reported levels of cognitive reappraisal, expressive suppression, positive affect, negative affect, and life satisfaction. Evaluation and comparison of the 'fit' of these three 'nested' models were conducted systematically.

Participants.

The entire sample of 559 participants (male: $n=170$, 30.4%; female: $n=389$, 69.6%) participated in this stage of the study. Their ages ranged from 18 years to 51 years, with a mean age of 32.97 years.

Materials.

Participants responded to the questionnaire described in Chapter III.

Model 1: Direct Model - Direct relationships between perceived stress and

spousal support with marital satisfaction among Thai first-time parents.

This hypothesized model derives from the role of stress and spousal support in

relation to marital satisfaction. First-time parents will experience stress once they appraise

that environmental demands, like new roles and responsibilities from being a mother or a

father, exceed their ability to cope. Most new parents report decreases in marital

satisfaction and increases in conflict during this transition to parenthood (Crohan, 1996).

On the other hand, social support was found to be a buffer in the stress appraisal process

by preventing the particular environmental event to be perceived as very stressful

(Lazarus, 1966). Moreover, spousal support, or a helping relationship between husband

and wife was a factor that had a significant effect on marital satisfaction because this

healthy relationship helps buffer stress and enhance marital satisfaction (Burke Weir,

1977). Figure 9 presents the direct model in which perceived stress and spousal support are

hypothesized to have direct influences on the criterion variable of marital satisfaction

among first-time parents.
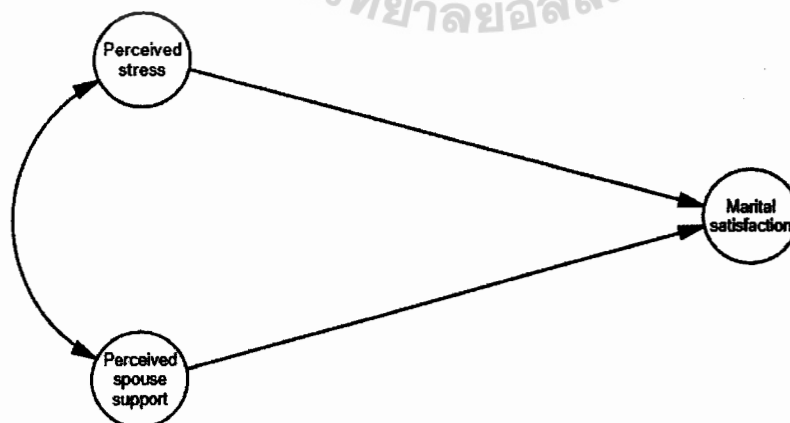
Figure 9. Direct model: The relationship between perceived stress and spousal support with
marital satisfaction among first-time parents.

Model 2: Indirect Model - Indirect relationships between perceived stress and spousal support on the participants' level of marital satisfaction, being mediated by their reported levels of cognitive reappraisal and expressive suppression.

According to the consensual process model of emotion regulation, the evaluation of emotional cues or a specific situation will trigger a set of emotional response tendencies, which will, then, assist the reaction to the perceived situation (Gross, 1998a). However, different emotion regulation strategies can be employed along the process of emotion generation to produce different emotional responses. The two out of five emotion regulation strategies: (1) cognitive reappraisal which belongs to antecedent-focused strategies and (2) expressive suppression which is one of response-focus strategies have been widely studied and reported to produce different effects. Many studies demonstrated that using reappraisal as an emotional regulation strategy is more effective than suppression (Gross, 1998a; Gross, 2002; Gross & John, 2003). The use of reappraisal was found to have a positive relationship with marital satisfaction, whereas the use of suppression has a negative correlation with marital satisfaction (Enebrink et al., 2013). Figure 10 presents the indirect model in which perceived stress and spousal support are hypothesized to have indirect influences on the criterion variable of marital satisfaction among first-time parents, being mediated by their reported levels of cognitive reappraisal and expressive suppression.
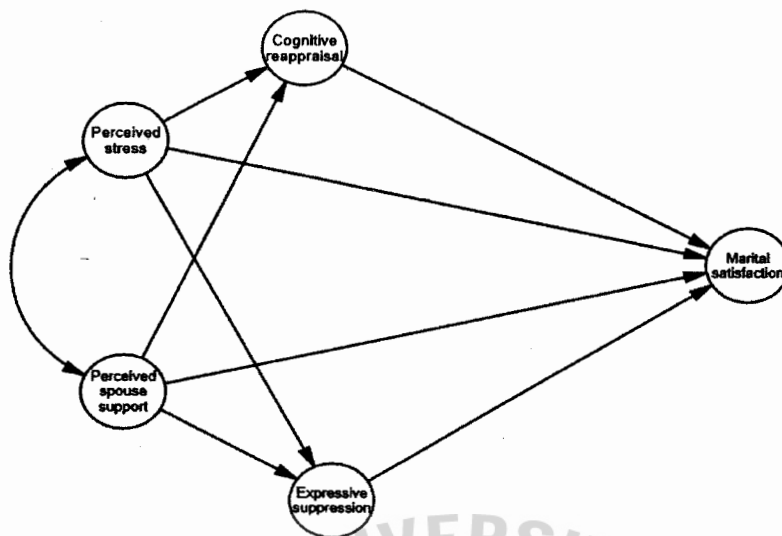
Figure 10. Indirect model: The relationship between perceived stress and spousal support with the criterion variable of marital satisfaction among first-time parents, being mediated by their reported levels of cognitive reappraisal and expressive suppression.

Model 3: Full Path Model - Path relationships between perceived stress, spousal support, cognitive reappraisal, expressive suppression, positive affect, negative affect, and life satisfaction with marital satisfaction among first-time parents.

As the different strategies of emotion regulation produce different consequences, these consequences affect our happiness. Past research showed that cognitive reappraisal produced greater positive emotion, lesser negative emotion, more satisfaction with their lives, fewer depressive symptoms, and higher self-esteem than repression (Gross & John, 2003). This means that all three components of subjective well-being (SWB) including the presence of positive affect, the absence of negative affect, and life satisfaction improves with the use of cognitive reappraisal. However, collectivistic cultures perceive suppression as being more congruent with their goals of maintaining social harmony and being interdependent. Therefore, suppressing negative emotions is a decent strategy to fulfill collectivistic goals and norms (Matsumoto et al., 2008; Soto et al., 2011; Zohar, 2013). In addition, top-down theory of SWB proposes that happy people are more likely to

experience their situation in a positive way; therefore, domain satisfaction like marital

satisfaction may derive from global life satisfaction, not vice versa (Andrews & Whitney,

1974 as cited in Diener, 1984). Figure 11 presents this full path model in which perceived

stress and spousal support are hypothesized to influence marital satisfaction among first-

time parents, both directly and indirectly, being mediated by cognitive appraisal,

expressive suppression, positive affect, negative affect, and life satisfaction.

Figure 11. Full path model: The relationship between perceived stress, spousal support, cognitive reappraisal, expressive suppression, positive affect, negative affect, and life satisfaction with marital satisfaction among first-time parents.

The fit of these three hierarchical path models posited to represent the direct and

indirect structural relationships between perceived stress and spousal support with the

criterion variable of marital satisfaction among first-time parents, being mediated by

cognitive reappraisal, expressive suppression, positive affect, negative affect, and life

satisfaction was tested via structural equation modeling. Table 8 presents the goodness-of-

fit indices for these three models as well as their comparison fit indices. (See Appendices

I-6, I-7, & I-8)

Table 8

Chi-Square Goodness-of-Fit Values, Incremental Fit Indices (NFI, IFI, TLI, CFI), Akaike Information Criterion (AIC), Root Mean Square Error of Approximation (RMSEA), and Model Comparison

Model RMSEA	χ^2 (N=559)	df	p	NFI	IFI	TLI	CFI	AIC
Model 1 Direct model 0.089	174.552	32	<.001	0.971	0.976	0.966	0.976	220.522
Model 2 Indirect model 0.084	466.436	95	<.001	0.936	0.949	0.935	0.948	548.436
Model 3 Full path 0.076 Model	1278.919	301	<.001	0.900	0.918	0.904	0.918	1432.919
Model comparison								
Model 1 vs. Model 2	291.884	63	<.001					
Model 1 vs. Model 3	1104.000	269	<.001					
Model 2 vs. Model 3	812.483	206	<.001					

Although the overall chi-square goodness-of-fit values for all three models are significant (p <.01), the incremental fit indices (NFI, IFI, TLI, CFI) are all at or above 0.90 (range: 0.900 – 0.976). These fit indices indicate that all three models provide a very good fit relative to their null or independence models (i.e., the posited models represented between 90% to 97.6% improvement in fit over their null or independence models), and support the hypothesized structure of the posited direct, indirect, and full path models. The RMSEA value of 0.076 for the full path model is also within the range suggested by Browne and Cudeck (1993) and indicates that the model fits the population covariance

matrix well. The RMSEA values of 0.089 and 0.084 for the direct and indirect models,

respectively, indicate some errors of approximation when compared to the population

covariance matrix. The models also yielded Akaike Information Criterion (AIC) values of

220.522, 548.436, and 1432.919 for the direct, indirect, and full path models, respectively.

The AIC (Akaike, 1987) is used for comparing the goodness-of-fit of competing models.

In evaluating hypothesized models, the AIC takes into account both model parsimony and

model fit. Simple models that fit well receive low scores, whereas poorly fitting models

get high scores. A small AIC generally occurs when small chi-square values are achieved

with fewer estimated coefficients. This shows not only a good fit of observed versus

predicted co-variances but also a model not prone to "overfitting" (Jöreskog, 1993).

Comparing the AIC measure for the three hierarchical models, it is evident that the direct

model provided a lower AIC value (220.522) than the indirect model (548.436) and the

full path model (1432.919). These parsimony-based fit indices indicate that the direct

model is both more parsimonious and better fitting than the indirect and full path models.

This is not unexpected given the simplicity of the direct model with its fewer parameters to

be estimated compared to the other two more complex indirect models.

Summary and discussion.

Study I investigated the direct and indirect relationships, being mediated by the

factors of cognitive reappraisal, expressive suppression, positive affect, negative affect,

and life satisfaction, between perceived stress and spousal support with marital satisfaction

among first-time parents. More specifically, three hierarchical path models were posited

and were evaluated and compared as to their efficacy in explaining the direct and indirect

influences of the participants' reported level of perceived stress and spousal support on

their level of marital satisfaction, being mediated by the factors of cognitive reappraisal,

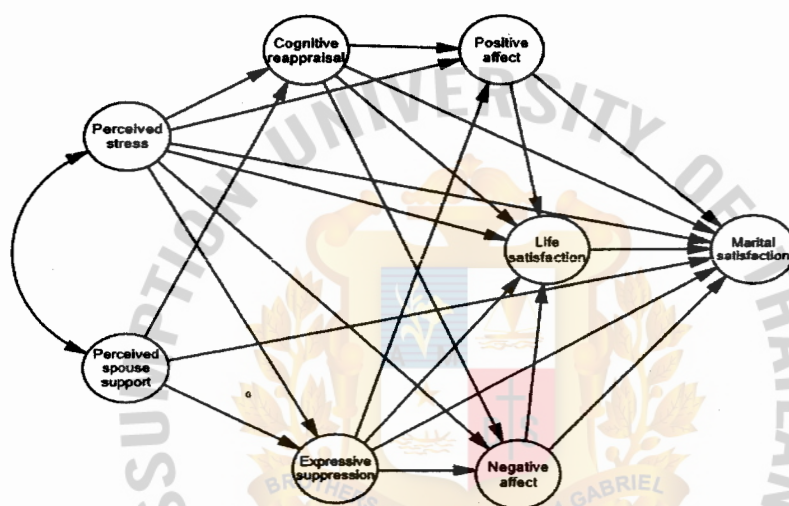expressive suppression, positive affect, negative affect, and life satisfaction. Evaluation

and comparison of the 'fit' of these three 'nested' models were conducted systematically. While the results from the multi-model path analysis showed that all three models fitted the data set well, direct comparison of their goodness-of-fit indices clearly showed that the *direct path model* is both significantly better fitting and more parsimonious than either the indirect or full path models. In other words, a path model that incorporates the hypothesized direct influences of perceived stress and spousal support is a better representation of the cognitive processes affecting the participants' overall level of marital satisfaction than models that incorporate the hypothesized indirect influences. Nevertheless, it was decided to employ the most complex model (Model 3) for investigation of gender differences in Study II as this model is fully identified.

Results of Study II

Assessment of the patterns of structural relationships, direct and indirect, hypothesized between perceived stress, spousal support, cognitive reappraisal, expressive suppression, positive affect, negative affect, and life satisfaction with marital satisfaction among first-time parents as a function of their gender.

While Study I clearly showed that all three hierarchical models fitted the data set well, it remains unclear how the pattern of structural relationships hypothesized for the full path model may vary as a function of the participants' gender. Study II was designed and conducted to answer this question.

Participants.

The entire sample of 559 participants (male: $n=170$, 30.4%; female: $n=389$, 69.6%) participated in this stage of the study. Their ages ranged from 18 years to 51 years, with a mean age of 32.97 years..

Materials.

Participants responded to the questionnaire described in Chapter III.

Multi-group path analysis: Evaluation of the consistency of the marital

satisfaction model across the two groups of first time mothers and fathers.

Multi-group path analysis was conducted to investigate whether the pattern of

structural relationships represented in the marital satisfaction path model presented in

Figure 7 (Chapter II) follows the same dynamics for the two groups of first-time fathers

and first-time mothers. The following sequence of hypotheses was developed for analyzing

group differences in this model: (1) path coefficients have the same pattern for the two

groups of participants; and (2) path coefficients are identical for the two groups of

participants. (See Appendix I-9)

In determining the consistency of the model across groups, the model was first

specified to have the same pattern of path coefficients for both groups, but allowed these

coefficients to be estimated separately within each group. For this unconstrained/variant

model, χ^2 (df=598)=1508.015, p<.001. The incremental fit indices (NFI, IFI, TLI, CFI) are

all close to or above 0.90 (range: 0.880 – 0.923). These fit indices indicated that the

posited model provided a good fit relative to the null or independence model, and support

the hypothesized structure of the model posited for the male and female participants.

The preceding model specified the same pattern of fixed and free parameters for

the two groups, but estimated these parameters separately within each group. In order to

test the consistency of the model across groups, the model was respecified to have the path

coefficients constrained to be invariant across the two groups of participants. Results from

the analysis indicated that this constrained/invariant model fitted the data very well,

χ^2 (df=641)=1579.289, p<.001; the incremental fit indices of NFI, IFI, TLI, CFI ranged

from 0.875 to 0.921. Results of a chi-square difference test comparing this model with one

that simply specified the same pattern of path coefficients indicated significant difference in fit between the variant and invariant models, χ^2 (df=43) = 71.273, p<.001. This suggests that the hypothesized structural path relationships (between the exogenous, mediator, and criterion variables) posited on the basis of the theoretical assumptions underlying the influences of the exogenous factors of perceived stress and spousal support, the mediator variables of cognitive reappraisal, expressive suppression, positive affect, negative affect, and life satisfaction on the participants' reported level of marital satisfaction (criterion variable), operated differently for the first-time fathers and first-time mothers. The RMSEA values of 0.052 and 0.051 for the variant and invariant models, respectively, are within the range suggested by Browne and Cudeck (1993), and indicate that the two models fit the population covariance matrix well. Table 9 presents the goodness-of-fit indices for both these models, together with the model comparison statistics.

Table 9

Chi-Square Goodness-of-Fit Values, Incremental Fit Indices (NFI, IFI, TLI, CFI), RMSEA, and Model Comparison

Model	χ^2 (N=559)	df	p	NFI	IFI	TLI	CFI	RMSEA
Null Model	12586.204	702	<.001	0.00	0.00	0.00	0.00	0.174
Model A Unconstrained (Variant) Model	1508.015	598	<.001	0.880	0.924	0.910	0.923	0.052
Model B Constrained (invariant) Model	1579.289	641	<.001	0.875	0.921	0.914	0.921	0.051
Model comparison Model A vs. Model B	71.273	43	<.001	0.005	0.003	0.004	0.002	

The significant standardized path coefficients for the marital satisfaction path model for first-time fathers and first-time mothers are presented in Figure 12.
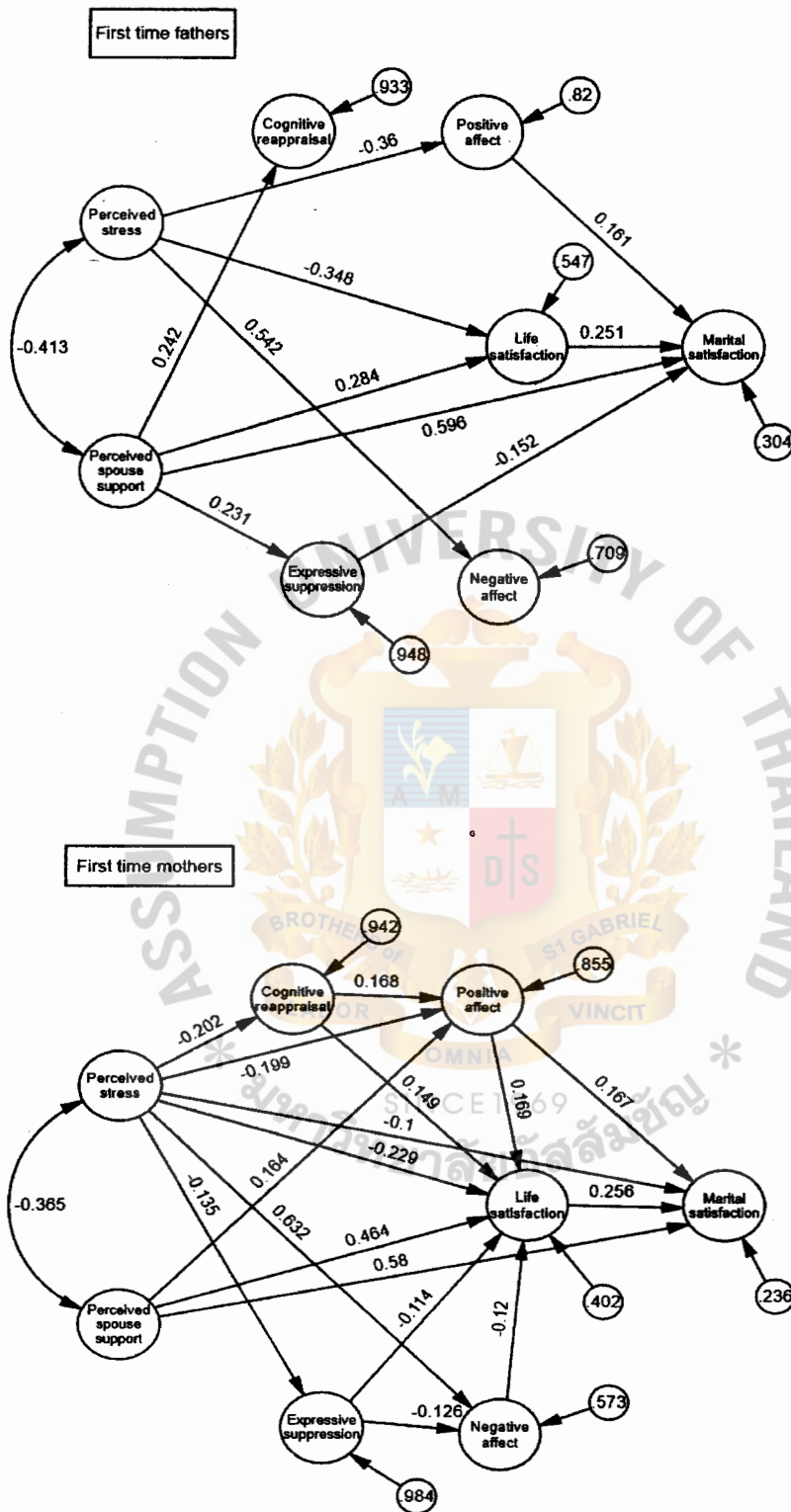
Figure 12. Marital satisfaction path model for first-time fathers and first-time mothers together with the models' significant path coefficients.

Standardized regression paths for first-time fathers.

As can be seen from Figure 12, the first-time fathers' level of perceived spousal support has both direct and indirect relationships, being mediated by their level of life satisfaction and expressive suppression, with the criterion variable of marital satisfaction. For the direct relationship, the higher their perceived level of spousal support received, the higher is their reported level of marital satisfaction (Beta=0.596). For the indirect relationships, (1) the higher their perceived level of spousal support received, the higher is their reported level of life satisfaction (Beta=0.284) and, subsequently, the higher is their reported level of marital satisfaction (Beta=0.251); and (2) the higher their perceived level of spousal support received, the higher is their reported level of expressive suppression (Beta=0.231) and, subsequently, the lower is their reported level of marital satisfaction (Beta=-0.152).

For the exogenous predictor variable of perceived stress, the findings showed that the first-time fathers' perceived stress level has only indirect relationships with the criterion variable of marital satisfaction, being mediated by their levels of positive affect and life satisfaction. Thus, (1) the higher their perceived stress level, the lower their reported level of positive affect (Beta=-0.360) and, subsequently, the lower is their reported level of marital satisfaction (Beta=0.161); and (2) the higher their perceived stress level, the lower their reported level of life satisfaction (Beta=-0.348) and, subsequently, the lower is their reported level of marital satisfaction (Beta=0.251).

Standardized regression paths for first-time mothers.

Given that the findings from the multi-group analysis showed that the variant/unconstrained marital satisfaction model fitted the data set significantly better than the invariant/constrained model, it would not be unexpected that the standardized regression paths yielded by the male and female participants' marital satisfaction models

would be different. As can be seen from Figure 12, the first-time mothers' level of perceived spousal support has both direct and indirect relationships, being mediated by their level of positive affect and life satisfaction, with the criterion variable of marital satisfaction. For the direct relationship, the higher their perceived level of spousal support received, the higher is their reported level of marital satisfaction (Beta=0.580). For the indirect relationships, (1) the higher their perceived level of spousal support received, the higher is their reported level of life satisfaction (Beta=0.464) and, subsequently, the higher is their reported level of marital satisfaction (Beta=0.256); and (2) the higher their perceived level of spousal support received, the higher is their reported level of positive affect (Beta=0.164) and, subsequently, the higher is their reported level of marital satisfaction (Beta=0.167).

For the exogenous predictor variable of perceived stress, the findings showed that the first-time mothers' perceived stress level has both direct and indirect relationships with the criterion variable of marital satisfaction, being mediated by their levels of cognitive reappraisal, expressive suppression, positive affect, negative affect, and life satisfaction. For the direct relationship, the higher their perceived stress level, the lower their reported level of marital satisfaction (Beta=-0.100). For the indirect relationships, (1) the higher their perceived stress level, the lower their cognitive reappraisal (Beta=-0.202); the lower their cognitive reappraisal, the lower their positive affect (Beta=0.168) and life satisfaction (Beta=0.149); the lower their positive affect and life satisfaction, the lower their reported level of marital satisfaction (Beta=0.167 and Beta=0.256, respectively); (2) the higher their perceived stress level, the lower their expressive suppression (Beta=-0.135); the lower their expressive suppression, the higher their negative affect (Beta=-0.126); the higher their negative affect, the lower their life satisfaction (Beta=-0.120) and, subsequently, the lower their reported level of marital satisfaction (Beta=0.256); (3) the higher their

perceived stress level, the higher their negative affect (Beta=0.632); the higher their

negative affect, the lower their life satisfaction (Beta=-0.120) and, subsequently, the lower

their reported level of marital satisfaction (Beta=0.256); and (4) the higher their perceived

stress level, the lower their life satisfaction (Beta=-0.229) and, subsequently, the lower

their reported level of marital satisfaction (Beta=0.256.).

Residuals (unexplained variance).

Figure 12 also reports the standardized residual for each endogenous variable in the

first-time fathers' and first-time mothers' marital satisfaction models. These coefficients

provide an estimate of the proportion of variance in each endogenous variable not

predicted by the model. Alternatively, subtracting these values from 1.00 indicates the

proportion of variance predicted by the model. For the first-time fathers, the residual

coefficients indicated that the posited marital satisfaction model accounted for 69.6% of

the variance in their reported level of marital satisfaction (30.4% unexplained/residual

variance). For the first-time mothers, the residual coefficients indicated that the marital

satisfaction model accounted for 76.4% of the variance in their reported level of marital

satisfaction (23.6% unexplained/residual variance).

Summary and discussion.

Study II was designed to assess the patterns of structural relationships, direct and

indirect, hypothesized between the exogenous predictor variables of perceived stress and

spousal support, the mediator variables of cognitive reappraisal, expressive suppression,

positive affect, negative affect, and life satisfaction, with the criterion variable of marital

satisfaction among first-time parents, as a function of their gender. Multi-group analysis

was conducted to test the hypothesis of invariance between these two groups. Direct

comparison of the goodness-of-fit indices yielded by the posited variant and invariant

models showed that the variant model fitted the data significantly better than the invariant

model. This finding suggests that there are significant differences in the patterns of structural relationships posited for the male and female participants' marital satisfaction models. In other words, the patterns of direct and indirect structural relationships posited between the variables of perceived stress, spousal support, cognitive reappraisal, expressive suppression, positive affect, negative affect, and life satisfaction with the criterion variable of marital satisfaction operated differently for the Thai first-time fathers and mothers. In terms of the specific path coefficients yielded by the male and female path models, it is clear that they are somewhat different and, thus, confirm the conclusion that the patterns of structural relationships posited between the marital satisfaction model factors (exogenous and mediators) and the criterion variable of marital satisfaction operated differently for the Thai first-time fathers and mothers.

Results of Study III

Is a parenting intervention program workshop (based on the results of the comparative analysis of the three conceptual path models in Study I and Study II) effective in enhancing the level of subjective well-being and marital satisfaction among Thai first-time parents?

Study III was designed and conducted to investigate the efficacy of a parenting intervention program workshop in enhancing the level of subjective well-being and marital satisfaction among Thai first-time parents. This study employed a *mixed between-groups/within-subjects repeated measures design* via MANOVA.

Participants.

A sample of 58 participants (male: $n=26$, 44.8%; female: $n=32$, 55.2%) was employed for Study III. Their ages ranged from 24 to 50 years, with a mean age of 34.05 years. These 58 participants were randomly assigned to the control (no intervention) group

(male: n=11, 36.67%; female: n=19, 63.33%) and the experimental (intervention) group

(male: n=15, 53.57%; female: n=13, 46.43%). (See Appendix I-10)

Materials.

Participants responded to a questionnaire similar to the one described in Chapter

III. For this questionnaire, the scale items were measured three times for the experimental

group (pre-intervention, post-intervention, follow-up-intervention) and three times for the

control group (pre-intervention, no-intervention, follow-up-no-intervention).

Results.

In order to investigate whether the changes in the dependent (within-subjects)

variables of marital satisfaction, life satisfaction, positive affect, and negative affect from

pre- to post-intervention, to follow-up, are similar or significantly different for the

experimental (intervention) group and the control (no intervention) group, a series of 2

(experimental versus control) x 3 (pre- versus post-intervention versus follow-up)

MANOVA for repeated measures were conducted. (See Appendix I-11)

Marital satisfaction. Results from the 'multivariate tests of significance'

indicated that the main effect for the within-subjects variable of *trial* (pre- post- follow-up-

marital satisfaction) is significant (p<.001), based on all four multivariate tests of

significance (Pillai's, Wilks', Hotelling's, Roy's). From the cell means, the results indicated

that the participants scored higher on the marital satisfaction variable in the post-

intervention condition (M=3.887) than in the pre-intervention condition (M=3.479),

averaged across the two groups (experimental, control). This is confirmed by the 'tests of

within-subjects contrasts' which contrasted the marital satisfaction scores obtained across

the pre- and post-intervention conditions. The contrast compares the marital satisfaction

scores made in the pre-intervention condition (M=3.479) with those made in the post-

intervention condition (M=3.887), and is statistically significant, $F(1,56)$=28.209, p<.001.

The results also indicated that the participants scored lower in the follow-up condition (M=3.812) than in the post-intervention condition (M=3.887). However, the 'tests of within-subjects contrasts' indicated that this difference in mean scores is not statistically significant (p>.05). In order to see whether the decrease in the mean marital satisfaction scores from the post-intervention to the follow-up conditions for the experimental group is significant or not, a paired t -test was conducted. The results clearly showed that the decrease in marital satisfaction score from the post-intervention condition (M=4.0692) to the follow-up condition (M=3.8348) is statistically significant, t(27)=2.616, p<.05 (See Appendix I-12).

For the *trial* (pre- post- follow-up-marital satisfaction)*group* interaction, all four multivariate tests (Pillai's, Hotelling's, Wilks', Roy's) indicate that this interaction is statistically significant (p<.01), suggesting that the marital satisfaction scores made across the pre- and post- intervention and follow-up condition are dependent on the type of treatment groups (i.e., experimental versus control). Figure 13 presents this interaction in graphical form.

Figure 13. Profile plot for the trial (pre- post- follow-up-marital satisfaction)*group interaction.

Figure 13 shows that there is a general increase in the marital satisfaction scores made across the pre- and post-intervention conditions for the two groups. However, the rate of increase is greater for the experimental (intervention) group than for the control group. From the Figure, it can also be seen that the marital satisfaction scores made across the post-intervention and follow-up conditions decreased for the experimental (intervention) group, but increased for the control group.

The 'tests of within-subjects contrasts' present the contrasts between the marital satisfaction scores obtained across the pre- and post-intervention and follow-up conditions for the two groups. The first contrast between the pre- and post-intervention conditions is significant, $F(1,56)=9.53$, $p<.01$, which indicates that the mean difference in the marital satisfaction scores made between the pre- and post-intervention conditions is significantly different for the experimental and control groups.

Marital satisfaction	Mean Difference (pre- *vs.* post-intervention)
• Experimental	**0.645** (4.069-3.424)
• Control	**0.171** (3.704-3.533)

The second contrast between the post-intervention and follow-up conditions is also significant, $F(1,56)=4.947$, $p<.05$, which indicates that the mean difference in the marital satisfaction scores made between the post-intervention and follow-up conditions is significantly different for the experimental and control groups.

Marital satisfaction	Mean Difference (post-intervention *vs.* follow-up)
• Experimental	-0.234 (3.835-4.069)
• Control	0.086 (3.790-3.704)

In conjunction with Figure 13, the results indicate that (1) the increase in the marital satisfaction scores made between the pre- and post-intervention conditions is significantly different across the two groups (experimental, control); that is, while both groups showed an increase in marital satisfaction scores from pre- to post intervention, the

increase is significantly greater for the experimental (intervention) group than for the control group, and (2) the difference in the marital satisfaction scores made between the post-intervention and follow-up conditions is significantly different across the two groups (experimental, control); that is, while the experimental group showed a decrease in marital satisfaction scores from post-intervention to follow-up, the control group showed an increase in marital satisfaction scores from post-intervention to follow-up.

Life satisfaction. Results from the 'multivariate tests of significance' indicated that the main effect for the within-subjects variable of *trial* (pre- post- follow-up-life satisfaction) is significant ($p<.001$), based on all four multivariate tests of significance (Pillai's, Wilks', Hotelling's, Roy's). From the cell means, the results indicated that the participants scored higher on the life satisfaction variable in the post-intervention condition ($M=5.17$) than in the pre-intervention condition ($M=4.749$), averaged across the two groups (experimental, control). This is confirmed by the 'tests of within-subjects contrasts' which contrasted the life satisfaction scores obtained across the pre- and post-intervention conditions. The contrast compares the life satisfaction scores made in the pre-intervention condition ($M=4.749$) with those made in the post-intervention condition ($M=5.17$), and is statistically significant, $F(1,56)=8.706$, $p<.01$. The results also indicated that the participants scored higher in the follow-up condition ($M=5.32$) than in the post-intervention condition ($M=5.17$). However, the 'tests of within-subjects contrasts' indicated that this difference in mean scores is not statistically significant ($p>.05$).

For the *trial* (pre- post- follow-up-life satisfaction)*group* interaction, all four multivariate tests (Pillai's, Hotelling's, Wilks', Roy's) indicate that this interaction is not statistically significant ($p>.05$), suggesting that the life satisfaction scores made across the pre- and post- intervention and follow-up conditions are not dependent on the type of treatment groups (i.e., experimental versus control). Figure 14 presents this interaction in graphical form.
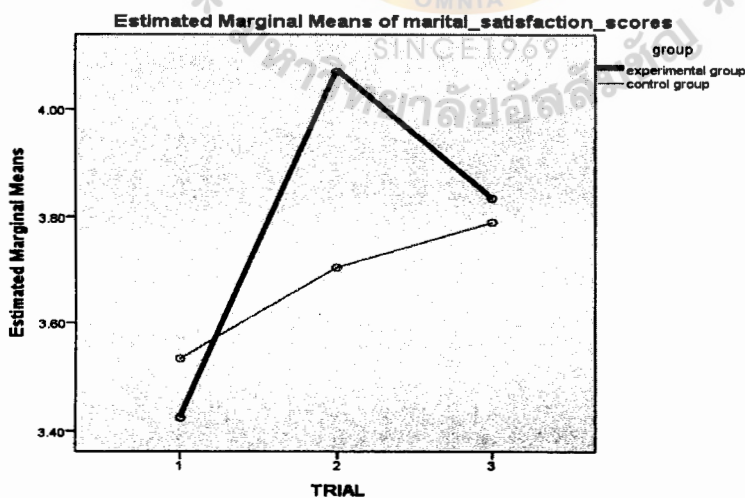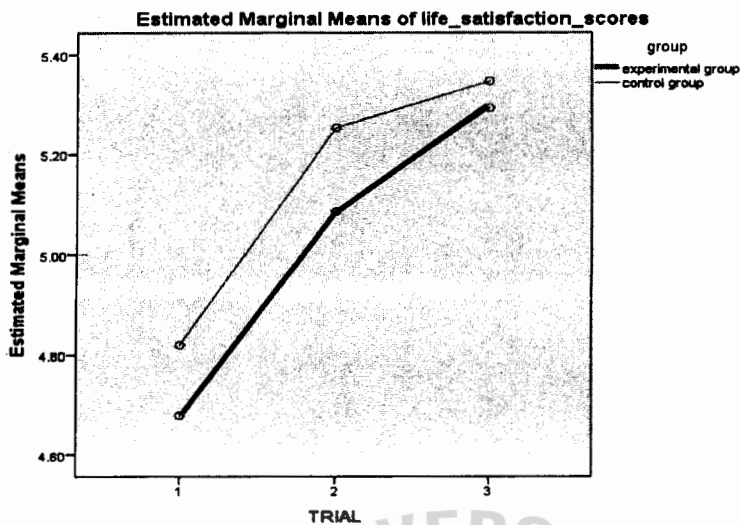
Figure 14. *Profile plot for the trial (pre- post- follow-up-life satisfaction)*group interaction.*

Figure 14 shows that the increase in the life satisfaction scores made across the pre- and post-intervention and follow-up conditions is highly similar for the two groups. This is confirmed by the 'tests of within-subjects contrasts'. This analysis presents the contrasts between the life satisfaction scores obtained across the pre- and post-intervention and follow-up conditions for the two groups. The first contrast between the pre- and post-intervention conditions is not significant, $F(1,56)=.008$, $p>.05$, which indicates that the mean difference in the life satisfaction scores made between the pre- and post-intervention conditions is similar for the experimental and control groups.

Life satisfaction	Mean Difference (pre- *vs.* post-intervention)
• Experimental	**0.407** (5.086-4.679)
• Control	**0.433** (5.253-4.820)

The second contrast between the post-intervention and follow-up conditions is also not significant, $F(1,56)=.365$, $p>.05$, which indicates that the mean difference in the life satisfaction scores made between the post-intervention and follow-up conditions is similar for the experimental and control groups.

Life satisfaction	Mean Difference (post-intervention *vs.* follow-up)
• Experimental	**0.207** (5.293-5.086)
• Control	**0.094** (5.347-5.253)

In conjunction with Figure 14, the results indicate that the increase in the life satisfaction scores made between the pre- and post-intervention and follow-up conditions is highly similar across the two groups (experimental, control).

Positive affect. Results from the 'multivariate tests of significance' indicated that the main effect for the within-subjects variable of *trial* (pre- post- follow-up-positive affect) is not significant ($p>.05$), based on all four multivariate tests of significance (Pillai's, Wilks', Hotelling's, Roy's). From the cell means, the results indicated that the participants scored higher on this variable in the post-intervention condition ($M=3.595$) than in the pre-intervention condition ($M=3.537$), averaged across the two groups (experimental, control). The results also indicated that the participants scored higher on this variable in the follow-up condition ($M=3.719$) than in the post-intervention condition ($M=3.595$), averaged across the two groups (experimental, control). However, these differences are not statistically significant. This is confirmed by the 'tests of within-subjects contrasts' which contrasted the positive affect scores obtained across the pre- and post-intervention and follow-up conditions. The contrast compares (1) the positive affect scores made in the pre-intervention condition ($M=3.537$) with those made in the post-intervention condition ($M=3.595$), and is not statistically significant, $F(1,56)=0.774, p>.05$; and (2) the positive affect scores made in the post-intervention condition ($M=3.595$) with those made in the follow-up condition ($M=3.719$), and is not statistically significant, $F(1,56)=3.525, p>.05$

For the *trial* (pre- post- follow-up-positive affect)*group* interaction, all four multivariate tests (Pillai's, Hotelling's, Wilks', Roy's) indicate that this interaction is not statistically significant ($p>.05$), suggesting that the positive affect scores made across the pre- and post-intervention and follow-up conditions are not dependent on the type of treatment groups (i.e., experimental versus control). Figure 15 presents this interaction in

graphical form.
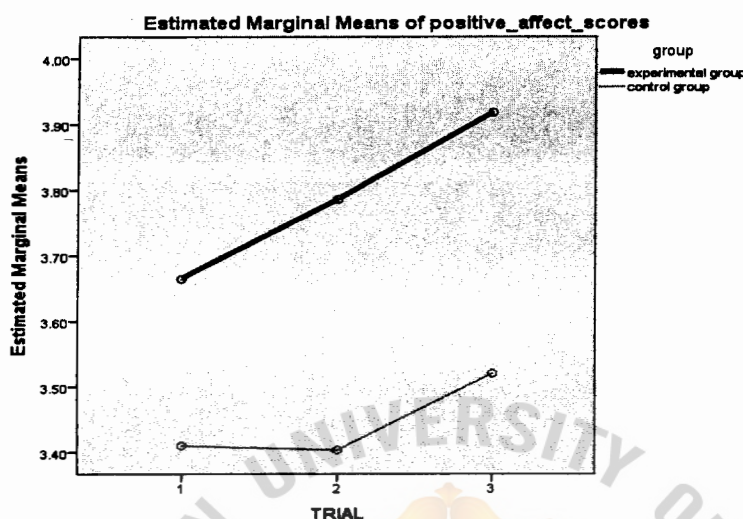
Figure 15. Profile plot for the trial (pre- post- follow-up-positive affect)*group interaction.

Figure 15 shows that the difference in the positive affect scores made across the pre- and post-intervention and follow-up conditions is highly similar for the two groups. This is confirmed by the 'tests of within-subjects contrasts'. This analysis presents the contrasts between the positive affect scores obtained across the pre- and post-intervention and follow-up conditions for the two groups. The first contrast between the pre- and post-intervention conditions is not significant, $F(1,56)=.238, p>.05$, which indicates that the mean difference in the positive affect scores made between the pre- and post-intervention conditions is similar for the experimental and control groups.

Positive affect	Mean Difference (pre- *vs.* post-intervention)
• Experimental	**0.122** (3.786-3.664)
• Control	**-0.007** (3.403-3.410)

The second contrast between the post-intervention and follow-up conditions is also not significant, $F(1,56)=.014, p>.05$, which indicates that the mean difference in the positive affect scores made between the post-intervention and follow-up conditions is similar for

the experimental and control groups.

Positive affect	Mean Difference (post-intervention *vs.* follow-up)
• Experimental	**0.132** (3.918-3.786)
• Control	**0.117** (3.520-3.403)

In conjunction with Figure 15, the results indicate that the difference in the positive affect scores made between the pre- and post-intervention and follow-up conditions is highly similar across the two groups (experimental, control).

Negative affect. Results from the 'multivariate tests of significance' indicated that the main effect for the within-subjects variable of *trial* (pre- post- follow-up-negative affect) is significant ($p<.001$), based on all four multivariate tests of significance (Pillai's, Wilks', Hotelling's, Roy's). From the cell means, the results indicated that the participants scored lower on the negative affect variable in the post-intervention condition ($M=1.814$) than in the pre-intervention condition ($M=2.136$), averaged across the two groups (experimental, control). This is confirmed by the 'tests of within-subjects contrasts' which contrasted the negative affect scores obtained across the pre- and post-intervention conditions. The contrast compares the negative affect scores made in the pre-intervention condition ($M=2.136$) with those made in the post-intervention condition ($M=1.814$), and is statistically significant, $F(1,56)=18.357$, $p<.001$. The results also indicated that the participants scored slightly higher in the follow-up condition ($M=1.824$) than in the post-intervention condition ($M=1.814$). However, the 'tests of within-subjects contrasts' indicated that this difference in mean scores is not statistically significant ($p>.05$).

For the *trial* (pre- post- follow-up-negative affect)*group* interaction, all four multivariate tests (Pillai's, Hotelling's, Wilks', Roy's) indicate that this interaction is not statistically significant ($p>.05$), suggesting that the negative affect scores made across the pre- and post-intervention and follow-up conditions are not dependent on the type of

treatment groups (i.e., experimental versus control). Figure 16 presents this interaction in graphical form.
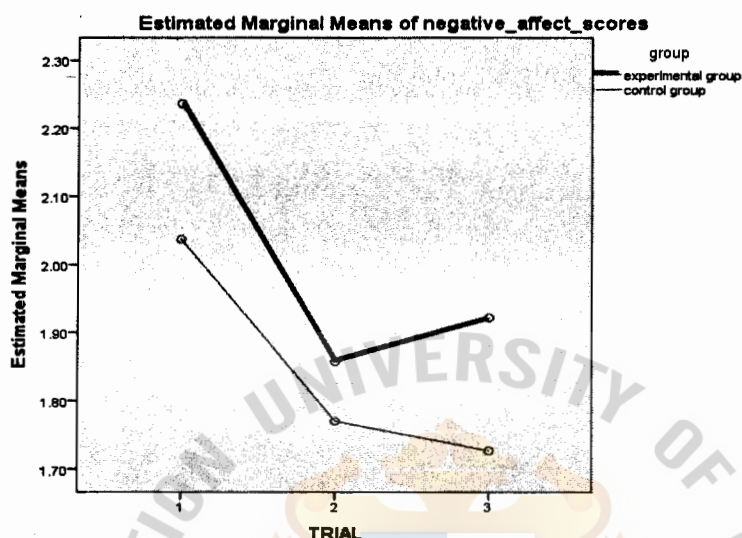
Figure 16. Profile plot for the trial (pre- post- follow-up-negative affect)*group interaction.

Figure 16 shows that the decrease in the negative affect scores made across the pre- and post-intervention is highly similar for the two groups. This is confirmed by the 'tests of within-subjects contrasts'. This analysis presents the contrasts between the negative affect scores obtained across the pre- and post-intervention conditions for the two groups and is not significant, $F(1,56)=.552, p>.05$. This indicates that the mean difference (decrease) in the negative affect scores made between the pre- and post-intervention conditions is similar for the experimental and control groups.

Negative affect	Mean Difference (pre- *vs.* post-intervention)
• Experimental	**-0.379** (1.857-2.236)
• Control	**-0.267** (1.770-2.037)

The second contrast between the post-intervention and follow-up conditions is also not significant, $F(1,56)=.580, p>.05$, which indicates that the mean difference in the negative affect scores made between the post-intervention and follow-up conditions is similar for

the experimental and control groups.

Negative affect	Mean Difference (post-intervention *vs.* follow-up)
• Experimental	**0.064** (1.921-1.857)
• Control	**-0.043** (1.727-1.770)

In conjunction with Figure 16, the results indicate that between the post-intervention and follow-up conditions there is an increase in negative affect scores for the experimental (intervention) group but a decrease in these scores for the control group. However, the difference in these mean scores is not statistically significant.

CHAPTER V

Discussion

The present investigation attempted to examine the direct and indirect influences of perceived stress and spousal support on marital satisfaction, being mediated by emotion regulation strategies and subjective well-being, among Thai first-time parents.

This final chapter consists of the overview of Study I, II and III, discussion of findings, followed by the limitations, implications, recommendations, and conclusions of the study.

Overview of Study I

Study I aimed to investigate the pattern of relationships among perceived stress, spousal support, emotion regulation strategies (cognitive reappraisal, expressive suppression), subjective well-being (positive affect, negative affect, life satisfaction), and marital satisfaction among Thai first-time parents. To meet this purpose, three configurations of structural path models (direct, indirect, and full model) were proposed in which structural equation modeling was employed to determine the best-fit model. Forward and back translation of two Western-based psychometric measures: the Positive and Negative Affect Schedule (PANAS) and the Couples Satisfaction Index-16 (CSI-16) for use with Thai populations were accomplished to facilitate the investigation of the psychometric properties of all the measures used in the study, before proceeding to data collection and analysis.

The participants of the study consisted of 559 first-time parents (male: n=170, 30.4%; female: n=389, 69.6%), aged between 18-51 years, who lived in Bangkok and suburbs, and had a child/children aged no more than two years old. The first-time parents

were asked to fill in a survey questionnaire consisting of seven parts: (1) Personal Information section; (2) Perceived Stress Scale (PSS-10); (3) Multidimensional Schedule of Perceived Social Support (MSPSS) – Significant Others subscale; (4) Emotion Regulation Questionnaire (ERQ); (5) Positive and Negative Affect Schedule (PANAS); (6) Satisfaction With Life Scale (SWLS); and (7) Couples Satisfaction Index-16 (CSI-16).

Study 1 employed six standardized scales in which four of those scales had already been translated into the Thai language by previous researchers. Only the PANAS and the CSI-16 were translated into Thai in the present study. The two measures underwent forward and back translation procedures and their psychometric properties were investigated in order to ensure their cross-cultural reliability and construct validity. The results of the examination of the corrected item-total correlations and Cronbach's alphas of the PANAS and CSI-16 revealed that neither items with very low corrected item-total correlation nor their deletion would increase their particular scale's Cronbach's alpha markedly. Thus, all items were retained. However, for the four scales that had earlier been translated into Thai, one item of the PSS-10 and one item of the ERQ were deleted from their scales for the said reasons. The process resulted in the PSS-10 being represented by 9 items, the MSPSS-Significant Others subscale being represented by 4 items, the ERQ by 9 items, and the SWLS by 5 items.

In addition, Cronbach's alpha coefficients for the six scales ranged from .67 to .97. The computed Cronbach's alpha values for each scale were as follows: .81 for 'perceived stress'; .94 for 'spousal support'; .81 for 'cognitive reappraisal'; .67 for 'expressive suppression'; .90 for 'positive affect'; .88 for 'negative affect'; .89 for 'life satisfaction'; and .97 for 'marital satisfaction'. For the test of convergent validity, positive affect, negative affect, and marital satisfaction were all statistically significant by the critical value (C.R.) test, indicating convergent validity for these three scales. However, the

Cronbach's alpha for 'expressive suppression' of ERQ-Suppression subscale was .67 in this study which was slightly lower than the original Cronbach's alpha of .73 (Gross & John, 2003) but higher than the Thai translated version of ERQ (Cronbach's alpha of .57) that was used in this study (Noppaprach et al., 2015). In analyzing the construct and convergent validity, both PANAS and CSI-16 were proved to be valid. In short, statistical analysis showed that all six Thai-translated instruments were reliable and valid, confirming their sound psychometric properties for subsequent use with the participants of this study.

In Study I, three hierarchical path models (Model 1–direct model, Model 2–indirect model, or Model 3–full path model) were posited, evaluated, and compared as to their efficacy in explaining the direct and indirect influences of the participants' reported level of perceived stress and spousal support on marital satisfaction, being mediated by emotion regulation strategies (cognitive reappraisal, expressive suppression) and subjective well-being (positive affect, negative affect, life satisfaction) among Thai first-time parents. Evaluation and comparison of the 'fit' of these three 'nested' models were conducted systematically. The results showed that all three models provided a very good fit from the multi-model path analysis and supported the hypothesized structure of the posited direct, indirect, and full path models. However, direct comparison of their goodness-of-fit indices revealed that the *direct path model* is significantly better fitting and more parsimonious than either the indirect or full path models.

Overview of Study II

While Study I clearly showed that all three hierarchical models fitted the data set well, it remains unclear how the pattern of structural relationships hypothesized for the full path model may vary as a function of the participants' gender. Study II was designed and

conducted to answer this question. Study II attempted to examine the patterns of structural relationships, direct and indirect, hypothesized between perceived stress, spousal support, cognitive reappraisal, expressive suppression, positive affect, negative affect, and life satisfaction with marital satisfaction among first-time fathers and first-time mothers, as a function of their gender.

Participants of the study consisted of 559 first-time parents (male: n=170, 30.4%; female: n=389, 69.6%), aged between 18-51 years, with a mean age of 32.97 years, who responded to the same set of questionnaires in Study I. Multi-group path analysis was conducted to investigate whether or not the pattern of structural relationships represented in the full path model follow the same dynamics for the two groups of first-time fathers and mothers. Multi-group analysis was conducted to test the hypothesis of invariance between these two groups. Direct comparison of the goodness-of-fit indices yielded by the posited variant and invariant models showed that the variant model fitted that data significantly better than the invariant model, suggesting that the hypothesized structural path relationships posited on the basis of the theoretical assumptions underlying the influences of the exogenous factors of perceived stress and spousal support, the mediator variables of cognitive reappraisal, expressive suppression, positive affect, negative affect, and life satisfaction on the participants' reported level of marital satisfaction operated differently for Thai first-time fathers and mothers.

Discussion of Findings – Study I and Study II

Hypotheses testing.

H1:   *Perceived stress and spousal support will have a direct influence on the level of marital satisfaction among Thai first-time parents.*

The result of testing Hypothesis 1 demonstrated the direct influence of perceived stress and spousal support on the level of marital satisfaction among Thai first-time parents. The direct path model of perceived stress, spousal support, and marital satisfaction was found to be the best-fit model in this study. Consistent with previous research, perceived stress was found to have an influence on marital satisfaction. Being parents is one of most difficult adjustment that may disrupt intimacy in the marital relationship (LeMasters, 1957). Spousal support was also found to be a factor that could influence marital satisfaction (Burke & Weir, 1977; Shapiro et al., 2000; Smith et al., 2008; Wolkoff, 2014). According to Cutrona (1996b, as cited in Yedirir & Hamartab, 2015), spousal support is useful for increasing marital satisfaction and for the continuation of a marriage.

H2: *Perceived stress and spousal support will have indirect influences on the level of marital satisfaction being mediated by (1) the emotion regulation strategies of cognitive reappraisal and expressive suppression, and (2) the subjective well-being components of positive affect, negative affect, and life satisfaction.*

The direct model was determined to be the best-fit model, therefore; perceived stress and spousal support have no indirect influences on the level of marital satisfaction, being mediated by the emotion regulation strategies of cognitive reappraisal and expressive suppression among Thai first-time parents. Despite the fact that the results from Study I supported the hypothesized structural path relationships between the exogenous variables (perceived stress and spousal support), and the criterion variable of marital satisfaction, it was unclear how the structural relationships of full path model, including the mediator variables (emotion regulation strategies of cognitive reappraisal and expressive suppression and subjective well-being components of positive affect, negative affect, and life satisfaction), vary as a function of the participants' gender.

H3:   *There are significant gender differences in the pattern of structural relationships*

       hypothesized among perceived stress, spousal support, the emotion regulation

       strategies of cognitive reappraisal and expressive suppression, the subjective well-

       being components of positive and negative affect and life satisfaction, and marital

       satisfaction between Thai first-time mothers and fathers.

The result of testing Hypothesis 3 demonstrated significant gender differences in the patterns of direct and indirect structural relationships hypothesized between the variables of perceived stress, spousal support, cognitive reappraisal, expressive suppression, positive affect, negative affect, and life satisfaction with the criterion variable of marital satisfaction between Thai first-time mothers and fathers.

Multi-model and multi-group analyses.

The findings from Study I showed that all three hierarchical models fitted the data set very well, but that the *direct path model* is both significantly better fitting and more parsimonious than either the indirect or full path model. This is not unexpected given that the direct model presented fewer parameters to be estimated when compared to the indirect and fully identified path model. However, the full path model was investigated for gender differences in Study II as it was the most fully identified model. The results from Study II suggest that the hypothesized structural relationships among all five variables (perceived stress, spousal support, emotion regulation, subjective well-being, and marital satisfaction) operated differently for first-time fathers and first-time mothers. Thus, three sets of important findings emerged from this study.

First, it was demonstrated that in the case of first-time parents, emotion regulation strategies (cognitive appraisal and suppression) were not so helpful toward their marital satisfaction, on the whole. However, they proved to be significant when looking at each

particular group of participants. Emotion regulation strategies played different roles in the marital satisfaction path model between first-time fathers and mothers. More specifically, cognitive reappraisal and expressive suppression acted as mediators between perceived stress, subjective well-being, and marital satisfaction in first-time mothers but not with first-time fathers, whereas suppression alone acted as a mediator between perceived spousal support and marital satisfaction only in first-time fathers, but not in first-time mothers. Previous research found significant gender differences in the use of emotion regulation strategies (Corstensen et al., 1995; Gross & John, 2003). Second, perceived stress was found to have a direct association with marital satisfaction among first-time parents overall, but was not significant with marital satisfaction for first-time fathers. However, it can influence indirectly through positive affect and life satisfaction. In addition, the results demonstrated that subjective well-being components acted as mediators in many relationships for both first-time fathers and mothers in this study. This is consistent to top-down theory of subjective well-being in that being happy with oneself leads to domain satisfaction such as marital relationship (Diener, 1984). Finally, negative affect highly correlated with perceived stress which implied that stress, not spousal support, is the only predictor of negative emotion among first-time parents from the result of the path model. When individuals appraise the situation as stressful, they concurrently experience negative emotional responses (Cohen et al., 1995). In addition, having low or high level of spousal support is not associated with negative affect which means that spousal support does not predict negative feelings in both groups of parents. Vinokur and Ryn (1993) suggested that social support alone might not be enough to be accounted for the adverse side of mental health. Social undermining like interpersonal conflict, which was not the opposite pole of spousal support, should also be studied in combination as it reported in a decrease in well-being. This is also supported by DeLongis, Capreol,

Holtzman, O'Brien, & Campbell (2004) that the interaction of both social support and social strain predicted negative affect in husbands and wives.

The typical goals of emotion regulation are to decrease negative emotions and increase positive emotions in conformity with hedonic goals that people are motivated to seek pleasure and avoid pain (Gross, 1998b). In the present study, two types of emotion regulation strategies were presented: cognitive reappraisal and expressive suppression. The best-fit model showed no significant role of emotion regulation. Looking at first-time fathers and mothers separately, however, emotion regulation strategies played different but important roles. In a direct relationship, spousal support such as expression of affection tends to increase marital satisfaction (Shapiro et al., 2000). Normally, husbands receive more benefits from spousal support than wives do. This support is so important to husbands to buffer against stressful events in their lives (Neff & Karney, 2005). The study was consistent with previous research showing a strong association between perceived spousal support and marital satisfaction (Bradbury et al., 2000; Menéndez et al., 2011; Shapiro et al., 2000). However, suppression can mediate the relationship between perceived spousal support and marital satisfaction in first-time fathers (but not mothers), in which using more suppression is associated with decreased marital satisfaction. The finding is consistent with previous research in that the use of suppression comes with adverse side effects (Gross, 1998a; Gross & John, 2003) such as lower social satisfaction and relationship closeness (Butler, 2004; Gross, 2002; Gross & John, 2003; Velotti et al., 2016). In addition, using suppression is associated negatively with interpersonal functioning and relationship quality. Suppressors are less likely to share both positive and negative emotions to others and are more likely to avoid close relationship than reappraisers (Gross & John, 2003). Specifically, 'stonewalling' by husband, a very similar concept to suppression (Butler et al., 2007), was associated with a decline in marital

satisfaction (Levenson & Gottman, 1985). First-time parents reported the use of suppression in the present study. This is consistent with previous research on the use of suppression in collectivistic cultures like Thailand. Because of cultural values to maintain interpersonal relationship and social harmony (Butler et al., 2007; Matsumoto et al., 2008; Pisitsungkagarn & Busayaprateep, 2013), suppression may be important to these cultures to give individuals time to think about the most appropriate response in a given situation (Matsumoto et al., 2008).

Men are more likely than women to use suppression and emotional withdrawal in regulating their emotions (Corstensen et al., 1995; Gross & John, 2003; Levenson & Gottman, 1985). Gross and John (2003) found that men reported greater use of suppression than women. This emotional withdrawal from husbands, like not showing both positive and negative affection, was also associated with a subsequent decline in marital satisfaction (Levenson & Gottman, 1985). The path model showed that the level of spousal support perceived by father was also mediated by suppression such that the higher the level of spousal support, the higher the use of suppression, and subsequently led to the lower level of marital satisfaction. Consistent with previous research, Butler et al., (2007) explained that the values of Asian people such as being interdependent and maintaining relationship harmony might encourage people to use suppression during positive social interaction to preserve relationship. However, this mediating effect of suppression led to a decrease in marital satisfaction in this study. Therefore, first-time fathers who perceive low level of spousal support may experience a decline in their marital satisfaction. However, this finding also suggests that if, during the time that the fathers perceive low spousal support, they reduce the use of their suppression (i.e., be more expressive about their feelings), their marital relationship may improve.

On the other hand, first-time mothers' high level of perceived spousal support directly leads to positive affect, life satisfaction, and marital satisfaction. Support from their partners make their day as women tend to seek social support to buffer against stressful situations; women are more interpersonally-oriented than men, according to Feingold (1994, as cited in Nolen-Hoeksema, 2012). There is no mediating role of emotion regulation in first-time mothers. This finding suggests that only high support from husbands can predict their happiness within themselves and in the relationship. For example, dual-income families reported a benefit in terms of spouses helping each other as a partner to deal with problems arising from outside the marriage (Bradbury et al., 2000) or provide more father involvement in child-rearing (Menéndez et al., 2011). Furthermore, first-time fathers tend to use cognitive reappraisal as well when they perceive high level of spousal support, but its relationship to marital satisfaction was not demonstrated in this study. It can also be said that the use of cognitive reappraisal in first-time fathers does not produce any effect on their well-being.

Emotion regulation strategies were found to mediate the relationship between perceived stress and marital satisfaction in first-time mothers. When mothers perceive high level of stress and experience low use of cognitive reappraisal, this leads to lower positive affect and life satisfaction which, consequently, leads to low level of marital satisfaction. Reappraisal is one of the effective emotion strategies which is a form of change in cognition used to transform the interpretation of the situation in a way that changes its impact (Lazarus & Alfert, 1964). The current result confirms previous literature that reappraisal makes people experience more positive emotion (Butler, 2004; Gross & John, 2003), in which there is a positive association between reappraisal and positive affect. Normally, women reported using more emotion regulation strategies because they appraise the negative events as more stressful than men are (Rudolph & Hammen, as cited in

Nolen-Hoeksema, 2012). Consistent with this view, the study showed the use of both cognitive reappraisal and expressive suppression in times of stress among first-time mothers but not fathers. However, the path model shows that with the low use of reappraisal in times of stress, it may not help change the effect of high stress on lower level of marital satisfaction for Thai first-time mothers. It may be that mothers used other emotion regulation strategies that was not be effective in improving marital satisfaction in times of stress. For example, rumination is one of emotion regulation strategies that is found to be used widely by women (Nolen-Hoeksema & Aldao, 2011). Therefore, high perceived stress level may still lead to a decrease in marital satisfaction.

However, when examining suppression during times of high perceived stress, low use of this strategy (i.e., being more expressive) in first-time mothers can mediate the hypothesized relationship by increasing life satisfaction, thus, leading to a rise in marital satisfaction. By being expressive, people can maintain their individuality and authenticity which may be considered as criteria in the assessment of their quality of life (Diener, 2000; Diener et al., 1985; Shin & Johnson, 1978). This is consistent with previous research. Another indirect association is the path from the perception of high stress and low use of suppression as influencing more negative affect, lower life satisfaction, and subsequently lower marital satisfaction. If first-time mothers experience negative feelings from being expressive, it may lower the levels of life satisfaction and marital satisfaction. Normally, women tend to appraise negative events as stressful much more than men do (Rudolph & Hammen, as cited in Nolen-Hoeksema, 2012). In the collectivistic context, when individuals try to be expressive about how they feel, this is perceived as contradicting Thai cultural values where being suppressive is seen as being more congruent with the Asian goals of maintaining harmony and being interdependent with others (Butler et al., 2007; Matsumoto et al., 2008; Soto et al., 2011; Zohar, 2013). Inconguence, in this context, may

lead to negative emotions such as feelings of guilt or shame which, in turn, reduce life satisfaction and marital satisfaction.

In the path model of perceived stress and marital satisfaction, it was found that perceived stress leads to all components of subjective well-being and, subsequently, marital satisfaction in first-time fathers. When there is no stress perceived, parents are generally happy with their lives, particularly in terms of their emotions and thoughts about life. In other words, they are happy with themselves. This satisfaction in life influences happiness in their marriage as well, especially for first-time fathers. In addition, the top-down theory of subjective well-being can be applied here as it suggests that happy people are more likely to perceive other domains of life, such as marriage, in a positive way (Diener, 1984).

Another important current finding in first-time fathers was that negative affect does not influence marital satisfaction. This is different from the result seen in first-time mothers in which increase in stress leads to lower subjective well-being and, consequently, lower marital satisfaction. The finding demonstrated that negative affect as a result of stressful events does not predict happiness in life among men participants. It could be that first-time fathers are able to manage their negative feelings derived from stressful situations in a way that does not affect their marriage. According to a review from Susan Nolen-Hoeksema (2012), fathers may discharge negative feelings into other channels such as problem solving or engaging in shared activities with friends that will not adversely affect their marital relationship. As mentioned earlier, women, however, are more emotional in terms of how they experience and express feelings. They also have a tendency to ruminate when they face with stress, and are more likely to choose to analyze their negative emotions (Butler & Nolen-Hoeksema, 1994). In agreement with earlier

research, negative affect in women influences how they interpret their life satisfaction and marital satisfaction.

A point of commonality was the strong association among the levels of perceived spousal support, life satisfaction, and marital satisfaction for both first-time fathers and mothers in which the higher the perceived level of spousal support, the higher the level of life satisfaction and marital satisfaction. Consistent with previous research, spousal support is useful in increasing marital satisfaction (Cutrona, 1996b, as cited in Yedirir & Hamartab, 2015) and has a positive relationship with well-being and physical health (Markus et al., 2004; Walen & Lachman, 2000). Moreover, perceived support from the spouse is a protection against any psychological distress (Markus et al., 2004). Another point is that a strong correlation between perceived stress and spousal support was negative in this study, which is consistent with previous research. This is not unexpected because, according to Lazarus and Folkman's (1984) theory of stress and coping, social support is one factor that helps people perceive a situation as less stressful. The belief that social support is available alleviates the effects of stress, leading to less negative appraisals of the situation (Lakey & Cohen, 2000).

The following section presents the discussion of current findings relative to the pattern of relationship in the marital satisfaction path model between Thai first-time fathers and mothers.

First-time fathers.

It was demonstrated in this study that first-time fathers' perceived stress level has *no direct* relationship with marital satisfaction. The reverse is true, however, if mediated by positive affect or life satisfaction. In addition, first-time fathers' perceived stress level has a significant relationship with negative affect such that the higher the stress, the higher

the negative affect, with no subsequent effect on marital satisfaction. *Only indirect* relationship was found between first-time fathers' perceived stress level and their level of marital satisfaction, being mediated by the two components of subjective well-being (positive affect and life satisfaction). This suggests that in first-time fathers, high level of perceived stress influences how they evaluate their own happiness. When they feel unhappy, marital satisfaction will decline as consistent with top-down versus bottom-up controversy (Diener, 1984).

Another interesting point is that no significant relationship was found between perceived stress and cognitive reappraisal and/or expressive suppression which means that there is insufficient evidence to conclude that there is a significant relationship between perceived stress, emotion regulation strategies, and marital satisfaction in first-time fathers. This implies that emotion regulation strategies are not the preferred actions used by first-time fathers in coping with stress. They may be more inclined to manage their stress by other strategies such as problem-solving, or changing the situation (Tamres et al., 2002, as cited in Nolen-Hoeksema, 2012) instead of consciously regulating their emotions.

The following significant relationships between perceived spousal support and marital satisfaction were demonstrated: (1) high level of perceived spousal support directly increases marital satisfaction, and (2) high level of perceived spousal support increases life satisfaction and, consequently, increases marital satisfaction. These direct relationships are consistent with earlier reports (Cutrona, 1996b, as cited in Yedirir & Hamartab, 2015; Dew & Wilcox, 2011). First-time fathers tend to be satisfied with their marriage if they perceive that they have much support from their wives. This support is important in order for the marriage to last. Indirectly, perceived social support may influence marital satisfaction via life satisfaction. Normally, people judge their satisfaction in life with their own standards (Pavot & Diener, 1993). Each person gives importance to each component of happiness

differently. People may be happy with their lives even if their marriage is not satisfactory (Diener et al., 1985). Within the context of social cognitive theory, when they perceive high level of support from their spouse, they develop stable beliefs about supportiveness from their partners. Constant thoughts about the reality of spousal support strengthen the couple's self-esteem, leading to better health outcomes (Lakey & Cohen, 2000).

Interestingly, perceived spousal support also has an indirect relationship with marital satisfaction, being mediated by expressive suppression. An outcome of this study indicated that perceived high spousal support in first-time fathers is associated with the use of suppression, which may lead to a decrease in marital satisfaction. Suppression suggests the inhibition of expressive behavior that comes with ongoing emotions (Gross & Levenson, 1993; Gross 1998b; Gross, 2015). Earlier research had established that those who employ emotional suppression are more likely to develop some kind of disorder than those who are emotionally expressive (Gross, 2002; Gross & Levenson, 1993; Gross & Levenson, 1997). Furthermore, expressive suppression leads to increased arousal (Gross & Levenson, 1993). Consistent with the model predictions in this study, experimental studies have shown that the learned use of suppression effectively reduces the outward display of emotions but not the subjective experience of negative emotion (Gross, 1998). Additionally, Dew and Wilcox (2011) suggested that couples could maintain their marital satisfaction after the arrival of their child if they wisely managed their time for their marriage, if mothers resisted the cultural value of intensive motherhood, and if fathers equally involved themselves in childrearing and housework.

First-time mothers.

It was demonstrated in this study that first-time mothers' perceived stress level has both *direct* and *indirect* relationships with marital satisfaction, being mediated by levels of

cognitive reappraisal, expressive suppression, positive affect, negative affect, and life

satisfaction. An investigation by Dew and Wilcox (2011) of first-time mothers found that,

compared to their childless peers, the new mothers were more likely to face a decline in

marital satisfaction because after childbirth, they spent considerably less time with their

husbands. The researchers suggested that new mothers felt that motherhood came with a

reduction in time spent with their husbands and that many wives were unprepared for the

decline in their relationship intimacy after giving birth. For indirect relationships through

suppression, first-time mothers' perceived high stress level with low use of suppression

may lead to negative feelings, decrease in life satisfaction and, subsequently, lower level

of marital satisfaction. Culture creates a value system that guides norms in regulating

emotion. Some cultures have to maintain interpersonal relationships, value power

differences, and support social order, all of which are associated with the use of

suppression (Matsumoto et al., 2008). Suppressing negative emotions fulfill collectivistic

goals and norms of social harmony (Matsumoto et al., 2008; Soto et al., 2011; Zohar,

2013), and being interdependent (Pisitsungkagarn & Busayaprateep, 2013). In

collectivistic cultures such as East Asian countries where suppression is quite normative,

the use of suppression is not linked to negative well-being (Soto et al., 2011). In the

present study, when first-time mothers experience high stress level, it influences all the

subjective well-being (SWB) components (i.e., decrease in positive affect, increase in

negative affect, decrease in life satisfaction) and, subsequently, leads to lower level of

marital satisfaction. This outcome is congruent with those of earlier studies which

demonstrated that domain satisfaction of marriage is exhibited by happy people who have

high SWB. Milkie (2011) noted an interesting thing about parenthood; that is, even though

some new mothers might report a decline in their satisfaction in marriage, their satisfaction

in family life and finding meaning in life may increase, and that this increase may be

higher than in childless wives. This is because new mothers are pleased with their new roles in spite of their being exhausted and overwhelmed with childcare and housework. Therefore, marital satisfaction should be treated as another aspect of new mothers' well-being.

Overview of Study III

Study III was conducted to test the effectiveness of the intervention program titled, *Happy Life Workshop for New Parents* which incorporated the subjective well-being components (positive affect, negative affect, life satisfaction) and marital satisfaction, via a pretest-posttest control group research design with repeated measures. The first-time parent skills training program evolved from the results of Study I and Study II which demonstrated that stress, spousal support, and emotion regulation strategies do play important roles in increasing the level of subjective well-being and marital satisfaction in Thai first-time parents. The topics of the workshop were adapted from Gottman and Gottman's (2007) *And Baby Makes Three*, an official book for the "Bringing Baby Home Program", which elaborated on the authors' six-step plan for preserving marital intimacy and rekindling romance after the baby arrives. Additionally, cognitive-behavioral theory was utilized as the theoretical framework of the workshop, and psychoeducation and skills training were the means to carry out the workshop contents. 'Happy Life Workshop for New Parents' was developed with the objective to increase happiness in first-time parents, both in themselves and in their relationship. In this study, the first-time parent skills training intervention program was designed to reduce stress, effectively regulate emotions, and improve spousal support.

To meet the objectives of the study, all participants in both experimental and control groups attended a two-hour online course and a four-hour workshop (see Appendix E). The program comprised three domains: knowledge acquisition, skills training, and application/practice, and the topics included stress reduction, cognitive restructuring, and effective communication skills for couples.

The workshop was accomplished in two days: Day 1 for the experimental group, and Day 2 for the control group. Participants had the option to choose which day they preferred and, subsequently, registered accordingly, not knowing they were assigning themselves to either the experimental or control group. The current researcher decided that there would be a 2-week interval between Day 1 and Day 2. Data collection was accomplished in three trials. For the experimental group, data were collected two weeks before the workshop (T1), immediately after the workshop (T2), and two weeks after the workshop (T3). For the control group, data collection for all three trials (pretests) was done at nearly the same time as the experimental group. The results of Study III are discussed in more detail in the following section.

Discussion of Findings – Study III

    Hypotheses testing.

H4:   *The first-time parent program intervention will enhance the level of marital satisfaction and subjective well-being among Thai first-time parents such that (1) first-time parents in the experimental group will have higher outcome variable scores than those in the control group; and (2) first-time parents in the experimental group can retain their outcome variable scores immediately, at post-intervention and two-week post-intervention.*

The result of hypothesis testing partially supported Hypothesis 4. The results of the 'tests of within-subjects contrasts' for trial*group interaction showed that only the contrast between marital satisfaction scores obtained across the pre-and post-intervention conditions and two-week follow-up conditions for the two groups were significant, whereas the other three variables (i.e., positive affect, negative affect, and life satisfaction) were not.

The findings also partially supported Hypothesis 4 (1) which stated that first-time parents in the experimental group will have higher outcome variable scores than those in the control group. Marital satisfaction proved to be the only variable that was significantly different across the experimental and control groups throughout all the trials; however, the directions between each trial were not the same. There was a significantly greater increase in marital satisfaction from pre-intervention to immediate post-intervention among the experimental group participants compared to their counterparts in the control group. This indicates that the intervention program was effective at that point. However, a drop in the level of marital satisfaction was observed in the experimental group participants between post-intervention and two-week follow-up trials whereas an increase in marital satisfaction was reported in the control group during the same period. This difference is significant as it implies that the six-hour training cannot maintain its efficacy two weeks after the intervention. The findings also partially supported Hypothesis 4 (2) which stated that first-time parents in the experimental group can retain their outcome variable scores immediately, at post-intervention and two-week post-intervention. The results revealed that the experimental group participants retained their marital satisfaction scores immediately after intervention, but not after the two-week post-intervention interval.

Experimental group *vs.* control group.

Out of an initial 71 targeted participants for Study III, 58 first-time parents actually participated as they completed all three trials of the data collection process. Thirteen dropped out either due to inability to attend the workshop or decision to discontinue their participation in the study. There were 28 participants (male: n=15, 53.57%; female: n=13, 46.43%) in the experimental group and 30 participants (male: n=11, 36.67%; female: n=19, 63.33%) in the control group.

The summary of the results of 'tests of within-subjects contrasts' are as follows: (1) the increase in the marital satisfaction scores made between the pre- and post-intervention conditions is significantly different across the two groups; that is, while both groups showed an increase in marital satisfaction scores from pre- to post intervention, the increase is significantly greater for the experimental (intervention) group than for the control group; and (2) the difference in the marital satisfaction scores made between the post-intervention and follow-up conditions is significantly different across the two groups; that is, while the experimental group showed a decrease in marital satisfaction scores from post-intervention to follow-up, the control group showed an increase in marital satisfaction scores from post-intervention to follow-up.

The results also showed that the interaction effects of the other three variables (i.e., positive affect, negative affect, life satisfaction) were not significant. In other words, the differences in positive affect, negative affect, and life satisfaction scores between the pre-intervention, post-intervention, and follow-up conditions were similar for both the experimental and control groups.

Significance of key variables.

The statistically significant marital satisfaction difference in the experimental and control group indicates the efficacy of the first-time parent skills training intervention

program in enhancing the level of marital satisfaction among Thai first-time parents. Parents who participated in the intervention program showed a significant increase in their level of marital satisfaction after the intervention whereas marital satisfaction in parents in the control group increased insignificantly. This suggests that the first-time parent skills training intervention program is effective in teaching cognitive reappraisal, stress reduction techniques, and supportive communication skills to Thai first-time parents.

A review of the literature revealed that stress, emotion regulation, and relationship satisfaction are interrelated (Bloch, Haase, & Levenson, 2014; English et al., 2013; Gross & John, 2003) and that emotion regulation is one of the predictors of marital satisfaction (English et al., 2013). Emotion regulation originated from stress and coping, of which one of the aims was to adapt (Gross, 2007). It can be initiated by regulating one's own emotion or other people's emotions (Gross & Levenson, 1993). Gross and Jazaieri (2014) suggested that skillful emotion regulation is believed to be important to everyone; therefore, psychoeducation on emotion regulation should be promoted before psychological problems are diagnosed. One of the common factors of emotion regulation is the awareness of emotions because when we are aware of which emotion to regulate, we increase the variety of emotion regulation strategies to be used (Gross & Jazaieri, 2014). In the intervention program, participants were encouraged to be aware of their negative thoughts that lead to negative emotions and reframe them with more positive and effective ones.

Spousal support was also found to have a significant relationship with marital satisfaction. Shapiro and Gottman (2005) reported the findings from a psycho-communicative-educational two-day workshop to couples experiencing the transition to parenthood called 'Bringing Baby Home Workshop' by John and Julie Gottman. The results showed that the intervention was effective for marital quality, postpartum

depression, and expressed hostile affect between before intervention (last trimester of pregnancy), when the baby was three months old, and when the baby was one-year-old. In the present intervention program, active listening and expression of appreciation, affection, and admiration were encouraged among the participants to express support to their spouse in everyday life. Earlier studies found that support from partners (i.e., expression of love and spousal time) predicted stable and increasing marital satisfaction (Dew & Wilcox, 2011; Shapiro et al., 2000).

The significant effect of the first-time parent skill training program on marital satisfaction, however, was not sustained over the two-week follow-up. This finding suggests that more attention needs to be given to develop strategies that can maintain the level of marital satisfaction over time. Perhaps more workshop sessions as booster sessions are needed to ensure that first-time parents understand all the skills being learned and are able to apply them in real life. A follow-up session of the program could help parents integrate their skills in dealing with stressful events in their lives. Thus, it is suggested that improvement in marital satisfaction would be sustained further if more sessions of the workshop were provided.

Non-significance of other key variables.

Even though the differences in positive affect, negative affect, and life satisfaction were not significant across the experimental and control groups, this does not imply that the first-time parent skills training intervention program used in Study III was ineffective. Several issues such as number of sessions, sample size, and nature of intervention may have accounted for the lack of statistically significant changes in subjective well-being in both groups. The following section discusses these issues in more detail.

Number of sessions. It is possible that more sessions would result in better level of subjective well-being. Shapiro and Gottman (2005) reported an effectiveness in the two-day psychoeducational workshop for couples on their transition to parenthood. Honey, Bennett, and Morgan (2003) provided a brief psychoeducational group intervention for mothers with postnatal depression for eight sessions. At posttest and six-month post-intervention, women in the experimental groups showed a significant decrease in scores on the depression measure. Also, doing homework is another important part of the CBT process in order to encourage practice or examination of thoughts between sessions. To make the workshop more effective and result in a significant improvement in subjective well-being, more sessions with homework assignment should be seriously considered.

Sample size. The power analyses based on normative standard deviations for a primary outcome measure – the Global Severity Index (GSI) at a significance level of .05, a desired power of .8, and a medium to large effect size (i.e., Cohen's d = .4) indicated that more than 26 persons per group would be required to detect a significant difference for the intervention versus control group. While the present study involved 28 and 30 participants in the experimental and control groups, respectively; perhaps a larger number of participants would provide more accurate results.

Nature of the intervention. The main content of the intervention used in the current study focused on both happiness and happy relationship. However, the examples used, the exercises, the role plays, and scenarios were played out and examined from the couples' perspective. It may be that the participants may have identified closely with the activities as being similar to their marital relationship circumstances rather than seeing them in a more objective light from which they can learn better ways of enhancing their level of well-being.

Limitations

Before discussing the implications of the current study's findings, some limitations should be noted. First, the respondents were required to answer questions related to their marital relationship and support from spouse. In the process of revealing their emotional experiences, they may have presented themselves in a much better light. In addition, response bias can also occur as a result of Thai cultural values relative to the role of parents. According to a review by Deniel Detzner (2010), the primary role of Southeast Asian father is to provide financial support for the family, while mothers have the primary responsibility in child-rearing.

Second, due to time and resource constraints, some important aspects of the survey and the intervention may have been compromised. For example, the survey could have been administered in some other public venues that did not require a long process of granting study permission (i.e., one to two months). Furthermore, more appropriate places such as well-baby clinics or hospital departments were not included due to the existing bureaucratic system in seeking permission to conduct a survey. The duration of the workshop was also an issue. A two-hour online course and four-hour workshop is not sufficient enough for first-time parents to practice emotion regulation techniques and other communication skills. More sessions should have been allotted to help participants master the techniques and apply these in their daily lives and to provide them with more effective techniques.

Third, certain features of the workshop may not be appropriate to all first-time parent participants as they were required to use both online videos and online comprehensive tests by themselves. It is possible that some participants may have skipped or ignored the presented online material and went directly to the comprehensive tests

which were based on workshop materials. Related to the matter of using online information and tests is the problem that not all the participants were keen or experienced in using mobile applications. It was observed that some of them did not know how to navigate through each question on their devices; some had problems accessing the tests. Others might not have read the test items thoroughly as the font size was very small compared to paper-based tests. Thus, many participants took longer time than expected or felt bored at completing the questionnaires and gave up.

A fourth limitation was the lack of Thai-based theoretical perspectives and related studies on the key variables of this study, all together or independent of each other. Discussion relied heavily on Western perspectives and studies, especially in the intervention program in Study III, which may not necessarily reflect Thai culture and values.

The findings of the current study should be interpreted with some caution because of some intervening or limiting factors beyond the scope of this study. Nonetheless, despite some identified limitations, it is anticipated that this study would provide valuable knowledge and database for a number of individuals and groups who are involved or interested in investigating the interrelationships among perceived stress, spousal support, marital satisfaction, emotion regulation strategies, and subjective well-being. Thus, the contribution of this study towards expansion of the literature cannot be overemphasized.

Implications

As gleaned from the results of this study, first-time parents can enhance their level of marital quality by learning how to reduce stress and regulate their emotions effectively. Also, affection and admiration from the spouse can strengthen the marital relationship.

First-time parents who express their love and appreciation are able to maintain and improve their marital satisfaction.

The findings from this study would serve as a valuable knowledge resource on the understanding of the relationship between perceived stress, spousal support, emotion regulation strategies, subjective well-being, and marital satisfaction. The significant path models both in first-time fathers and mothers would provide a better understanding on how they should regulate their emotions, especially in times of stress. On a related note, the Thai-translated measures used in this study all yielded sound psychometric properties and, therefore, can be used by other researchers who are interested in the same variables for study purposes within the Thai setting.

Additionally, the intervention program developed for use in this study proved to be an effective means of enhancing the level of happiness and marital satisfaction among first-time parents. The result of the present study also implies the usefulness of the intervention as a guide or knowledge resource for counseling psychologists or other helping professionals in an attempt to help first-time parents adjust to their new role in life as well as enhance their well-being and marital quality. Furthermore, concerned professionals, especially in the field of mental health, may consider using the intervention program for the benefit of expectant fathers and mothers as preventative training on how to deal with stress particularly during the transition to parenthood.

Recommendations for Future Research

Because of time constraints and resource limitations, the intervention program applied in this investigation was limited to a one-day, six-hour workshop which included effectiveness monitoring for only an interval of two weeks. As the effectiveness of using

emotion regulation strategies as well as skills to reduce stress and improve spousal support

has been proven to be productive, it is recommended that future researchers should aim to

develop a more comprehensive program with more sessions for knowledge acquisition,

skills training, and practice purposes. For example, interpersonal conflict resolution skills

such as problem solving therapy, albeit a Western-based strategy, could be added.

Additionally, it may also prove beneficial for future researchers to integrate other stress

reduction techniques that are more congruent with collective cultures and have received

much attention and interest in Thailand such as mindfulness training into the treatment

plan. Mindfulness emphasizes an emotional balance consisting of the sustained attention

on immediate experience while approaching the experience with acceptance (Bishop et al.,

2004), and the ability to regulate one's emotions. This is to experience an uncertainty in

life without distorting the reality (Hayes & Feldman, 2004). A culture-specific approach

might be more acceptable to Thai first-time parents who are likely to feel more

comfortable with home-grown strategies and techniques than with Western-based

theoretical frameworks.

Future investigations should consider the demographic characteristics of

educational background, occupational area, and socioeconomic status and their possible

impact on the level of marital satisfaction among first-time parents who may perceive

stressful situations and spousal support in a different light. On a related note, the current

research showed that most first-time parents reported low level of stress and high level of

spousal support. Future investigations that might obtain a more heterogeneous sample

using the purposive sampling technique might capture a wider range of perspectives

relating to the key variables, effectively producing more substantial information and

generalizable results that can be applied to a much wider population.

The current attempt to give definitive answers to questions raised in the study is still premature. This study only serves as a pilot investigation. More substantive research, beginning with the development of culture-free and more appropriate research instruments, is needed before general conclusions can be made. Confirmatory evidence for existing theoretical models on the same and similar study phenomena is possible with the utilization of a more improved survey technique, a larger sample, and collaboration with others in related fields of study, including sociology, anthropology, and family studies. Alternatively, other research methods and designs could be employed such as a longitudinal study to observe changes and differences in parents' attitudes and satisfaction level over time or the qualitative approach in which in-depth interviewing would be more fitting.

Conclusion

The nature of the stress and challenges that may occur as a result of the new roles and responsibilities that first-time parents have to experience during the early stages of their child's life influences how satisfied they are with their life and marriage. Being a parent for the first time can have negative impact on their well-being. It can be concluded that spousal support is an important factor in increasing the level of marital happiness; by the same token, low level of spousal support will likely lead to a decrease in marital satisfaction. Recent research had demonstrated the role of emotion regulation in buffering against stress and in enhancing spousal support and marital satisfaction. To the best of this researcher's knowledge, the present investigation is the first Thai-based empirical attempt to examine the roles of emotion regulation and subjective well-being in influencing marital satisfaction in Thai first-time parents. This study incorporates an experimental approach to examine the effectiveness of a first-time parent skills training program based on the

combination of emotion regulation and supportive communication in promoting marital satisfaction. Path analysis demonstrated the impact of perceived stress and spousal support on the level of marital satisfaction, mediated by the emotion regulation strategies of cognitive reappraisal and expressive suppression and the subjective well-being components of positive affect, negative, affect, and life satisfaction among first-time fathers and mothers.

This study also demonstrated that the first-time parent skills training intervention developed for use in this study increased marital satisfaction among the participants. Gross (2015) posited that there are various uses of emotion regulation in psychotherapy which could be shared for the benefit of the general population, including individuals and couples. This is consistent with the conclusion drawn from this study in that effective emotion regulation helps buffer against stress and enhances marital satisfaction and subjective well-being among non-clinical populations. In addition, the first-time parent skills training program combined the techniques of cognitive restructuring and effective communication skills as therapeutic strategies to help couples cope with their everyday stressors and emotional demands of new parenthood. Given the positive outcome of the intervention in promoting marital satisfaction, it can also be concluded that an enhanced and more improved version of the original program is bound to be a promising intervention for Thai first-time parents.

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APPENDIX A

Letter of Request (Sample)

Assumption University [Letterhead]
[Date]

Janette L. Funk, PhD., Department of Clinical and Social Sciences in Psychology
Meliora Hall, University of Rochester
Rochester, NY, USA 14627

Dear Professor Funk:

I am writing to request for your permission to use the *Couples Satisfaction Index* (CSI) you developed. Currently, I am a doctoral student in the Counseling Psychology program, Assumption University, Bangkok, Thailand, and am working on my dissertation entitled, *Perceived Stress, Spousal Support, Emotion Regulation, Subjective Well-Being, and Marital Satisfaction Among Thai First-Time Parents.*

I read your paper on "Testing the Ruler With Item Response Theory: Increasing Precision of Measurement for Relationship Satisfaction With the Couples Satisfaction Index" and found the paper to be very useful and relevant to my study. I plan to investigate marital satisfaction in Thai first-time parents and its relationship with relevant variables such as emotion regulation, positive and negative affect, and life satisfaction. Furthermore, my study will examine the effectiveness of an intervention aimed at enhancing the level of well-being and marital satisfaction among Thai first-time parents.

In this regard, I am really interested in the CSI-16, and would like to ask for your permission to use the questionnaire. In my opinion, it fits well with my research questions and hypotheses focused on marital satisfaction. I also plan to translate the scale into Thai and adjust the Thai version to best fit with the Thai cultural context. If you wish, I would be happy to send you the Thai scale and its psychometric properties upon completion of the study.

I would be grateful if you would kindly share with me the CSI and the instructions for administration along with other useful advice about the instrument, reliability values, and concerns (if any). Please feel free to contact me at this e-mail address: juntita@hotmail.com or my academic advisor Dr. Jon Blauw at: jonblauw@gmail.com, should you require further information about my research project.

I thank you very much in advance for your time and consideration. I look forward to hearing from you at your earliest convenience.

Yours sincerely,

Juntita Watcharakitipong
Cell phone: 66 8 1911 1720
E-mail: juntita@hotmail.com

APPENDIX B

Panel of Translators for Research Instruments

1. **Associate Professor Arunya Tuicompee, Ph.D.**

   Faculty member, Chulalongkorn University, Bangkok, Thailand; Psychology graduate; bilingual expert.

2. **Associate Professor Panrapee Suthiwan, Ph.D.**

   Faculty member, Chulalongkorn University, Bangkok, Thailand; Psychology graduate; bilingual expert.

3. **Sirintip Rhee, Psy.D.**

   Postdoctoral psychology resident, Kaiser Permanente, Roseville, California, USA; Psychology graduate; bilingual expert.

APPENDIX C

Informed Consent Form (English Version)

Code Number: _____   Date: ___ / ___ / _____

Informed Consent for Participants

Title of research: "Perceived Stress, Spousal Support, Emotion Regulation, Subjective Well-Being, and Marital Satisfaction Among Thai First-Time Parents"

Thank you for your cooperation to participate in this research study by Mrs. Juntita Watcharakitipong, a doctoral student from the Graduate School of Psychology, Assumption University. You are invited to participate in this study because you are a first-time parent who has a child (or children) aged no more than two years-old and reside in Bangkok area. The purpose of this study is to examine the influences of perceived stress and spousal support on marital satisfaction.

The questionnaires are in Thai, comprising seven parts: (1) Personal Information, (2) Perceived Stress Scale-Short Form, (3) Multidimensional Scale of Perceived Social Support-significant others subscale, (4) Emotion Regulation Questionnaire, (5) Positive and Negative Affect Schedule, (6) Satisfaction with Life Scale, and (7) Couples Satisfaction Index-Short Form. The survey consists of 76 questions which will take approximately 15-20 minutes to complete. If you decide to agree to participate in this research study, you will be asked to fill out a set of questionnaires and return the packet with this signed consent form to Mrs. Juntita Watcharakitipong or one of her research assistants.

It is not anticipated that there would be any harm or distress encountered in participating in this study; however, in the unlikely event that this does occur, you may stop answering the questions at any time, without penalty. You may also contact the researcher if you have any questions or problems that may arise during the survey process.

Every effort will be made to assure that the materials are kept confidential. No one will be told how you answered the questionnaires. Only the primary researcher and her dissertation committee will have access to the completed questionnaires. The findings will be consolidated and analyzed for academic purposes only.

If you have any questions or concerns about the research itself, or would like a copy of its summary and results, please feel free to contact me: Mrs. Juntita Watcharakitipong, Researcher/doctoral student, Graduate School of Psychology, Assumption University, Hua-Mak Campus, Bangkok, or e-mail me at: juntita.w@gmail.com. Assumption University has

reviewed and approved my request to conduct this project. If you have any concerns about your rights in this study, please contact the Graduate School of Psychology at (02) 300-4543, ext. 3636 or email counseling@au.edu.

I acknowledge the abovementioned information and voluntarily agree to participate in this study.

Signature: _____ **Date:**

_____

If you are interested in the next phase of this research, which is the use of the findings from this study to construct a workshop for first-time parents, please give us your first name, surname, telephone number, and email address. The researcher will contact you later.

Name-Surname: _____ Tel.: _____

Email address: _____
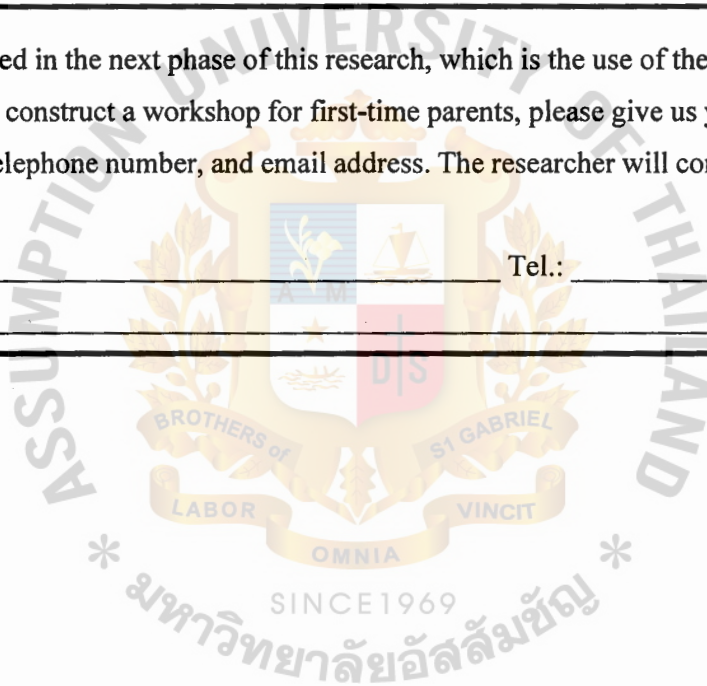
APPENDIX D

Informed Consent Form (Thai Version)

เลขที่ _____   วันที่ _____

<u>ข้อมูลสำหรับผู้ตอบแบบสอบถาม</u>

การวิจัยเรื่องความสัมพันธ์ระหว่างการรับรู้ความเครียด การสนับสนุนจากคู่สมรส การกำกับอารมณ์ ความสุขเชิงอัตวิสัย และความพึงพอใจในชีวิตสมรสของพ่อแม่มือใหม่

<u>ขอแจ้งให้ทราบ:</u> ขอขอบคุณที่กรุณาร่วมตอบแบบสอบถามสำหรับงานวิจัยในระดับปริญญาเอกของคุณจันฑิตา วัชระกิ ติพงศ์ นักศึกษาของคณะจิตวิทยา มหาวิทยาลัยอัสสัมชัญ เราขอเชิญให้คุณเข้าร่วมการตอบแบบสอบถามเนื่องจากคุณ เป็นพ่อหรือแม่ที่มีลูกเป็นครั้งแรก โดยที่บุตรของคุณอายุไม่เกิน 2 ปีในวันที่ตอบแบบสอบถามนี้ และคุณอาศัยอยู่ในเขต กรุงเทพมหานคร ซึ่งคำถามโดยรวมเกี่ยวข้องกับอิทธิพลของความเครียด และความช่วยเหลือจากคู่สมรสต่อความพึง พอใจในชีวิตสมรส

แบบสอบถามในงานวิจัยนี้เป็นภาษาไทย แบ่งเป็น 7 ส่วน (8 หน้า) ประกอบด้วย 1. ข้อมูลส่วนบุคคล 2. แบบวัด ความรู้สึกเครียด 3. แบบสอบถามความรู้สึกหลากหลายมิติเกี่ยวกับความช่วยเหลือจากคู่สมรส 4. แบบสอบถามการ บริหารจัดการอารมณ์ 5. มาตรวัดประสบการณ์อารมณ์ 6. แบบวัดความพึงพอใจในชีวิต 7. ดัชนีชี้วัดความพึงพอใจคู่รัก รวมทั้งสิ้น 76 ข้อ โดยจะใช้เวลาในการตอบแบบสอบถามประมาณ 15-20 นาที กรุณาส่งคืนแบบสอบถาม พร้อมทั้ง ลายเซ็นต์รับทราบข้อมูลสำหรับผู้ตอบแบบสอบถามในหน้าแรกนี้ให้กับทีมผู้วิจัย

หากในระหว่างการตอบแบบสอบถาม คุณรู้สึกว่าข้อคำถามทำให้เกิดการรบกวนทางอารมณ์หรือจิตใจ คุณสามารถ หยุดการตอบแบบสอบถามได้ และสามารถติดต่อผู้วิจัยเพื่อรับคำแนะนำในการติดต่อผู้เชี่ยวชาญเพื่อช่วยให้คำปรึกษา เกี่ยวกับความไม่สบายใจนั้น

ข้อมูลทั้งหมดจากการตอบแบบสอบถามจะถูกเก็บเป็นความลับ โดยจะไม่มีใครทราบว่าคุณตอบแบบสอบถามอย่างไร จะมีเพียงทีมผู้วิจัยและคณะกรรมการการวิจัยเท่านั้นที่สามารถเข้าถึงเอกสารนี้ได้ โดยผลการวิจัยจะสรุปในภาพรวม ไม่ใช่การวิเคราะห์ข้อมูลในระดับตัวบุคคล และเป็นไปเพื่อประโยชน์ทางการศึกษาเท่านั้น

หากคุณมีคำถามเกี่ยวกับโครงการวิจัย ข้อกังวลเกี่ยวกับงานวิจัย หรือต้องการรับทราบถึงผลของงานวิจัยนี้ คุณสามารถ ติดต่อสอบถามได้ที่ คุณจันฑิตา วัชระกิติพงศ์ ผู้วิจัย/นักศึกษาปริญญาเอก คณะจิตวิทยา มหาวิทยาลัยอัสสัมชัญ หรือที่ อีเมลล์ juntita.w@gmail.com ทั้งนี้ ทางคณะจิตวิทยา มหาวิทยาลัยอัสสัมชัญ ได้ตรวจสอบและอนุญาตให้คุณจันฑิตา ดำเนินงานวิจัยนี้ได้ คุณสามารถติดต่อสอบถามข้อมูลเพิ่มเติมได้ที่ เบอร์โทร (02) 300 – 4543 เบอร์ต่อ.3636 (หรือที่ อีเมลล์ counseling@au.edu)

ข้าพเจ้ารับทราบข้อมูลข้างต้น และตอบแบบสอบถามนี้ด้วยความสมัครใจ

ลายเซ็นต์ _____ วันที่ _____

หากคุณสนใจเข้าร่วมงานวิจัยในขั้นตอนต่อไป ซึ่งจะเป็นการนำผลของการศึกษาจากแบบสอบถามนี้ ไปพัฒนา
เป็นเวิร์คช็อปให้ความรู้สำหรับพ่อแม่มือใหม่ กรุณาระบุชื่อ-นามสกุล เบอร์โทรศัพท์ และอีเมลล์ เพื่อทีมผู้วิจัย
จะติดต่อคุณในภายหลัง

ชื่อ-นามสกุล _____ เบอร์โทรศัพท์ _____

อีเมลล์ _____

APPENDIX E

Survey Questionnaire (English Version)

Part 1: Personal Information

1.1 Personal Information for Study I and Study II

Directions: Please check ($\sqrt{}$) the box below to indicate your qualification to participate in this study, then answer questions 1-10.

I am a parent of an only child (or twins) aged 2 years-old or below.

☐ **Yes** (*please go to Question 1*)   ☐ **No** (*end the survey*). ***Thank you for your time.***

---

1. Gender: _____ Male   _____ Female

2. Age: _____ years old

3. Education: _____ Below Bachelor degree   _____ Bachelor Degree

   _____ Master Degree   _____ Doctoral Degree and above

4. Marital status: _____ Married   _____ Separated   _____ Divorced   _____ Widowed

5. How long have you been married?

   _____ Not married

   _____ 0–2 years   _____ 2–4 years

   _____ 4–6 years   _____ more than 6 years

6. Occupation:

   _____ Unemployed   _____ Employee

   _____ Business owner   _____ Government/state enterprise officer

   _____ Other (Please specify: _____)

7. Working hours per week

   _____ None   _____ 1–10 hours per week

   _____ 11–20 hours per week   _____ 21–30 hours per week

   _____ 31–40 hours per week   _____ more than 40 hours per week

8. Family income per month

    ____ Less than 50,000 Baht   ____ 50,001-100,000 Baht

    ____ 100,001-150,000 Baht   ____ 150,001-200,000 Baht

    ____ More than 200,000 Baht

9. Residential area:

    ____ Bangkok and proximities

    ____ Other Provinces (Please specify: _____)

10. Your child's age: ___ year ___ months

11. Who has the main responsibility to take care of your child? (You can choose more than one

    person)

    ____ You

    ____ Your spouse

    ____ Other family members (i.e., your parents, your sister, etc.)

    ____ Nanny/Nurse/Maid

    ____ Other (please specify: _____)
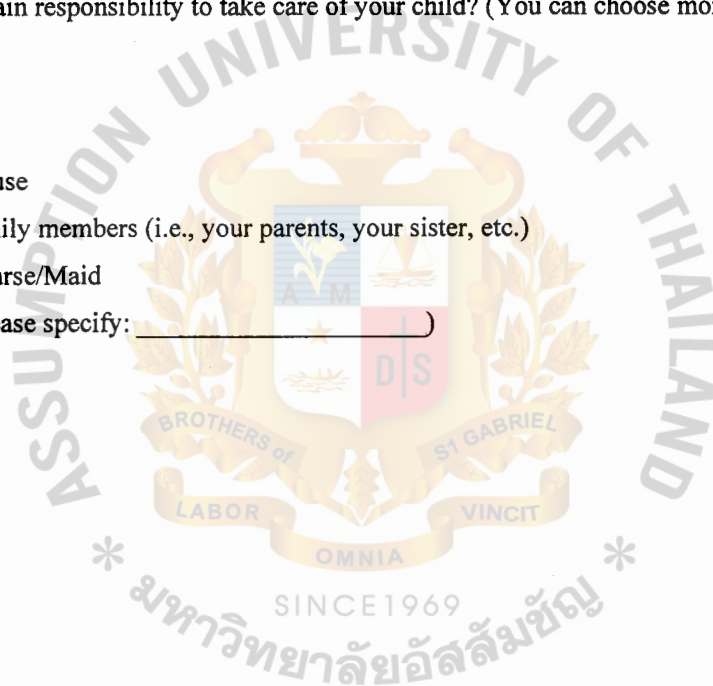
Part 1: Personal Information for Study III

Your initials: _____

Consisting of: First letter of your first name

First letter of your surname

First letter of your nickname

For example: Somchai Rakdee (Chai) = **SRC**

1.   Gender: ____ Male   ____ Female

2.   Your age: ____ years old

3.   Education:

____ Below Bachelor degree   ____ Bachelor Degree

____ Master Degree   ____ Higher than Master Degree

4.   Marital status:

____ Married   ____ Separated   ____ Divorced   ____ Widowed

5.   How long have you been married OR stayed together as couple (if not married)?

____ 0-2 years   ____ 2-4 years

____ 4-6 years   ____ More than 6 years

6. Occupation:

____ Unemployed   ____ Employee

____ Government/state enterprise officer   ____ Business owner

____ Other (Please specify: _____)

7. Working hours per week

____ None   ____ 1-10 hours per week

____ 11-20 hours per week   ____ 21-30 hours per week

____ 31-40 hours per week   ____ more than 40 hours per week

8. Family income per month

    ____ Less than 10,000 Baht/Month   ____ 10,001 – 30,000 Baht/Month

    ____ 30,001 - 50,000 Baht/Month   ____ 50,001-100,000 Baht/Month

    ____ 100,001-150,000 Baht/Month   ____ 150,001-200,000 Baht/Month

    ____ 200,001-250,000 Baht/Month   ____ More than 150,000 Baht

9. Your child's age: ____ Year(s)   ____ Month(s)

10. Who has the main responsibility to take care of your child? (You can choose more than

one person)

    ____ You

    ____ Your spouse

    ____ Other family members (i.e., your parents, your sister, etc.)

    ____ Nanny/Nurse/Maid

    ____ Other (please specify: _____)

11. How often do you practice meditation?

    ____ Never   ____ Once a month

    ____ Once a week   ____ Almost everyday

    ____ Everyday   ____ More than once a day

Part 2: PSS-10

Directions: The questions in this scale ask you about your feelings and thoughts **during the last month**. In each case, you will be asked to indicate by <u>circling</u> how often you felt or thought a certain way, using the following scale.

0 = Never   1 = Almost never   2 = Sometimes   3 = Fairly often   4 = Very often

1. In the last month, how often have you been upset because of

    something that happened unexpectedly?   0 1 2 3 4

2. In the last month, how often have you felt that you were unable

    to control the important things in your life?   0 1 2 3 4

3. In the last month, how often have you felt nervous and stressed?   0 1 2 3 4

4. In the last month, how often have you felt confident about your

    ability to handle your personal problems?   0 1 2 3 4

5. In the last month, how often have you felt that things were going

    your way?   0 1 2 3 4

6. In the last month, how often have you found that you could not cope

    with all the things that you had to do?   0 1 2 3 4

7. In the last month, how often have you been able to control irritations

    in your life?   0 1 2 3 4

8. In the last month, how often have you felt that you were on top of things? 0 1 2 3 4

9. In the last month, how often have you been angered because of things

    that were outside of your control?   0 1 2 3 4

10. In the last month, how often have you felt difficulties were piling up

    so high that you could not overcome them?   0 1 2 3 4

Part 3: MSPSS

Directions: We are interested in how you feel about the following statements. Read each statement carefully. Indicate how you feel about each statement using the following scale.

Circle the "1" if you   –   **Very strongly disagree**
Circle the "2" if you   –   **Strongly disagree**
Circle the "3" if you   –   **Mildly disagree**
Circle the "4" if you are   –   **Neutral**
Circle the "5" if you   –   **Mildly agree**
Circle the "6" if you   –   **Strongly agree**
Circle the "7" if you   –   **Very strongly agree**

1.   There is my spouse who is around when I am in   1   2   3   4   5   6   7
      need.

2.   There is my spouse with whom I can share my   1   2   3   4   5   6   7
      joys and sorrows.

3.   I have my spouse who is a real source of comfort   1   2   3   4   5   6   7
      to me.

4.   There is my spouse who cares about my feelings.   1   2   3   4   5   6   7
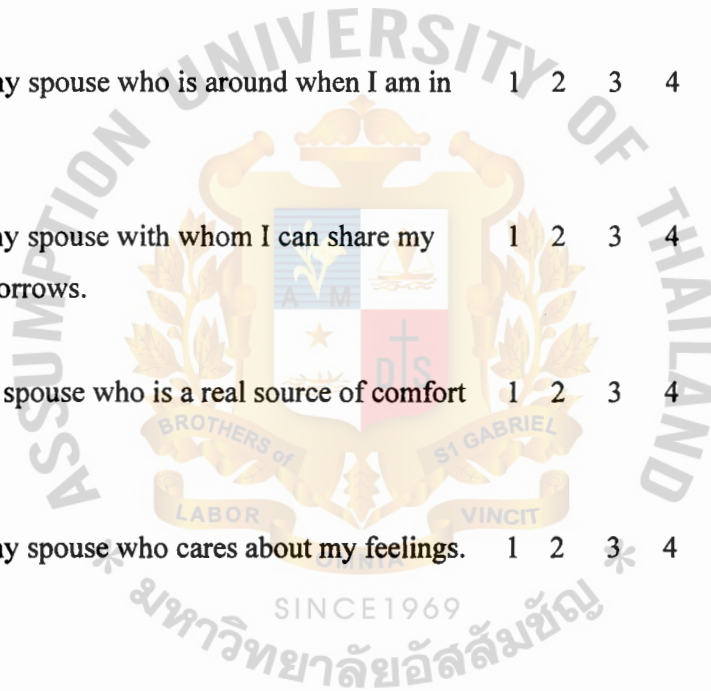
Part 4: ERQ

Directions: We would like to ask you some questions about your emotional life, in particular, how you control (that is, regulate and manage) your emotions. The questions below involve two distinct aspects of your emotional life. One is your <u>emotional experience</u> (what you feel like inside). The other is your <u>emotional expression</u> (how you show your emotions in the way you talk, gesture, or behave). Although some of the following questions may seem similar to one another, they differ in important ways. For each item, please answer by putting the corresponding <u>number</u> on the blank, using the following scale:

```
1-------------2-------------3-------------4-------------5-------------6-------------7
Strongly                              Neutral                              Strongly
disagree                                                                   agree
```

____ 1. When I want to feel more positive emotion (such as joy or amusement), I change what I'm thinking about.

____ 2. I keep my emotions to myself.

____ 3. When I want to feel less negative emotion (such as sadness or anger), I change what I'm thinking about.

____ 4. When I am feeling positive emotions, I am careful not to express them.

____ 5. When I'm faced with a stressful situation, I make myself think about it in a way that helps me stay calm.

____ 6. I control my emotions by not expressing them.

____ 7. When I want to feel more positive emotion, I change the way I'm thinking about the situation.

____ 8. I control my emotions by changing the way I think about the situation I'm in.

____ 9. When I am feeling negative emotions, I make sure not to express them.

____ 10. When I want to feel less negative emotion, I change the way I'm thinking about the situation.

Part 5: PANAS

Directions: This scale consists of a number of words that describe different feelings and emotions. Read each item and then list the <u>number</u> from the scale below on the blank next to each word. **Indicate to what extent you feel this way right now, that is, at the present moment *OR* indicate the extent you have felt this way over the past week.**

1	2	3	4	5
Not at all	**A little**	**Moderately**	**Quite a bit**	**Extremely**

_____ 1. Interested		_____11. Irritable
_____ 2. Distressed		_____12. Alert
_____ 3. Excited		_____13. Ashamed
_____ 4. Upset		_____14. Inspired
_____ 5. Strong		_____15. Nervous
_____ 6. Guilty		_____16. Determined
_____ 7. Scared		_____17. Attentive
_____ 8. Hostile		_____18. Jittery
_____ 9. Enthusiastic		_____ 19. Active
_____10. Proud		_____20. Afraid

Part 6: SWLS

Directions: Below are five statements that you may agree or disagree with. Using the 1 – 7 scale below, indicate your agreement with each item by placing the appropriate <u>number</u> on the blank preceding that item. Please be open and honest in your responses.

1 = **Strongly disagree**	5 = **Slightly agree**
2 = **Disagree**	6 = **Agree**
3 = **Slightly disagree**	7 = **Strongly agree**
4 = **Neither agree nor disagree**	

_____ 1. In most ways, my life is close to my ideal.

_____ 2. The conditions of my life are excellent.

_____ 3. I am satisfied with my life.

_____ 4. So far, I have gotten the important things I want in life.

_____ 5. If I could live my life over, I would change almost nothing.

Part 7: CSI-16

1. Please indicate the degree of happiness, all things considered, of your relationship by circling the corresponding number below.

Extremely unhappy	Fairly unhappy	A little unhappy	Happy	Very happy	Extremely happy	Perfect
0	1	2	3	4	5	6

2. In general, how often do you think that things between you and your partner are going well?

All the time	Most of the time	More often than not	Occasionally	Rarely	Never
5	4	3	2	1	0

Note: The rating scale below is slightly different from the scales above. Nonetheless, respond by circling the corresponding number as above.

	Not at all TRUE	A little TRUE	Somewhat TRUE	Mostly TRUE	Almost completely TRUE	Completely TRUE
3. Our relationship is strong.	0	1	2	3	4	5
4. My relationship with my partner makes me happy.	0	1	2	3	4	5
5. I have a warm and comfortable relationship with my partner.	0	1	2	3	4	5
6. I really feel like part of a team with my partner.	0	1	2	3	4	5

	Not at all TRUE	A little TRUE	Somewhat TRUE	Mostly TRUE	Almost completely TRUE	Completely TRUE
7. How rewarding is your relationship with your partner?	0	1	2	3	4	5
8. How well does your partner meet your needs?	0	1	2	3	4	5
9. To what extent has your relationship met your original expectations?	0	1	2	3	4	5
10. In general, how satisfied are you with your relationship?	0	1	2	3	4	5

For each of the following items, select the answer that best describes *how you feel about your relationship.* Base your responses on your first impressions and immediate feelings about the item. Respond by circling the corresponding number on a scale of 0 to 5, as shown below.

11.	INTERESTING	5	4	3	2	1	0	BORING
12.	BAD	0	1	2	3	4	5	GOOD
13.	FULL	5	4	3	2	1	0	EMPTY
14.	STURDY	5	4	3	2	1	0	FRAGILE
15.	DISCOURAGING	0	1	2	3	4	5	HOPEFUL
16.	ENJOYABLE	5	4	3	2	1	0	MISERABLE

THANK YOU FOR YOUR PARTICIPATION

APPENDIX F

Survey Questionnaire (Thai Version)

Personal Information for Study I and II

ส่วนที่ 1: ข้อมูลส่วนบุคคล

<u>คำแนะนำ</u>: กรุณาทำเครื่องหมาย (√) หน้าคำตอบที่ตรงกับคุณเพื่อคัดกรองการตอบแบบสอบถามนี้
จากนั้นตอบคำถามข้อ 1-10

> คุณเป็นพ่อหรือแม่ของลูกคนเดียว (หรือลูกแฝด) ที่มีอายุไม่เกิน 2 ปี
> ☐ ใช่ (กรุณาเริ่มตอบแบบสอบถามข้อที่ 1)   ☐ ไม่ใช่ (ยุติการตอบแบบสอบถาม)

1. เพศ: ☐ ชาย   ☐ หญิง
2. อายุของคุณ: _____ ปี
3. การศึกษา: ☐ ต่ำกว่าปริญญาตรี ☐ ปริญญาตรี ☐ ปริญญาโท ☐ สูงกว่าปริญญาโท
4. สถานภาพสมรส:
    ☐ แต่งงาน   ☐ แยกกันอยู่   ☐ หย่า   ☐ เป็นหม้าย
5. คุณแต่งงานมาแล้วกี่ปี?
    ☐ ไม่ได้แต่งงาน ☐ 0-2 ปี ☐ 2-4 ปี ☐ 4-6 ปี ☐ มากกว่า 6 ปี
6. อาชีพปัจจุบัน: ☐ ว่างงาน   ☐ พนักงานบริษัท   ☐ ค้าขายหรือธุรกิจส่วนตัว
    ☐ ข้าราชการ/พนักงานรัฐวิสาหกิจ   ☐ อื่นๆ (ระบุ ....)
7. จำนวนชั่วโมงทำงานต่อสัปดาห์:
    ☐ ไม่ได้ทำงาน   ☐ 1 – 10 ชั่วโมงต่อสัปดาห์
    ☐ 11-20 ชั่วโมงต่อสัปดาห์   ☐ 21-30 ชั่วโมงต่อสัปดาห์
    ☐ 31-40 ชั่วโมงต่อสัปดาห์   ☐ มากกว่า 40 ชั่วโมงต่อสัปดาห์
8. รายได้ของครอบครัวต่อเดือน
    ☐ ต่ำกว่า 50,000 บาท   ☐ 50,000 – 100,000 บาท
    ☐ 100,001 – 150,000 บาท   ☐ 150,001 – 200,000 บาท
    ☐ 200,001 – 250,000 บาท   ☐ มากกว่า 250,000 บาท

9. ที่อยู่อาศัยปัจจุบัน (ไม่จำเป็นต้องเป็นที่เดียวกับในทะเบียนบ้าน)
    ☐ กรุงเทพและปริมณฑล   ☐ ต่างจังหวัด (ระบุ ....)

10. อายุบุตร _____ ปี _____ เดือน

11. บุคคลใดมีหน้าที่หลักในการดูแลลูกของคุณ (ตอบได้มากกว่า 1 ข้อ)

☐ คุณดูแลลูกเอง ☐ คู่สมรสของคุณเป็นผู้ดูแล

☐ สมาชิกอื่นในครอบครัว (เช่น พ่อแม่ของคุณ พี่น้องของคุณ)

☐ พี่เลี้ยง พยาบาล หรือแม่บ้าน ☐ อื่นๆ: (ระบุ ....)

Personal Information for Study III

<u>คำถามระบุรหัสผู้ตอบแบบสอบถาม</u>

คำแนะนำ: กรุณาใส่ชื่อตัวย่อของคุณ ดังนี้

ตัวที่ 1 = พยัญชนะตัวแรกของชื่อจริงในภาษาอังกฤษ

ตัวที่ 2 = พยัญชนะตัวแรกของนามสกุลในภาษาอังกฤษ

ตัวที่ 3 = พยัญชนะตัวแรกของชื่อเล่นในภาษาอังกฤษ

<u>ตัวอย่าง</u>

ชื่อ Somchai

นามสกุล Rukdee

ชื่อเล่น Chai

กรอกตัวย่อ = SRC

กรุณากรอกชื่อตัวย่อของคุณ

☐ ☐ ☐

ส่วนที่ 1: ข้อมูลส่วนบุคคล

<u>คำแนะนำ:</u> กรุณาทำเครื่องหมาย (√) หน้าคำตอบที่ตรงกับคุณเพื่อคัดกรองการตอบแบบสอบถามนี้ จากนั้นตอบคำถามข้อ 1-10

1. เพศ: ☐ ชาย ☐ หญิง

2. อายุของคุณ: _____ ปี

3. การศึกษา: ☐ ต่ำกว่าปริญญาตรี ☐ ปริญญาตรี ☐ ปริญญาโท ☐ สูงกว่าปริญญาโท

4. สถานภาพสมรส:

☐ แต่งงาน ☐ แยกกันอยู่ ☐ หย่า ☐ เป็นหม้าย

5. คุณแต่งงานมาแล้วกี่ปี?

☐ ไม่ได้แต่งงาน ☐ 0-2 ปี ☐ 2-4 ปี ☐ 4-6 ปี ☐ มากกว่า 6 ปี

6. อาชีพปัจจุบัน: ☐ ว่างงาน ☐ พนักงานบริษัท ☐ ค้าขายหรือธุรกิจส่วนตัว

☐ ข้าราชการ/พนักงานรัฐวิสาหกิจ ☐ อื่นๆ: (ระบุ ....)

7. จำนวนชั่วโมงทำงานต่อสัปดาห์:

☐ ไม่ได้ทำงาน   ☐ 1 – 10 ชั่วโมงต่อสัปดาห์

☐ 11-20 ชั่วโมงต่อสัปดาห์   ☐ 21-30 ชั่วโมงต่อสัปดาห์

☐ 31-40 ชั่วโมงต่อสัปดาห์   ☐ มากกว่า 40 ชั่วโมงต่อสัปดาห์

8. รายได้ของครอบครัวต่อเดือน

☐ ต่ำกว่า 10,000 บาท   ☐ 10,000 – 30,000 บาท

☐ 30,001 – 50,000 บาท   ☐ 50,001 – 100,000 บาท

☐ 100,001 – 150,000 บาท   ☐ 150,001 – 200,000 บาท

☐ 200,001 – 250,000 บาท   ☐ มากกว่า 250,000 บาท

9. อายุบุตร   _____ ปี _____ เดือน

10. บุคคลใดมีหน้าที่หลักในการดูแลลูกของคุณ (ตอบได้มากกว่า 1 ข้อ)

☐ คุณดูแลลูกเอง   ☐ คู่สมรสของคุณเป็นผู้ดูแล

☐ สมาชิกอื่นในครอบครัว (เช่น พ่อแม่ของคุณ พี่น้องของคุณ)

☐ พี่เลี้ยง พยาบาล หรือแม่บ้าน   ☐ อื่นๆ: (ระบุ ....)

11. คุณนั่งสมาธิบ่อยแค่ไหน

☐ ไม่เคยเลย   ☐ เดือนละครั้ง

☐ สัปดาห์ละครั้ง   ☐ เกือบทุกวัน

☐ ทุกวัน   ☐ มากกว่า 1 ครั้งต่อวัน

ส่วนที่ 2: แบบวัดความรู้สึกเครียด

<u>คำแนะนำ</u>: ต่อไปนี้เป็นคำถามเกี่ยวกับความรู้สึกและความคิดของคุณในรอบ <u>1 เดือนที่ผ่านมา</u> โปรดทำ
เครื่องหมาย √ ลงในช่องที่ตรงกับที่คุณคิดหรือรู้สึกแบบนั้น

	ไม่เลย	แทบจะ ไม่มี	มี บางครั้ง	ค่อนข้าง บ่อย	บ่อย มาก
1. ในรอบ 1 เดือนที่ผ่านมา บ่อยแค่ไหนที่คุณรู้สึกไม่ สบายใจเพราะมีสิ่งที่เกิดขึ้นอย่างไม่คาดคิด?					
2. ในรอบ 1 เดือนที่ผ่านมา บ่อยแค่ไหนที่คุณรู้สึกว่าคุณ ไม่สามารถควบคุมเรื่องสำคัญๆ ในชีวิตของคุณได้?					
3. ในรอบ 1 เดือนที่ผ่านมา บ่อยแค่ไหนที่คุณรู้สึก กระสับกระส่าย และตึงเครียด?					
4. ในรอบ 1 เดือนที่ผ่านมา บ่อยแค่ไหนที่คุณรู้สึกมั่นใจ ในความสามารถของตนเองที่จะรับมือกับปัญหา ส่วนตัวทั้งหลายได้?					
5. ในรอบ 1 เดือนที่ผ่านมา บ่อยแค่ไหนที่คุณรู้สึกว่าสิ่ง ทั้งหลายเป็นไปในทิศทางที่คุณต้องการ?					
6. ในรอบ 1 เดือนที่ผ่านมา บ่อยแค่ไหนที่คุณรู้สึกว่าคุณ ไม่สามารถจัดการกับสิ่งทั้งหลายทั้งที่เป็นสิ่งที่ล้วน เคยทำมาแล้ว?					
7. ในรอบ 1 เดือนที่ผ่านมา บ่อยแค่ไหนที่คุณรู้สึกว่า สามารถควบคุมสิ่งทั้งหลายที่มากวนใจได้?					
8. ในรอบ 1 เดือนที่ผ่านมา บ่อยแค่ไหนที่คุณรู้สึกว่าคุณ ควบคุมสถานการณ์ต่างๆ ได้?					
9. ในรอบ 1 เดือนที่ผ่านมา บ่อยแค่ไหนที่คุณโกรธอัน เนื่องมาจากสิ่งที่นอกเหนือการควบคุมของคุณ?					
10. ในรอบ 1 เดือนที่ผ่านมา บ่อยแค่ไหนที่คุณรู้สึกว่า ปัญหาต่างๆ ทับถมมากขึ้นจนคุณไม่สามารถแก้ไขได้ หมด?					

ส่วนที่ 3: แบบสอบถามความรู้สึกหลากหลายมิติเกี่ยวกับความช่วยเหลือจากคู่สมรส

คำแนะนำ: คุณรู้สึกอย่างไรเกี่ยวกับข้อความต่าง ๆ เหล่านี้ โปรดอ่านแต่ละข้อความอย่างตั้งใจ และบอก
ว่าคุณรู้สึกอย่างไรเกี่ยวกับคู่สมรสชองคุณ

กากบาท X ในช่อง "1" ถ้าคุณ ไม่เห็นด้วยอย่างมาก

กากบาท X ในช่อง "2" ถ้าคุณ ไม่เห็นด้วย

กากบาท X ในช่อง "3" ถ้าคุณ ค่อนข้างไม่เห็นด้วย

กากบาท X ในช่อง "4" ถ้าคุณ เฉย ๆ

กากบาท X ในช่อง "5" ถ้าคุณ ค่อนข้างเห็นด้วย

กากบาท X ในช่อง "6" ถ้าคุณ เห็นด้วย

กากบาท X ในช่อง "7" ถ้าคุณ เห็นด้วยอย่างมาก

	1	2	3	4	5	6	7
1. สามี/ภรรยาของฉันคอยช่วย หากฉันต้องการความช่วยเหลือขึ้นมา							
2. สามี/ภรรยาของฉันสามารถร่วมทุกข์ร่วมสุขกับฉันได้							
3. สามี/ภรรยาของฉันเป็นผู้ที่ให้ความสบายใจจริงๆ แก่ฉัน							
4. สามี/ภรรยาของฉันคอยห่วงใยความรู้สึกฉัน							

ส่วนที่ 4: แบบสอบถามการบริหารจัดการอารมณ์

<u>คำชี้แจง</u>: ข้อความต่อไปนี้ เป็นข้อความที่เกี่ยวกับการควบคุมและจัดการกับอารมณ์ความรู้สึกของคุณโดยทั่วไป ข้อความจะแบ่งเป็น 2 กลุ่ม กลุ่มแรก เป็นเรื่องของอารมณ์ความรู้สึกที่อยู่ข้างใน และกลุ่มที่ 2 เป็นเรื่องของการ แสดงออกซึ่งอารมณ์ความรู้สึกภายนอก ไม่ว่าจะเป็นการแสดง ออกผ่านทางการพูด ท่าทาง หรือการกระทำในบาง ข้อความอาจมีความหมายคล้ายคลึงกัน ทั้งนี้ ความแตกต่างเพียงเล็กน้อยนั้น ล้วนสำคัญต่อการชี้วัด <u>โปรดพิจารณาแต่ ละข้อความโดยละเอียด</u> แล้ว "วงกลม" หมายเลขในช่องที่ตรงกับความรู้สึกของคุณมากที่สุดเพียงข้อเดียว กรุณาตอบ คำถามทุกข้อ

	ไม่เห็นด้วย อย่างยิ่ง	ไม่เห็น ด้วย	ไม่เห็นด้วย นิดหน่อย	เฉยๆ	เห็นด้วย นิดหน่อย	เห็น ด้วย	เห็นด้วย อย่างยิ่ง
1. เมื่อฉันต้องการที่จะรู้สึกถึงอารมณ์ในด้าน บวกให้มากขึ้น (เช่น รู้สึกเบิกบาน สนุกสนาน) ฉันใช้วิธีเปลี่ยนเรื่องที่ฉันกำลัง คิดอยู่	1	2	3	4	5	6	7
2. ฉันเก็บอารมณ์ความรู้สึกไว้กับตัวเอง	1	2	3	4	5	6	7
3. เมื่อฉันต้องการที่จะรู้สึกถึงอารมณ์ในด้านลบ ให้น้อยลง (เช่น เศร้าหรือโกรธให้น้อยลง) ฉัน ใช้วิธีเปลี่ยนเรื่องที่ฉันกำลังคิดอยู่	1	2	3	4	5	6	7
4. ฉันมักระวังที่จะไม่แสดงอารมณ์ในด้านบวก ออกมา	1	2	3	4	5	6	7
5. เมื่อฉันเจอกับสถานการณ์ตึงเครียด ฉันมัก คิดถึงมันในลักษณะที่ช่วยให้ฉันมีความสงบ ใจ	1	2	3	4	5	6	7
6. ฉันควบคุมอารมณ์ความรู้สึกต่างๆ โดยการไม่ แสดงมันออกมา	1	2	3	4	5	6	7
7. เมื่อฉันต้องการที่จะรู้สึกถึงอารมณ์ในด้าน บวกให้มากขึ้น ฉันมักเปลี่ยนวิธีคิดที่ฉันมีต่อ สถานการณ์นั้น ๆ	1	2	3	4	5	6	7
8. ฉันควบคุมความอารมณ์ความรู้สึกของตนเอง โดยการเปลี่ยนวิธีคิดที่ฉันมีต่อสถานการณ์ที่ ฉันกำลังเจออยู่	1	2	3	4	5	6	7
9. ฉันทำทุกอย่างเพื่อให้แน่ใจว่าจะไม่แสดง อารมณ์ในทางลบออกมา	1	2	3	4	5	6	7
10. เมื่อฉันต้องการที่จะรู้สึกถึงอารมณ์ในทางลบ ให้น้อยลง ฉันมักเปลี่ยนวิธีคิดที่ฉันมีต่อ สถานการณ์นั้น	1	2	3	4	5	6	7

ส่วนที่ 5: มาตรวัดประสบการณ์อารมณ์

<u>คำชี้แจง</u>: มาตรวัดนี้ประกอบด้วยคำที่อธิบายความรู้สึก และอารมณ์ต่างๆ จำนวน 20 ข้อ กรุณาอ่านคำแต่
ละคำแล้วใส่ตัวเลขตามมาตรวัดด้านล่างในช่องว่างหน้าคำแต่ละคำ โดยระบุระดับความรู้สึกของคุณใน
ปัจจุบัน หรือระบุระดับความรู้สึกของคุณในช่วงสัปดาห์ที่ผ่านมา

| 1 = น้อยมากหรือไม่เลย | 2 = เล็กน้อย | 3 = ปานกลาง | 4 = ค่อนข้างมาก | 5 = มากที่สุด |

_____	1. สนใจในบางสิ่งบางอย่าง	_____	11. หงุดหงิดรำคาญใจ
_____	2. ทุกข์ใจ	_____	12. ตื่นตัว
_____	3. ตื่นเต้น	_____	13. ละอายใจ
_____	4. หัวเสีย	_____	14. มีแรงบันดาลใจ
_____	5. เข้มแข็ง	_____	15. ประหม่า
_____	6. รู้สึกผิด	_____	16. แน่วแน่
_____	7. หวาดกลัว	_____	17. ใส่ใจ
_____	8. ไม่เป็นมิตร	_____	18. ว้าวุ่นใจ
_____	9. กระตือรือร้น	_____	19. กระฉับกระเฉง
_____	10. ภูมิใจ	_____	20. เกรงกลัว

ส่วนที่ 6: แบบวัดความพึงพอใจในชีวิต

<u>คำแนะนำ</u>: ขอให้ท่านพิจารณาข้อคำถามด้านล่างทั้ง 5 ข้อซึ่งบางข้อท่านอาจจะเห็นด้วยหรือไม่เห็นด้วย โดยขอให้ท่านประเมินระดับความคิดเห็นต่อข้อคำถามดังกล่าว ด้วยการระบุหมายเลขของคำตอบ จาก 1 - 7 ลงในช่องว่างหน้าข้อคำถาม ทั้ง 5 ข้อ ข้อคำถามดังกล่าวไม่มีถูกหรือผิด เป็นเพียงการประเมิน ความคิดเห็นที่มีต่อสถานการณ์ของตัวท่าน ณ ปัจจุบันเท่านั้น

> 7 หมายถึง เห็นด้วยมากที่สุด
> 6 หมายถึง เห็นด้วย
> 5 หมายถึง ค่อนข้างเห็นด้วย
> 4 หมายถึง เฉยๆ ไม่ใช่ทั้ง เห็นด้วยหรือไม่เห็นด้วย
> 3 หมายถึง ค่อนข้างไม่เห็นด้วย
> 2 หมายถึง ไม่เห็นด้วย
> 1 หมายถึง ไม่เห็นด้วยมากที่สุด

_____ 1. โดยภาพรวมแล้ว ชีวิตของฉันใกล้เคียงกับอุดมคติที่ฉันนึกฝันไว้

_____ 2. สภาพชีวิตต่างๆ ของฉันดีมาก

_____ 3. ฉันมีความพึงพอใจในชีวิตที่เป็นอยู่

_____ 4. จวบจนกระทั่งปัจจุบันนี้ ฉันได้รับสิ่งที่สำคัญตามที่ฉันต้องการในชีวิตแล้ว

_____ 5. ถ้าฉันสามารถย้อนหวนกลับไปยังชีวิตในอดีตที่ผ่านมาได้ ฉันก็แทบจะไม่อยากแก้ไขอะไรมัน
เลย

ส่วนที่ 7: ดัชนีชี้วัดความพึงพอใจคู่รัก

<u>คำแนะนำ</u>: กรุณาตอบคำถามด้านล่างโดยการวงกลมล้อมรอบคำตอบที่ตรงกับคุณมากที่สุด

1. กรุณาระบุระดับความสุขของความสัมพันธ์ของคุณ โดยพิจารณาทุกปัจจัย

ไม่มีความสุข มาก	ไม่มีความสุข	ไม่มีความสุข เล็กน้อย	มีความสุข	มีความสุขมาก	มีความสุข อย่างยิ่ง	สมบูรณ์แบบ
0	1	2	3	4	5	6

2. บ่อยครั้งแค่ไหนที่คุณคิดว่าความสัมพันธ์ระหว่างคุณกับคู่ของคุณไปได้ดี

ตลอดเวลา	ส่วนใหญ่	ดีมากกว่าไม่ดี	บางครั้ง	แทบจะไม่ดี	ไม่เคยดีเลย
5	4	3	2	1	0

	ไม่ถูกต้องเลย	ถูกต้องเล็กน้อย	ถูกต้องบ้าง	ถูกต้องเป็นส่วนใหญ่	ถูกต้องเกือบทั้งหมด	ถูกต้องทั้งหมด
3. ความสัมพันธ์ของเรามั่นคงแข็งแรงดี	0	1	2	3	4	5
4. ความสัมพันธ์ของฉันกับคู่ของฉันทำให้ฉันมีความสุข	0	1	2	3	4	5
5. ฉันมีความสัมพันธ์ที่อบอุ่นและสบายใจกับคู่ของฉัน	0	1	2	3	4	5
6. ฉันรู้สึกว่าฉันเป็น<u>ทีมเดียวกับคู่</u>ของฉันจริง ๆ	0	1	2	3	4	5

	ไม่เลย	เล็กน้อย	บางครั้ง	ส่วนใหญ่	เกือบสมบูรณ์	สมบูรณ์
7. ความสัมพันธ์ระหว่างคุณกับคู่ของคุณคุ้มค่าแค่ไหน	0	1	2	3	4	5
8. คู่ของคุณเติมเต็มความต้องการของคุณได้ดีแค่ไหน	0	1	2	3	4	5
9. ความสัมพันธ์ของคุณตรงกับความคาดหวังตั้งแต่แรกของคุณมากแค่ไหน	0	1	2	3	4	5
10. โดยทั่วไป คุณรู้สึกพอใจกับความสัมพันธ์ของคุณเพียงใด	0	1	2	3	4	5

กรุณาเลือกคำตอบในแต่ละข้อที่อธิบายถึง<u>ความรู้สึกที่คุณมีต่อความสัมพันธ์ของคุณ</u> ให้เลือกคำตอบแรกที่คุณรู้สึกหลังจากอ่านตัวเลือก

11.	น่าสนใจ	5	4	3	2	1	0	น่าเบื่อ
12.	ไม่ดี	0	1	2	3	4	5	ดี
13.	เติมเต็ม	5	4	3	2	1	0	ว่างเปล่า
14.	แข็งแรง	5	4	3	2	1	0	เปราะบาง
15.	ไม่ให้กำลังใจ	0	1	2	3	4	5	มีความหวัง
16.	เพลิดเพลิน	5	4	3	2	1	0	ทุกข์ทน

ขอบคุณที่ร่วมทำแบบสอบถาม

APPENDIX G

Instrument Developers' Letter of Permission

Permission to Use: The Perceived Stressed Scale – Short Form (PSS-10)

Sent: Wednesday, February 24, 2016 1:35 PM
To: Juntita Watcharakitipong
Cc: TINAKON WONGPAKARAN
Subject: RE: Request to Use the Thai Perceived Stress Scale-10 (T-PSS-10)

Dear Juntita Watcharakitipong,

I could not be happier to allow you to use the T-PSS-10. Please find the scale and the full-text regarding its psychometric properties at this link:
http://www.wongpakaran.com/index.php?lay=show&ac=article&Id=539501466
--> Publication No. 13

Good luck with your dissertation.

Nahathai

ศาสตราจารย์แพทย์หญิง ณหทัย วงศ์ปการันย์

หน่วยจิตเวชศาสตร์ผู้สูงอายุ ภาควิชาจิตเวชศาสตร์ คณะแพทยศาสตร์ มช.

110 ถ.อินทวโรรส ต.ศรีภูมิ อ.เมือง เชียงใหม่ 50200

Nahathai Wongpakaran, MD, FRCPsychT
Professor of Psychiatry
Geriatric Psychiatry Unit, Department of Psychiatry, Faculty of Medicine, Chiang Mai
University, 110 Intawaroros Rd., T. Sriphum, A. Muang, Chiang Mai,
Kingdom of Thailand 50200; Tel: +66 53 935422 ext 320, Fax: +66 53 935426

Permission to Use: The Multidimensional Scale of Perceived Social Support (MSPSS)

Zimet, Gregory D <gzimet@iu.edu> Tue, Mar 8, 2016 at 8:48 AM
To: Juntita Watcharakitipong <juntita.w@gmail.com>

Dear Juntita Watcharakitipong,
6/28/2016 Gmail A Request to Use the Multidimensional Scale of Perceived Social
Support (MSPSS)

You have my permission to use the MSPSS (and make the modifications you mentioned) in your research. I have attached a copy of the scale (with scoring information on the second page) and a document listing several of the articles that report on the reliability and validity of the MSPSS.

I hope your research goes well.

Sincerely yours,

Greg Zimet

Gregory D. Zimet, PhD, FSAHM
Professor of Pediatrics & Clinical Psychology
Section of Adolescent Medicine
Indiana University School of Medicine
410 W. 10th Street, HS 1001
Indianapolis, IN 46202 USA
Phone: +13172748812
Fax: +13172740133
email: gzimet@iu.edu
PresidentElect,
Society for Adolescent Health and Medicine (SAHM)

Permission to Use: The Revised Thai Version of MSPSS

NAHATHAI WONGPAKARAN <nahathai.wongpakaran@cmu.ac.th> Thu, Mar 10, 2016 at 6:09 PM
To: JUNTITA WATCHARAKITIPONG <juntita.w@gmail.com>
Cc: TINAKON WONGPAKARAN <tinakon.w@cmu.ac.th>

Dear Juntita Watcharakitipong,

I am more than glad to allow you to use the revised Thai version of MSPSS. Great that you have Prof. Zimet's permission to use the MSPSS and to modify it. Attached, please find the Thai version of the scale, and the related article regarding its psychometrics.

Good luck with your research.

ศาสตราจารย์แพทย์หญิง ฌหทัย วงศ์ปการันย์

หน่วยจิตเวชศาสตร์ผู้สูงอายุ ภาควิชาจิตเวชศาสตร์ คณะแพทยศาสตร์ มช.

110 ถ.อินทวโรรส ต.ศรีภูมิ อ.เมือง เชียงใหม่ 50200

Nahathai Wongpakaran, MD, FRCPsychT
Professor of Psychiatry
Geriatric Psychiatry Unit, Department of Psychiatry, Faculty of Medicine, Chiang Mai University, 110 Intawaroros Rd., T. Sriphum, A. Muang, Chiang Mai, Kingdom of Thailand 50200; Tel: +66 53 935422 ext 320, Fax: +66 53 935426.

Permission to Use: The Emotion Regulation Questionnaires (ERQ)

From: Saovanee Noppaprach <saovaneen@gmail.com>
Sent: Friday, February 12, 2016 2:01 AM
To: juntita@hotmail.com
Subject: Thai-translated ERQ
Attachments: Thai-translated (ERQ).pdf

Please find attached ja. As mentioned in earlier mail, you still need to get permission from Professor James Gross - to be eligible to use Thai-translated version of ERQ in your study. When seeking permission, you can refer to my work here. It is now published at http://www. assumptionjournal.au.edu/index.php/Scholar/article/view/1513/1306

Permission to Use: The Emotion Regulation Questionnaire (ERQ)

James Gross <gross@stanford.edu> Fri, Mar 11, 2016 at 10:43 PM

To: JUNTITA WATCHARAKITIPONG <juntita.w@gmail.com>

You're welcome to use the ERQ for the purpose.

Best,

James

J. Gross, Ph.D.
Professor of Psychology
Bass University Fellow in Undergraduate Education
Department of Psychology
Stanford University

Stanford, CA 943052130
Tel: (650) 7231281
Fax: (650) 7255699
Email: gross@stanford.edu
Director, Stanford Psychophysiology Laboratory
http://spl.stanford.edu
Director, Stanford Psychology One

Permission to Use: The Positive and Negative Affect Schedule (PANAS)

David Watson <db.watson@nd.edu> Thu, Mar 31, 2016 at 8:58 PM
To: JUNTITA WATCHARAKITIPONG <juntita.w@gmail.com>, "Thomas, Karen"
<kthomas@apa.org>, Lee Anna Clark
<la.clark@nd.edu>

Dear Juntita,

I am pleased to grant you permission to use the PANAS in your research. Please note that to use the PANAS, you need both our permission and the permission of the American Psychological Association (APA), which is the official copyright holder of the instrument. Because I am copying this email to APA, however, you do not have to request permission separately from APA; this single email constitutes official approval from both parties.

We make the PANAS available without charge for noncommercial research purposes. We do require that all printed versions of the PANAS include a full citation and copyright information. Thus, any printed copies should state:
"From "Development and validation of brief measures of positive and negative affect: The PANAS scales," by D. Watson, L. A. Clark, and A. Tellegen, 1988, Journal of Personality and Social Psychology, 54, 10631070. Copyright © 1988 by the American Psychological Association. Reproduced with permission. No further reproduction or distribution is permitted without written permission from the American Psychological Association."
This permission also does not extend beyond you and your immediate research team. Thus, if others wish to use the PANAS in their research, they must contact either one of us or Karen Thomas at APA.

As requested, I have attached a sample copy of the PANAS, along with scoring information. For reliability and validity data regarding the PANAS, please consult the PANASX Manual, which is available here:
http://ir.uiowa.edu/psychology_pubs/11/

Please note that we do not authorize translations of the PANAS into other languages. This does NOT mean that you cannot translate the instrument. However, you should refer to any

such instrument as being "based on the PANAS," rather than calling it the "Thai PANAS" or something similar that might suggest that it is an officially authorized version.
If you use the measure in any form other than its original English version, the citation above should begin with "Adapted from" rather than just "From."

The reason we do not authorize transactions is because we do not have the expertise to evaluate the validity of translations and want to ensure that readers of research that used translated versions understand that the burden of demonstrating the validity of a translation lies with the translators. Because mood terms differ from language to language, we recommend that instead of translation, authors develop mood measures from a within-culture perspective. For an example of this research, please see the article cited below:

Watson, D., Clark, L. A., & Tellegen, A. (1984). Crosscultural convergence in the structure of mood: A Japanese replication and comparison with U. S. findings. Journal of Personality and Social Psychology, 47, 127144.

I appreciate your offer to provide the results of your research and the translated measure. I look forward to receiving these in the future.

Best wishes for your research,

Regards,

David Watson

David Watson, Ph.D.
Andrew J. McKenna Family Professor of Psychology
CoDirector,
Center for Advanced Measurement of Personality & Psychopathology
Director of Graduate Studies, Department of Psychology
University of Notre Dame
(574) 6311403
(office)
(574) 6317029
(CAMPP)
PANAS Score (Gen).doc
25K

Permission to Use: The Satisfaction With Life Scale (SWLS) (Thai Version)

From: ITSARA BOONYARIT <itsara.b@cmu.ac.th>
Sent: Tuesday, February 9, 2016 3:37 PM

To: Juntita Watcharakitipong
Subject: RE: A Request to Use the SWLS Thai Version
Attachments: SWLS_reliability_Thai sample.docx

Dear Khun Juntita

Please feel free to use the SWLS Thai translation and do proper citation using original one from Diener et al. (1985).

Attached is the result of reliability analysis, both Cronbach's Alpha and item-total correlation, using SWLS in two samples: one is academic staff and another is Thai university students. I wish you to be successful in your dissertation very soon.

Itsara

Itsara Boonyarit
B.S. (Hons); M.S.; PhD.
Division of Psychology, Faculty of Humanities
Chiang Mai University, Chiang Mai, Thailand

Permission to Use: The Couples Index Scale - 16 (CIS-16)

Janette Funk <jfunk.phd@gmail.com> Wed, Mar 9, 2016 at 12:45 AM

To: Juntita Watcharakitipong <juntita.w@gmail.com>

Hi Juntita,

The measure is free and publicly available so feel free to use it. Check out this website www.couplesresearch.com and you will find a copy of the measure (it is also in the appendix of the original 2007 paper you mentioned the scoring is on there). Good luck with your research and thank you for your interest in the scale.

Janette

L. Funk, PhD
Licensed Clinical Psychologist
1577 South Avenue
Rochester, NY 14620
(585)2103623

APPENDIX H

A First-Time Parent Skills Training Program

A six-hour, first-time parent skills training program called "Happy Life for New Parent Workshop" was designed to enhance the levels of well-being and marital satisfaction of Thai first-time parents. Cognitive behavior theory will be utilized as a basis to conduct the program. Furthermore, the findings relative to emotion regulation strategies (i.e., cognitive reappraisal), stress reduction techniques, and support from spouse derived from Study I and II will be integrated in the process of program development. An outline of the workshop is presented below.

First Component (online course). The online course contains a parenting knowledge orientation for two hours. Its contents will all be presented online, comprising slide presentations (online courses) and comprehensive tests. Participants will be checked for their knowledge before moving to the next step. It will start with an introduction about the workshop, pre-test, four-module online course, and online tests to check for participants' understanding.

Objective	Activity	Time (Min.)	Materials/Resources
KNOWLEDGE Introduction to the workshop	General introduction about the workshop and its procedure to each participant	15	Happy Life for New Parents Workshop Facebook Page, Phone, LINE and Facebook message
Pretest	Fill in questionnaires	20	Online Questionnaire (Google forms)

Objective	Activity	Time (Min.)	Materials/Resources
Introduction to becoming parents	*Concept: stress, spousal support, emotion regulation, subjective well-being, and marital satisfaction* General knowledge about the transition to parenthood and its effect on life and marital satisfaction	15	Online Video (Module 1 – Introduction) with PowerPoint slides
Introduction to Stress Reduction	*Concept: perceived stress* What stress is. Where stress comes from. Stress in first-time parents. Stress reduction techniques	25	Online Video (Module 2 – Stress Reduction) with PowerPoint slides and online test.
Introduction to emotion regulation strategies	*Concept: emotion regulation* What emotion is. Characteristics of those who have high EQ. Explanation about five emotion regulation strategies.	25	Online Video (Module 3 – Emotion Regulation) with PowerPoint slides and online test.
Introduction to spousal support	*Concept: spousal support* Why support from spouse is so important. How it buffers against stress. How can we support each other. Supportive communication to increase support.	20	Online Video (Module 4 – Spousal Support) with PowerPoint slides and online test.

Second and Third Components (Workshop). In the 'first-time parent skills training program', participants will be asked to attend a four-hour workshop that includes various activities aimed at practicing stress reduction, emotion regulation, and supporting spouse. For the application and practice (within one hour), the participants will discuss with trainers how best to apply those skills in their daily lives as well as to apply those skills for use with their children. This will help ensure that participants will apply the techniques learned in the skills training.

Objective	Activity	Time (Min.)	Materials/Resources
SKILL TRAINING AND APPLICATION Introduction to the workshop	*Concept: marital satisfaction and subjective well-being* Explaining about the workshop. The goal is a happy and strong relationship between mother and father and also parents' own happiness. Discuss about online courses.	30	PowerPoint slides, Information sheet, scenarios
Skill training and application	Presentation of strategies by scenarios, activities, and role play. Application of the strategies in participants' real situations. Topics: *Concept: perceived stress and emotion regulation* - Deep breathing - Cognitive reframing *Concept: spousal support* - Active listening - I-message - Expressing appreciation, admiration, and affection	 15 60 30 30 30	PowerPoint slides, Information sheet, role play, scenarios
Posttest	Fill in questionnaires	20	Posttest Questionnaire
Homework assigned	Homework assigned and informing about 2-week follow-up test	10	
Summary	Review of the workshop; Questions & Answers	15	
	TOTAL	**360**	**= 6-hour workshop**

APPENDIX I-1

Reliability

```
* Encoding: UTF-8.
reliability variables=pss1 to csi16
/scale(PANAS_Positive_affect)=p1 p3 p5 p9 p10 p12 p14 p16 p17 p19
/summary=total.
```

Reliability

Scale: PANAS_Positive_affect

Case Processing Summary

		N	%
Cases	Valid	559	100.0
	Excluded[a]	0	.0
	Total	559	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.903	10

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
p1	31.9428	49.774	.337	.912
p3	32.5259	46.701	.513	.903
p5	31.5778	45.879	.637	.895
p9	31.7979	44.481	.718	.890
p10	31.5420	43.690	.751	.887
p12	31.9982	44.762	.679	.892
p14	31.7746	42.523	.753	.887
p16	31.8104	43.025	.767	.886
p17	31.3703	45.151	.695	.891
p19	31.8640	44.222	.718	.890

```
reliability variables=pss1 to csi16
/scale(PANAS_Negative_affect)=p2 p4 p6 p7 p8 p11 p13 p15 p18 p20
/summary=total.
```

Reliability

Scale: PANAS_Negative_affect

Case Processing Summary

		N	%
Cases	Valid	559	100.0
	Excluded[a]	0	.0
	Total	559	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.881	10

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
p2	19.9589	45.459	.642	.867
p4	19.7657	44.889	.647	.866
p6	19.8623	44.818	.591	.870
p7	20.2594	44.486	.665	.865
p8	20.4687	46.701	.553	.873
p11	19.6619	44.317	.631	.867
p13	20.2451	45.899	.508	.877
p15	20.1324	46.205	.569	.872
p18	19.8694	43.519	.665	.865
p20	20.2075	45.473	.619	.868

```
reliability variables=pss1 to csi16
/scale(Couple_satisfaction)=csi1 to csi16
/summary=total.
```

Reliability

Scale: Couple_satisfaction

**Case Processing Summary**

		N	%
Cases	Valid	559	100.0
	Excluded[a]	0	.0
	Total	559	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.969	16

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
csi1	50.3488	286.094	.736	.968
csi2	50.1788	289.526	.680	.969
csi3	50.4615	276.526	.852	.966
csi4	50.4758	275.210	.876	.966
csi5	50.4686	273.947	.883	.966
csi6	50.6207	271.908	.867	.966
csi7	50.4203	276.129	.868	.966
csi8	50.5635	277.414	.859	.966
csi9	50.7656	276.600	.827	.967
csi10	50.4042	276.116	.883	.966
csi11	50.3112	284.766	.724	.968
csi12	50.0006	283.286	.748	.968
csi13	50.0411	282.305	.798	.967
csi14	49.9999	283.196	.737	.968
csi15	50.0250	282.058	.735	.968
csi16	50.0565	284.109	.732	.968

```
reliability variables=pss1 to csi16
/scale(Perceived_stress)=pss1 to pss3 pss5 to pss10
/summary=total.
```

Reliability

Scale: Perceived_stress

Case Processing Summary

		N	%
Cases	Valid	559	100.0
	Excluded[a]	0	.0
	Total	559	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.809	9

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
pss1	13.2254	25.956	.558	.784
pss2	13.4419	24.738	.637	.773
pss3	13.1807	24.819	.623	.775
pss5	13.3918	28.425	.284	.816
pss6	13.5134	26.609	.472	.794
pss7	13.4007	28.291	.294	.815
pss8	13.5081	27.451	.385	.804
pss9	13.2683	24.867	.597	.778
pss10	13.6136	23.617	.682	.765

```
reliability variables=pss1 to csi16
/scale(Social_support)=ss1 to ss4
/summary=total.
```

Reliability

Scale: Social_support

Case Processing Summary

		N	%
Cases	Valid	559	100.0
	Excluded[a]	0	.0
	Total	559	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.942	4

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
ss1	16.6404	19.102	.836	.931
ss2	16.4902	18.989	.898	.913
ss3	17.0143	17.960	.886	.915
ss4	16.9875	18.432	.828	.935

```
reliability variables=pss1 to csi16
/scale(Cognitive_reappraisal)=erq1 erq3 erq5 erq7 erq8 erq10
/summary=total.
```

Reliability

Scale: Cognitive_reappraisal

Case Processing Summary

		N	%
Cases	Valid	559	100.0
	Excluded[a]	0	.0
	Total	559	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.816	6
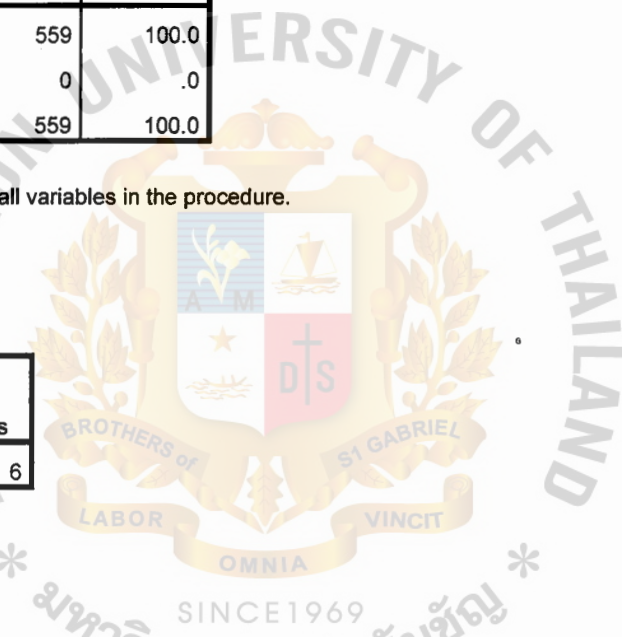
Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
erq1	26.5420	24.571	.511	.802
erq3	26.4204	24.004	.589	.785
erq5	26.8784	24.125	.481	.811
erq7	26.4705	23.336	.635	.774
erq8	26.5546	24.190	.641	.775
erq10	26.5170	24.057	.644	.774

```
reliability variables=pss1 to csi16
/scale(Expressive_suppression)=erq2 erq6 erq9
/summary=total.
```

Reliability

Scale: Expressive_suppression

Case Processing Summary

		N	%
Cases	Valid	559	100.0
	Excluded[a]	0	.0
	Total	559	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.668	3

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
erq2	9.2630	7.477	.391	.694
erq6	9.7066	6.444	.583	.427
erq9	9.2737	7.705	.479	.577

```
reliability variables=pss1 to csi16
/scale(Life_satisfaction)=swls1 to swls5
/summary=total.
```

Reliability

Scale: Life_satisfaction

Case Processing Summary

		N	%
Cases	Valid	559	100.0
	Excluded[a]	0	.0
	Total	559	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.886	5

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
swls1	19.3381	27.013	.746	.856
swls2	18.9732	27.567	.785	.849
swls3	18.7120	27.474	.799	.846
swls4	18.9964	27.247	.724	.861
swls5	19.6225	25.637	.623	.895

APPENDIX I-2

Descriptive Statistics for Computed Variables as a Function of Gender

Descriptive Statistics

	gender	Mean	Std. Deviation	N
spousal_support	male	5.7887	1.29272	170
	female	5.5090	1.47211	389
	Total	5.5941	1.42464	559
life_satisfaction	male	4.8576	1.20854	170
	female	4.7491	1.31093	389
	Total	4.7821	1.28056	559
marital_satisfaction	male	3.5467	.94786	170
	female	3.2705	1.17110	389
	Total	3.3545	1.11442	559
perceived_stress	male	1.5137	.56951	170
	female	1.7443	.64425	389
	Total	1.6741	.63096	559
cognitive_reappraisal	male	5.3216	.94899	170
	female	5.3089	.97052	389
	Total	5.3128	.96319	559
expressive_suppression	male	4.9490	1.12120	170
	female	4.6015	1.27998	389
	Total	4.7072	1.24320	559
positive_affect	male	3.6685	.68997	170
	female	3.4773	.75668	389
	Total	3.5355	.74166	559
negative_affect	male	2.1707	.70650	170
	female	2.2518	.75631	389
	Total	2.2271	.74183	559

APPENDIX I-3

Demographics for Study I and II

```
FREQUENCIES VARIABLES=parent gender age educ marital married occup hours
income residential c_age
    you spouse family nanny others
  /STATISTICS=STDDEV RANGE MEAN MEDIAN
  /ORDER=ANALYSIS.
```

Frequencies

	I am a parent of an only child (or twins) aged 2 years or below	gender	Age in years	Educational status	Marital status	How long have you been married?
N Valid	559	559	557	559	559	559
Missing	0	0	2	0	0	0
Mean	1.0000	1.6959	32.9677	2.2558	1.0912	3.1020
Median	1.0000	2.0000	33.0000	2.0000	1.0000	3.0000
Std. Deviation	.00000	.46044	5.02251	.73375	.39790	1.09511
Range	.00	1.00	33.00	3.00	3.00	4.00

	Occupation	Working hours per week	Family income per month	Residential area	Your child's age
N Valid	559	559	559	559	558
Missing	0	0	0	0	1
Mean	2.6959	4.1252	2.5903	1.1181	11.8620
Median	2.0000	5.0000	2.0000	1.0000	12.0000
Std. Deviation	1.16421	1.88335	1.61489	.32298	7.60473
Range	4.00	5.00	5.00	1.00	28.00

		You have the main responsibility of taking care of your child	Your spouse has the main responsibility of taking care of your child	Other family members have the main responsibility of taking care of your child	Nanny has the main responsibility of taking care of your child	Other people have the main responsibility of taking care of your child
N	Valid	559	559	559	559	558
	Missing	0	0	0	0	1
Mean		1.3685	1.6082	1.5581	1.8551	1.9946
Median		1.0000	2.0000	2.0000	2.0000	2.0000
Std. Deviation		.48283	.48858	.49705	.35232	.07319
Range		1.00	1.00	1.00	1.00	1.00

Frequency Table

I am a parent of an only child (or twins) aged 2 years or below

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	559	100.0	100.0	100.0

gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	male	170	30.4	30.4	30.4
	female	389	69.6	69.6	100.0
	Total	559	100.0	100.0	

Age in years

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18.00	3	.5	.5	.5
	19.00	5	.9	.9	1.4
	20.00	1	.2	.2	1.6
	21.00	4	.7	.7	2.3
	22.00	7	1.3	1.3	3.6
	23.00	4	.7	.7	4.3
	24.00	10	1.8	1.8	6.1
	25.00	12	2.1	2.2	8.3
	26.00	9	1.6	1.6	9.9
	27.00	20	3.6	3.6	13.5
	28.00	21	3.8	3.8	17.2
	29.00	29	5.2	5.2	22.4
	30.00	37	6.6	6.6	29.1
	31.00	26	4.7	4.7	33.8
	32.00	39	7.0	7.0	40.8
	33.00	53	9.5	9.5	50.3
	34.00	52	9.3	9.3	59.6
	35.00	55	9.8	9.9	69.5
	36.00	46	8.2	8.3	77.7
	37.00	31	5.5	5.6	83.3
	38.00	28	5.0	5.0	88.3
	39.00	29	5.2	5.2	93.5
	40.00	11	2.0	2.0	95.5
	41.00	9	1.6	1.6	97.1
	42.00	4	.7	.7	97.8
	43.00	6	1.1	1.1	98.9
	44.00	1	.2	.2	99.1
	45.00	1	.2	.2	99.3
	46.00	1	.2	.2	99.5
	47.00	1	.2	.2	99.6
	49.00	1	.2	.2	99.8
	51.00	1	.2	.2	100.0
	Total	557	99.6	100.0	
Missing	System	2	.4		
Total		559	100.0		

Educational status

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	below Bachelor degree	76	13.6	13.6	13.6
	Bachelow degree	285	51.0	51.0	64.6
	Master degree	177	31.7	31.7	96.2
	Above Master Degree	21	3.8	3.8	100.0
	Total	559	100.0	100.0	

Marital status

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	married	525	93.9	93.9	93.9
	separated	21	3.8	3.8	97.7
	divorced	9	1.6	1.6	99.3
	widowed	4	.7	.7	100.0
	Total	559	100.0	100.0	

How long have you been married?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	not married	24	4.3	4.3	4.3
	0-2 years	155	27.7	27.7	32.0
	2-4 years	202	36.1	36.1	68.2
	4-6 years	96	17.2	17.2	85.3
	more than 6 years	82	14.7	14.7	100.0
	Total	559	100.0	100.0	

Occupation

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	unemployed	67	12.0	12.0	12.0
	employee	245	43.8	43.8	55.8
	government/state enterprise officer	81	14.5	14.5	70.3
	business owner	123	22.0	22.0	92.3
	others	43	7.7	7.7	100.0
	Total	559	100.0	100.0	

Working hours per week

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	none	91	16.3	16.3	16.3
	1-10 hours per week	71	12.7	12.7	29.0
	11-20 hours per week	25	4.5	4.5	33.5
	21-30 hours per week	37	6.6	6.6	40.1
	31-40 hours per week	160	28.6	28.6	68.7
	more than 40 hours per week	175	31.3	31.3	100.0
	Total	559	100.0	100.0	

Family income per month

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less than 50,000 baht	171	30.6	30.6	30.6
	50,001-100,000 baht	171	30.6	30.6	61.2
	100,001-150,000 baht	82	14.7	14.7	75.8
	150,001-200,000 baht	42	7.5	7.5	83.4
	200,001-250,000 baht	37	6.6	6.6	90.0
	more than 250,000 baht	56	10.0	10.0	100.0
	Total	559	100.0	100.0	

Residential area

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Bangkok and proximities	493	88.2	88.2	88.2
	other provinces	66	11.8	11.8	100.0
	Total	559	100.0	100.0	

Your child's age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	35	6.3	6.3	6.3
	2.00	31	5.5	5.6	11.8
	3.00	35	6.3	6.3	18.1
	4.00	27	4.8	4.8	22.9
	5.00	27	4.8	4.8	27.8
	6.00	27	4.8	4.8	32.6
	7.00	17	3.0	3.0	35.7
	8.00	25	4.5	4.5	40.1
	9.00	14	2.5	2.5	42.7
	10.00	23	4.1	4.1	46.8
	11.00	16	2.9	2.9	49.6
	12.00	27	4.8	4.8	54.5
	13.00	25	4.5	4.5	59.0
	14.00	25	4.5	4.5	63.4
	15.00	15	2.7	2.7	66.1
	16.00	22	3.9	3.9	70.1
	17.00	13	2.3	2.3	72.4
	18.00	18	3.2	3.2	75.6
	19.00	25	4.5	4.5	80.1
	20.00	13	2.3	2.3	82.4
	21.00	20	3.6	3.6	86.0
	22.00	8	1.4	1.4	87.5
	23.00	7	1.3	1.3	88.7
	24.00	48	8.6	8.6	97.3
	25.00	6	1.1	1.1	98.4
	26.00	5	.9	.9	99.3
	29.00	4	.7	.7	100.0
	Total	558	99.8	100.0	
Missing	System	1	.2		
Total		559	100.0		

You have the main responsibility of taking care of your child

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	353	63.1	63.1	63.1
	no	206	36.9	36.9	100.0
	Total	559	100.0	100.0	

Your spouse has the main responsibility of taking care of your child

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	219	39.2	39.2	39.2
	no	340	60.8	60.8	100.0
	Total	559	100.0	100.0	

Other family members have the main responsibility of taking care of your child

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	247	44.2	44.2	44.2
	no	312	55.8	55.8	100.0
	Total	559	100.0	100.0	

Nanny has the main responsibility of taking care of your child

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	81	14.5	14.5	14.5
	no	478	85.5	85.5	100.0
	Total	559	100.0	100.0	

Other people have the main responsibility of taking care of your child

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	3	.5	.5	.5
	no	555	99.3	99.5	100.0
	Total	558	99.8	100.0	
Missing	System	1	.2		
Total		559	100.0		

APPENDIX I-4

Confirmatory Factor Analysis for PANAS and CSI-16

G:\SEM\Mink (Juntita Watcharakitipong)\cfa.amw

Analysis Summary

Date and Time

Date: Tuesday, 26 April 2016
Time: 3:39:43 PM

Title

cfa: Tuesday, 26 April 2016 3:39 PM

Groups

Group number 1 (Group number 1)

Notes for Group (Group number 1)

The model is recursive.
Sample size = 559

Variable Summary (Group number 1)

Your model contains the following variables (Group number 1)

Observed, endogenous variables
p_affect1
p_affect2
p_affect3
n_affect1
n_affect2
n_affect3
cs1
cs2
cs3
Unobserved, exogenous variables
Positive_affect
e1
e2
e3
Negative_affect
e4
e5
e6
Marital_satisfaction
e7
e8
e9

Variable counts (Group number 1)

Number of variables in your model: 21
Number of observed variables: 9
Number of unobserved variables: 12
Number of exogenous variables: 12
Number of endogenous variables: 9

Parameter Summary (Group number 1)

	Weights	Covariances	Variances	Means	Intercepts	Total
Fixed	12	0	0	0	0	12
Labeled	0	0	0	0	0	0
Unlabeled	6	3	12	0	0	21
Total	18	3	12	0	0	33

Models

Default model (Default model)

Notes for Model (Default model)

Computation of degrees of freedom (Default model)

Number of distinct sample moments: 45
Number of distinct parameters to be estimated: 21
Degrees of freedom (45 - 21):   24

Result (Default model)

Minimum was achieved
Chi-square = 174.518
Degrees of freedom = 24
Probability level = .000

Group number 1 (Group number 1 - Default model)

Estimates (Group number 1 - Default model)

Scalar Estimates (Group number 1 - Default model)

Maximum Likelihood Estimates

Regression Weights: (Group number 1 - Default model)

			Estimate	S.E.	C.R.	P	Label
p_affect1	<---	Positive_affect	1.000				
p_affect2	<---	Positive_affect	.942	.039	24.208	***	
p_affect3	<---	Positive_affect	.997	.040	25.171	***	
n_affect1	<---	Negative_affect	1.000				
n_affect2	<---	Negative_affect	.870	.040	22.029	***	
n_affect3	<---	Negative_affect	.703	.032	21.790	***	
cs1	<---	Marital_satisfaction	1.000				
cs2	<---	Marital_satisfaction	1.017	.017	59.410	***	
cs3	<---	Marital_satisfaction	1.012	.018	57.442	***	

Standardized Regression Weights: (Group number 1 - Default model)

			Estimate
p_affect1	<---	Positive_affect	.872
p_affect2	<---	Positive_affect	.840
p_affect3	<---	Positive_affect	.869
n_affect1	<---	Negative_affect	.859
n_affect2	<---	Negative_affect	.834
n_affect3	<---	Negative_affect	.824
cs1	<---	Marital_satisfaction	.951
cs2	<---	Marital_satisfaction	.978
cs3	<---	Marital_satisfaction	.973

Covariances: (Group number 1 - Default model)

			Estimate	S.E.	C.R.	P	Label
Positive_affect	<-->	Negative_affect	.004	.025	.166	.868	
Positive_affect	<-->	Marital_satisfaction	.340	.039	8.728	***	
Negative_affect	<-->	Marital_satisfaction	-.215	.038	-5.621	***	

Correlations: (Group number 1 - Default model)

			Estimate
Positive_affect	<-->	Negative_affect	.008
Positive_affect	<-->	Marital_satisfaction	.437
Negative_affect	<-->	Marital_satisfaction	-.267

Variances: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	P	Label
Positive_affect	.510	.041	12.453	***	
Negative_affect	.547	.046	11.919	***	
Marital_satisfaction	1.188	.078	15.141	***	
e1	.160	.016	10.141	***	
e2	.189	.016	11.837	***	
e3	.164	.016	10.326	***	
e4	.194	.020	9.612	***	
e5	.181	.017	10.914	***	
e6	.128	.011	11.405	***	
e7	.125	.009	13.253	***	
e8	.055	.007	8.119	***	
e9	.069	.007	9.653	***	

Squared Multiple Correlations: (Group number 1 - Default model)

	Estimate
cs3	.946
cs2	.957
cs1	.905
n_affect3	.679
n_affect2	.696
n_affect1	.738

	Estimate
p_affect3	.755
p_affect2	.705
p_affect1	.761

Modification Indices (Group number 1 - Default model)

Covariances: (Group number 1 - Default model)

		M.I.	Par Change
e6 <-->	Positive_affect	97.050	.118

Variances: (Group number 1 - Default model)

	M.I.	Par Change

Regression Weights: (Group number 1 - Default model)

			M.I.	Par Change
n_affect3 <---	Positive_affect		99.720	.258
n_affect3 <---	p_affect3		85.025	.197
n_affect3 <---	p_affect2		54.714	.162
n_affect3 <---	p_affect1		111.351	.226

Model Fit Summary

CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	21	174.518	24	.000	7.272
Saturated model	45	.000	0		
Independence model	9	4705.290	36	.000	130.702

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	.037	.941	.888	.502
Saturated model	.000	1.000		
Independence model	.395	.374	.217	.299

Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.963	.944	.968	.952	.968
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

Parsimony-Adjusted Measures

Model	PRATIO	PNFI	PCFI
Default model	.667	.642	.645
Saturated model	.000	.000	.000
Independence model	1.000	.000	.000

NCP

Model	NCP	LO 90	HI 90
Default model	150.518	112.261	196.263
Saturated model	.000	.000	.000
Independence model	4669.290	4447.587	4898.224

FMIN

Model	FMIN	F0	LO 90	HI 90
Default model	.313	.270	.201	.352
Saturated model	.000	.000	.000	.000
Independence model	8.432	8.368	7.971	8.778

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.106	.092	.121	.000
Independence model	.482	.471	.494	.000

AIC

Model	AIC	BCC	BIC	CAIC
Default model	216.518	217.284	307.367	328.367
Saturated model	90.000	91.642	284.677	329.677
Independence model	4723.290	4723.618	4762.225	4771.225

ECVI

Model	ECVI	LO 90	HI 90	MECVI
Default model	.388	.319	.470	.389
Saturated model	.161	.161	.161	.164
Independence model	8.465	8.067	8.875	8.465

HOELTER

Model	HOELTER .05	HOELTER .01
Default model	117	138
Independence model	7	7

Execution time summary

Minimization:	.000
Miscellaneous:	.172
Bootstrap:	.000
Total:	.172

APPENDIX I-5

Test of Convergent Validity

Correlations

[DataSet5] G:\SPSS personal\ABAC 2008\MSCP\Mink (Juntita
Watcharakitipong)\working data for studies 1 & 2 reverse scored and no
missing.sav

Correlations

		perceived_stress	spousal_support	life_satisfaction
positive_affect	Pearson Correlation	-.306	.239	.332
	Sig. (2-tailed)	.000	.000	.000
	N	559	559	559
negative_affect	Pearson Correlation	.600	-.227	-.355
	Sig. (2-tailed)	.000	.000	.000
	N	559	559	559
marital_satisfaction	Pearson Correlation	-.443	.776	.652
	Sig. (2-tailed)	.000	.000	.000
	N	559	559	559

APPENDIX I-6

Direct Path Model

G:\SEM\Mink (Juntita Watcharakitipong)\Direct model.amw

Analysis Summary

Date and Time

Date: Tuesday, 26 April 2016
Time: 4:58:33 PM

Title

Direct model: Tuesday, 26 April 2016 4:58 PM

Groups

Group number 1 (Group number 1)

Notes for Group (Group number 1)

The model is recursive.
Sample size = 559

Variable Summary (Group number 1)

Your model contains the following variables (Group number 1)

Observed, endogenous variables
ps1
ps2
ps3
ss3
ss2
ss1
cs1
cs2
cs3
ss4
Unobserved, endogenous variables
Marital_satisfaction
Unobserved, exogenous variables
Perceived_stress
Perceived_spouse_support
e1
e2
e3
e6
e5
e4
e8
e9
e10
e7

z1

Variable counts (Group number 1)

Number of variables in your model: 24
Number of observed variables: 10
Number of unobserved variables: 14
Number of exogenous variables: 13
Number of endogenous variables: 11

Parameter Summary (Group number 1)

	Weights	Covariances	Variances	Means	Intercepts	Total
Fixed	14	0	0	0	0	14
Labeled	0	0	0	0	0	0
Unlabeled	9	1	13	0	0	23
Total	23	1	13	0	0	37

Models

Default model (Default model)

Notes for Model (Default model)

Computation of degrees of freedom (Default model)

Number of distinct sample moments: 55
Number of distinct parameters to be estimated: 23
Degrees of freedom (55 - 23): 32

Result (Default model)

Minimum was achieved
Chi-square = 174.522
Degrees of freedom = 32
Probability level = .000

Group number 1 (Group number 1 - Default model)

Estimates (Group number 1 - Default model)

Scalar Estimates (Group number 1 - Default model)

Maximum Likelihood Estimates

Regression Weights: (Group number 1 - Default model)

			Estimate	S.E.	C.R.	P	Label
Marital_s atisfactio n	<---	Perceived_spouse_ support	.606	.029	21.216	***	
Marital_s atisfactio n	<---	Perceived_stress	-.281	.044	-6.380	***	
ps1	<---	Perceived_stress	1.000				
ps2	<---	Perceived_stress	.594	.042	14.003	***	
ps3	<---	Perceived_stress	.713	.047	15.197	***	
ss3	<---	Perceived_spouse_	1.111	.034	32.351	***	

			Estimate	S.E.	C.R.	P	Label
		support					
ss2	<---	Perceived_spouse_ support	1.022	.031	32.933	***	
ss1	<---	Perceived_spouse_ support	1.000				
cs1	<---	Marital_satisfactio n	1.000				
cs2	<---	Marital_satisfactio n	1.012	.017	60.343	***	
cs3	<---	Marital_satisfactio n	1.008	.017	58.478	***	
ss4	<---	Perceived_spouse_ support	1.056	.037	28.424	***	

Standardized Regression Weights: (Group number 1 - Default model)

			Estimate
Marital_satisfaction	<---	Perceived_spouse_support	.732
Marital_satisfaction	<---	Perceived_stress	-.191
ps1	<---	Perceived_stress	.995
ps2	<---	Perceived_stress	.614
ps3	<---	Perceived_stress	.671
ss3	<---	Perceived_spouse_support	.922
ss2	<---	Perceived_spouse_support	.929
ss1	<---	Perceived_spouse_support	.873
cs1	<---	Marital_satisfaction	.954
cs2	<---	Marital_satisfaction	.977
cs3	<---	Marital_satisfaction	.972
ss4	<---	Perceived_spouse_support	.867

Covariances: (Group number 1 - Default model)

			Estimate	S.E.	C.R.	P	Label
Perceived_st ress	<-->	Perceived_spouse_s upport	-.356	.046	-7.704	***	

Correlations: (Group number 1 - Default model)

	Estimate
Perceived_stress <--> Perceived_spouse_support	-.362

Variances: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	P	Label
Perceived_stress	.554	.042	13.137	***	
Perceived_spouse_support	1.744	.135	12.929	***	
z1	.391	.029	13.618	***	
e1	.006	.026	.233	.816	
e2	.323	.021	15.117	***	
e3	.345	.024	14.113	***	

	Estimate	S.E.	C.R.	P	Label
e6	.381	.033	11.707	***	
e5	.287	.026	11.118	***	
e4	.546	.039	13.938	***	
e8	.117	.009	13.044	***	
e9	.058	.007	8.914	***	
e10	.071	.007	10.174	***	
e7	.643	.046	14.087	***	

Squared Multiple Correlations: (Group number 1 - Default model)

	Estimate
Marital_satisfaction	.673
ss4	.752
cs3	.945
cs2	.954
cs1	.911
ss1	.762
ss2	.864
ss3	.850
ps3	.450
ps2	.377
ps1	.989

Modification Indices (Group number 1 - Default model)

Covariances: (Group number 1 - Default model)

	M.I.	Par Change
e5 <--> e4	47.318	.145

Variances: (Group number 1 - Default model)

	M.I.	Par Change

Regression Weights: (Group number 1 - Default model)

	M.I.	Par Change

Model Fit Summary

CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	23	174.522	32	.000	5.454
Saturated model	55	.000	0		
Independence model	10	6006.941	45	.000	133.488

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	.041	.941	.899	.548
Saturated model	.000	1.000		
Independence model	.923	.245	.077	.200

Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.971	.959	.976	.966	.976
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

Parsimony-Adjusted Measures

Model	PRATIO	PNFI	PCFI
Default model	.711	.690	.694
Saturated model	.000	.000	.000
Independence model	1.000	.000	.000

NCP

Model	NCP	LO 90	HI 90
Default model	142.522	104.799	187.763
Saturated model	.000	.000	.000
Independence model	5961.941	5710.609	6219.565

FMIN

Model	FMIN	F0	LO 90	HI 90
Default model	.313	.255	.188	.336
Saturated model	.000	.000	.000	.000
Independence model	10.765	10.684	10.234	11.146

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.089	.077	.103	.000
Independence model	.487	.477	.498	.000

AIC

Model	AIC	BCC	BIC	CAIC
Default model	220.522	221.447	320.023	343.023
Saturated model	110.000	112.212	347.938	402.938
Independence model	6026.941	6027.344	6070.203	6080.203

ECVI

Model	ECVI	LO 90	HI 90	MECVI
Default model	.395	.328	.476	.397
Saturated model	.197	.197	.197	.201
Independence model	10.801	10.351	11.263	10.802

HOELTER

Model	HOELTER .05	HOELTER .01
Default model	148	172
Independence model	6	7

Execution time summary

Minimization: .000
Miscellaneous: .156
Bootstrap: .000
Total: .156

APPENDIX I-7

Full Path Model

C:\Backup\SEM\Mink\Full path model.amw

Analysis Summary

Date and Time

Date: Wednesday, 27 April 2016
Time: 11:06:25 AM

Title

Full path model: Wednesday, 27 April 2016 11:06 AM

Groups

Group number 1 (Group number 1)

Notes for Group (Group number 1)

The model is recursive.
Sample size = 559

Variable Summary (Group number 1)

Your model contains the following variables (Group number 1)

Observed, endogenous variables
ca1
ca2
ca3
erq9
erq6
erq2
ps1
ps2
ps3
cs1
cs2
cs3
ss4
ss3
ss2
ss1
p_affect1
p_affect2
p_affect3
swls3
swls2
swls1
n_affect3
n_affect2
n_affect1

swls4
swls5
Unobserved, endogenous variables
Cognitive_reappraisal
Expressive_suppression
Marital_satisfaction
Positive_affect
Life_satisfaction
Negative_affect
Unobserved, exogenous variables
Perceived_stress
Perceived_spouse_support
e8
e9
e10
e13
e12
e11
e1
e2
e3
e25
e26
e27
e7
e6
e5
e4
z6
z1
e14
e15
e16
e22
e21
e20
e19
e18
e17
z2
e23
e24
z3
z4
z5

Variable counts (Group number 1)

Number of variables in your model: 68
Number of observed variables: 27
Number of unobserved variables: 41
Number of exogenous variables: 35
Number of endogenous variables: 33

Parameter Summary (Group number 1)

	Weights	Covariances	Variances	Means	Intercepts	Total
Fixed	41	0	0	0	0	41
Labeled	0	0	0	0	0	0
Unlabeled	41	1	35	0	0	77
Total	82	1	35	0	0	118

Models

Default model (Default model)

Notes for Model (Default model)

Computation of degrees of freedom (Default model)

Number of distinct sample moments: 378
Number of distinct parameters to be estimated: 77
Degrees of freedom (378 - 77): 301

Result (Default model)

Minimum was achieved
Chi-square = 1278.919
Degrees of freedom = 301
Probability level = .000

Group number 1 (Group number 1 - Default model)

Estimates (Group number 1 - Default model)

Scalar Estimates (Group number 1 - Default model)

Maximum Likelihood Estimates

Regression Weights: (Group number 1 - Default model)

			Estimate	S.E.	C.R.	P	Label
Cognitive_ reappraisal	<---	Perceived_stress	-.181	.066	-2.725	.006	
Expressive _suppressio n	<---	Perceived_spouse _support	-.007	.026	-.260	.795	
Cognitive_ reappraisal	<---	Perceived_spouse _support	.083	.033	2.558	.011	
Expressive _suppressio n	<---	Perceived_stress	-.153	.059	-2.603	.009	
Positive_af	<---	Perceived_stress	-.324	.050	-6.441	***	

			Estimate	S.E.	C.R.	P	Label
fect							
Negative_affect	<---	Perceived_stress	.672	.052	12.820	***	
Positive_affect	<---	Cognitive_reappraisal	.144	.041	3.524	***	
Negative_affect	<---	Cognitive_reappraisal	.040	.038	1.046	.296	
Negative_affect	<---	Expressive_suppression	-.074	.043	-1.727	.084	
Positive_affect	<---	Expressive_suppression	-.092	.045	-2.045	.041	
Life_satisfaction	<---	Perceived_stress	-.817	.109	-7.468	***	
Life_satisfaction	<---	Cognitive_reappraisal	.259	.062	4.153	***	
Life_satisfaction	<---	Expressive_suppression	-.172	.069	-2.507	.012	
Life_satisfaction	<---	Positive_affect	.331	.074	4.482	***	
Life_satisfaction	<---	Negative_affect	-.148	.088	-1.676	.094	
Marital_satisfaction	<---	Cognitive_reappraisal	-.046	.036	-1.277	.202	
Marital_satisfaction	<---	Perceived_spouse_support	.485	.026	18.945	***	
Marital_satisfaction	<---	Perceived_stress	-.126	.069	-1.824	.068	
Marital_satisfaction	<---	Expressive_suppression	-.064	.039	-1.645	.100	
Marital_satisfaction	<---	Life_satisfaction	.226	.031	7.344	***	
Marital_satisfaction	<---	Negative_affect	.006	.050	.118	.906	
Marital_satisfaction	<---	Positive_affect	.265	.043	6.124	***	
ca1	<---	Cognitive_reappraisal	1.000				
ca2	<---	Cognitive_reappraisal	1.044	.061	17.145	***	
ca3	<---	Cognitive_reappraisal	1.160	.067	17.359	***	
erq9	<---	Expressive_suppression	1.165	.135	8.663	***	
erq6	<---	Expressive_suppression	2.246	.342	6.562	***	
erq2	<---	Expressive_suppr	1.000				

			Estimate	S.E.	C.R.	P	Label
		ession					
ps1	<---	Perceived_stress	1.000				
ps2	<---	Perceived_stress	.692	.042	16.313	***	
ps3	<---	Perceived_stress	.837	.046	18.302	***	
cs1	<---	Marital_satisfaction	1.000				
cs2	<---	Marital_satisfaction	1.014	.018	57.640	***	
cs3	<---	Marital_satisfaction	1.007	.018	54.847	***	
ss4	<---	Perceived_spouse_support	1.050	.037	28.427	***	
ss3	<---	Perceived_spouse_support	1.104	.034	32.347	***	
ss2	<---	Perceived_spouse_support	1.022	.031	33.396	***	
ss1	<---	Perceived_spouse_support	1.000				
p_affect1	<---	Positive_affect	1.000				
p_affect2	<---	Positive_affect	.954	.039	24.335	***	
p_affect3	<---	Positive_affect	1.009	.040	25.278	***	
swls3	<---	Life_satisfaction	.981	.039	24.883	***	
swls2	<---	Life_satisfaction	.981	.040	24.721	***	
swls1	<---	Life_satisfaction	1.000				
n_affect3	<---	Negative_affect	.701	.031	22.541	***	
n_affect2	<---	Negative_affect	.857	.038	22.516	***	
n_affect1	<---	Negative_affect	1.000				
swls4	<---	Life_satisfaction	.921	.046	20.118	***	
swls5	<---	Life_satisfaction	.968	.060	16.243	***	

Standardized Regression Weights: (Group number 1 - Default model)

			Estimate
Cognitive_reappraisal	<---	Perceived_stress	-.148
Expressive_suppression	<---	Perceived_spouse_support	-.013
Cognitive_reappraisal	<---	Perceived_spouse_support	.133
Expressive_suppression	<---	Perceived_stress	-.147
Positive_affect	<---	Perceived_stress	-.309
Negative_affect	<---	Perceived_stress	.613
Positive_affect	<---	Cognitive_reappraisal	.167
Negative_affect	<---	Cognitive_reappraisal	.044
Negative_affect	<---	Expressive_suppression	-.070
Positive_affect	<---	Expressive_suppression	-.091

			Estimate
Life_satisfaction	<---	Perceived_stress	-.445
Life_satisfaction	<---	Cognitive_reappraisal	.172
Life_satisfaction	<---	Expressive_suppression	-.097
Life_satisfaction	<---	Positive_affect	.189
Life_satisfaction	<---	Negative_affect	-.088
Marital_satisfaction	<---	Cognitive_reappraisal	-.037
Marital_satisfaction	<---	Perceived_spouse_support	.619
Marital_satisfaction	<---	Perceived_stress	-.082
Marital_satisfaction	<---	Expressive_suppression	-.043
Marital_satisfaction	<---	Life_satisfaction	.271
Marital_satisfaction	<---	Negative_affect	.004
Marital_satisfaction	<---	Positive_affect	.182
ca1	<---	Cognitive_reappraisal	.723
ca2	<---	Cognitive_reappraisal	.811
ca3	<---	Cognitive_reappraisal	.864
erq9	<---	Expressive_suppression	.549
erq6	<---	Expressive_suppression	.972
erq2	<---	Expressive_suppression	.418
ps1	<---	Perceived_stress	.908
ps2	<---	Perceived_stress	.653
ps3	<---	Perceived_stress	.718
cs1	<---	Marital_satisfaction	.950
cs2	<---	Marital_satisfaction	.976
cs3	<---	Marital_satisfaction	.967
ss4	<---	Perceived_spouse_support	.865
ss3	<---	Perceived_spouse_support	.919
ss2	<---	Perceived_spouse_support	.932
ss1	<---	Perceived_spouse_support	.875
p_affect1	<---	Positive_affect	.866
p_affect2	<---	Positive_affect	.844
p_affect3	<---	Positive_affect	.873
swls3	<---	Life_satisfaction	.878
swls2	<---	Life_satisfaction	.874
swls1	<---	Life_satisfaction	.822
n_affect3	<---	Negative_affect	.827
n_affect2	<---	Negative_affect	.826
n_affect1	<---	Negative_affect	.864
swls4	<---	Life_satisfaction	.756
swls5	<---	Life_satisfaction	.641

Covariances: (Group number 1 - Default model)

			Estimate	S.E.	C.R.	P	Label
Perceived_stress	<-->	Perceived_spouse_support	-.377	.046	-8.240	***	

Correlations: (Group number 1 - Default model)

	Estimate
Perceived_stress <--> Perceived_spouse_support	-.419

Variances: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	P	Label
Perceived_stress	.461	.036	12.703	***	
Perceived_spouse_support	1.755	.135	12.991	***	
z1	.647	.071	9.165	***	
z2	.485	.111	4.377	***	
z3	.433	.036	12.039	***	
z5	.341	.032	10.814	***	
z4	.895	.083	10.759	***	
z6	.303	.023	13.123	***	
e8	.627	.047	13.417	***	
e9	.389	.038	10.319	***	
e10	.314	.041	7.679	***	
e13	1.557	.125	12.502	***	
e12	.145	.306	.475	.635	
e11	2.335	.153	15.296	***	
e1	.099	.016	6.072	***	
e2	.297	.020	14.867	***	
e3	.304	.022	13.919	***	
e25	.118	.009	13.123	***	
e26	.055	.006	8.647	***	
e27	.075	.007	10.636	***	
e7	.654	.046	14.117	***	
e6	.395	.033	11.857	***	
e5	.276	.026	10.798	***	
e4	.536	.039	13.831	***	
e14	.168	.016	10.592	***	
e15	.185	.016	11.716	***	
e16	.161	.016	10.207	***	
e22	.446	.038	11.665	***	
e21	.465	.039	11.859	***	
e20	.745	.055	13.595	***	
e19	.126	.011	11.676	***	
e18	.189	.016	11.710	***	
e17	.188	.019	9.872	***	
e23	.992	.067	14.745	***	
e24	2.083	.133	15.686	***	

Squared Multiple Correlations: (Group number 1 - Default model)

	Estimate
Expressive_suppression	.020
Cognitive_reappraisal	.056

	Estimate
Negative_affect	.384
Positive_affect	.144
Life_satisfaction	.425
Marital_satisfaction	.719
swls5	.411
swls4	.571
n_affect1	.747
n_affect2	.683
n_affect3	.684
swls1	.676
swls2	.763
swls3	.770
p_affect3	.762
p_affect2	.713
p_affect1	.751
ss1	.766
ss2	.869
ss3	.844
ss4	.748
cs3	.936
cs2	.953
cs1	.902
ps3	.516
ps2	.426
ps1	.824
erq2	.175
erq6	.945
erq9	.302
ca3	.746
ca2	.658
ca1	.522

Modification Indices (Group number 1 - Default model)

Covariances: (Group number 1 - Default model)

			M.I.	Par Change
z1	<-->	z2	57.212	.201
z4	<-->	Perceived_spouse_support	104.619	.568
e19	<-->	z3	145.487	.147
e2	<-->	z3	42.255	-.111

Variances: (Group number 1 - Default model)

	M.I.	Par Change

Regression Weights: (Group number 1 - Default model)

			M.I.	Par Change
Expressive_suppression	<---	Cognitive_reappraisal	53.267	.289
Cognitive_reappraisal	<---	Expressive_suppression	55.858	.404
Life_satisfaction	<---	Perceived_spouse_support	83.290	.313
n_affect3	<---	Positive_affect	124.210	.286
n_affect3	<---	p_affect3	107.045	.218
n_affect3	<---	p_affect2	75.543	.187
n_affect3	<---	p_affect1	137.558	.247
erq9	<---	ca1	42.575	.304
ca1	<---	erq9	46.411	.166

Model Fit Summary

CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	77	1278.919	301	.000	4.249
Saturated model	378	.000	0		
Independence model	27	12226.963	351	.000	34.835

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	.189	.862	.826	.686
Saturated model	.000	1.000		
Independence model	.575	.234	.175	.217

Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.895	.878	.918	.904	.918
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

Parsimony-Adjusted Measures

Model	PRATIO	PNFI	PCFI
Default model	.858	.768	.787
Saturated model	.000	.000	.000
Independence model	1.000	.000	.000

NCP

Model	NCP	LO 90	HI 90
Default model	977.919	871.138	1092.228
Saturated model	.000	.000	.000
Independence model	11875.963	11517.999	12240.266

FMIN

Model	FMIN	F0	LO 90	HI 90
Default model	2.292	1.753	1.561	1.957
Saturated model	.000	.000	.000	.000
Independence model	21.912	21.283	20.642	21.936

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.076	.072	.081	.000
Independence model	.246	.243	.250	.000

AIC

Model	AIC	BCC	BIC	CAIC
Default model	1432.919	1441.055	1766.032	1843.032
Saturated model	756.000	795.940	2391.285	2769.285
Independence model	12280.963	12283.816	12397.769	12424.769

ECVI

Model	ECVI	LO 90	HI 90	MECVI
Default model	2.568	2.377	2.773	2.583
Saturated model	1.355	1.355	1.355	1.426
Independence model	22.009	21.367	22.662	22.014

HOELTER

Model	HOELTER .05	HOELTER .01
Default model	150	158
Independence model	19	19

Execution time summary

Minimization:	.012
Miscellaneous:	.636
Bootstrap:	.000
Total:	.648

APPENDIX I-8

Indirect Path Model

C:\Backup\SEM\Mink\Indirect model.amw

Analysis Summary

Date and Time

Date: Wednesday, 27 April 2016
Time: 10:45:09 AM

Title

Indirect model: Wednesday, 27 April 2016 10:45 AM

Groups

Group number 1 (Group number 1)

Notes for Group (Group number 1)

The model is recursive.
Sample size = 559

Variable Summary (Group number 1)

Your model contains the following variables (Group number 1)

Observed, endogenous variables
ca1
ca2
ca3
erq9
erq6
erq2
ps1
ps2
ps3
cs1
cs2
cs3
ss4
ss3
ss2
ss1
Unobserved, endogenous variables
Cognitive_reappraisal
Expressive_suppression
Marital_satisfaction
Unobserved, exogenous variables
Perceived_stress
Perceived_spouse_support
e8
e9

e10
e13
e12
e11
e1
e2
e3
e14
e15
e16
e7
e6
e5
e4
z1
z2
z3

Variable counts (Group number 1)

Number of variables in your model: 40
Number of observed variables: 16
Number of unobserved variables: 24
Number of exogenous variables: 21
Number of endogenous variables: 19

Parameter Summary (Group number 1)

	Weights	Covariances	Variances	Means	Intercepts	Total
Fixed	24	0	0	0	0	24
Labeled	0	0	0	0	0	0
Unlabeled	19	1	21	0	0	41
Total	43	1	21	0	0	65

Models

Default model (Default model)

Notes for Model (Default model)

Computation of degrees of freedom (Default model)

Number of distinct sample moments: 136
Number of distinct parameters to be estimated: 41
Degrees of freedom (136 - 41): 95

Result (Default model)

Minimum was achieved
Chi-square = 466.436
Degrees of freedom = 95
Probability level = .000

Group number 1 (Group number 1 - Default model)

Estimates (Group number 1 - Default model)

Scalar Estimates (Group number 1 - Default model)

Maximum Likelihood Estimates

Regression Weights: (Group number 1 - Default model)

			Estimate	S.E.	C.R.	P	Label
Cognitive_reappraisal	<---	Perceived_stress	-.152	.055	-2.743	.006	
Expressive_suppression	<---	Perceived_spouse_support	.008	.029	.290	.772	
Cognitive_reappraisal	<---	Perceived_spouse_support	.076	.031	2.462	.014	
Expressive_suppression	<---	Perceived_stress	-.111	.053	-2.091	.037	
Marital_satisfaction	<---	Cognitive_reappraisal	.045	.039	1.175	.240	
Marital_satisfaction	<---	Perceived_spouse_support	.601	.029	21.011	***	
Marital_satisfaction	<---	Perceived_stress	-.298	.046	-6.521	***	
Marital_satisfaction	<---	Expressive_suppression	-.107	.043	-2.524	.012	
ca1	<---	Cognitive_reappraisal	1.000				
ca2	<---	Cognitive_reappraisal	1.058	.063	16.868	***	
ca3	<---	Cognitive_reappraisal	1.203	.071	16.965	***	
erq9	<---	Expressive_suppression	1.173	.133	8.810	***	
erq6	<---	Expressive_suppression	2.001	.288	6.941	***	
erq2	<---	Expressive_suppression	1.000				
ps1	<---	Perceived_stress	1.000				
ps2	<---	Perceived_stress	.610	.042	14.367	***	
ps3	<---	Perceived_stress	.733	.047	15.627	***	
cs1	<---	Marital_satisfaction	1.000				
cs2	<---	Marital_satisfaction	1.012	.017	60.448	***	
cs3	<---	Marital_satisfaction	1.008	.017	58.440	***	
ss4	<---	Perceived_spouse_support	1.057	.037	28.416	***	
ss3	<---	Perceived_spouse_support	1.112	.034	32.326	***	

			Estimate	S.E.	C.R.	P	Label
ss2	<---	Perceived_spouse _support	1.022	.031	32.861	***	
ss1	<---	Perceived_spouse _support	1.000				

Standardized Regression Weights: (Group number 1 - Default model)

			Estimate
Cognitive_reappraisal	<---	Perceived_stress	-.137
Expressive_suppression	<---	Perceived_spouse_support	.015
Cognitive_reappraisal	<---	Perceived_spouse_support	.123
Expressive_suppression	<---	Perceived_stress	-.110
Marital_satisfaction	<---	Cognitive_reappraisal	.034
Marital_satisfaction	<---	Perceived_spouse_support	.725
Marital_satisfaction	<---	Perceived_stress	-.200
Marital_satisfaction	<---	Expressive_suppression	-.073
ca1	<---	Cognitive_reappraisal	.709
ca2	<---	Cognitive_reappraisal	.807
ca3	<---	Cognitive_reappraisal	.880
erq9	<---	Expressive_suppression	.585
erq6	<---	Expressive_suppression	.916
erq2	<---	Expressive_suppression	.442
ps1	<---	Perceived_stress	.981
ps2	<---	Perceived_stress	.622
ps3	<---	Perceived_stress	.679
cs1	<---	Marital_satisfaction	.954
cs2	<---	Marital_satisfaction	.977
cs3	<---	Marital_satisfaction	.972
ss4	<---	Perceived_spouse_support	.867
ss3	<---	Perceived_spouse_support	.922
ss2	<---	Perceived_spouse_support	.929
ss1	<---	Perceived_spouse_support	.872

Covariances: (Group number 1 - Default model)

			Estimate	S.E.	C.R.	P	Label
Perceived_stress	<-->	Perceived_spouse_support	-.356	.046	-7.710	***	

Correlations: (Group number 1 - Default model)

			Estimate
Perceived_stress	<-->	Perceived_spouse_support	-.368

Variances: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	P	Label
Perceived_stress	.539	.041	13.076	***	
Perceived_spouse_support	1.742	.135	12.915	***	
z1	.630	.070	8.967	***	
z2	.546	.119	4.587	***	
z3	.383	.028	13.528	***	
e8	.652	.048	13.678	***	
e9	.397	.038	10.318	***	
e10	.279	.042	6.581	***	
e13	1.467	.127	11.592	***	
e12	.426	.266	1.605	.109	
e11	2.276	.152	14.986	***	
e1	.021	.024	.882	.378	
e2	.318	.021	15.052	***	
e3	.338	.024	14.030	***	
e14	.117	.009	13.053	***	
e15	.058	.007	8.868	***	
e16	.071	.007	10.224	***	
e7	.641	.046	14.080	***	
e6	.379	.032	11.689	***	
e5	.288	.026	11.144	***	
e4	.548	.039	13.956	***	

Squared Multiple Correlations: (Group number 1 - Default model)

	Estimate
Expressive_suppression	.013
Cognitive_reappraisal	.047
Marital_satisfaction	.681
ss1	.761
ss2	.863
ss3	.850
ss4	.752
cs3	.945
cs2	.955
cs1	.911
ps3	.461
ps2	.386
ps1	.962
erq2	.196
erq6	.839
erq9	.342
ca3	.774
ca2	.651
ca1	.503

Modification Indices (Group number 1 - Default model)

Covariances: (Group number 1 - Default model)

	M.I.	Par Change
z1 <--> z2	64.175	.233
e5 <--> e4	48.523	.147

Variances: (Group number 1 - Default model)

	M.I.	Par Change

Regression Weights: (Group number 1 - Default model)

			M.I.	Par Change
Expressive_suppression	<---	Cognitive_reappraisal	60.632	.349
Cognitive_reappraisal	<---	Expressive_suppression	63.152	.419
erq9	<---	ca1	42.348	.303
ca1	<---	Expressive_suppression	41.707	.345
ca1	<---	erq9	49.553	.174

Model Fit Summary

CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	41	466.436	95	.000	4.910
Saturated model	136	.000	0		
Independence model	16	7320.494	120	.000	61.004

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	.153	.908	.868	.634
Saturated model	.000	1.000		
Independence model	.645	.298	.205	.263

Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.936	.920	.949	.935	.948
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

Parsimony-Adjusted Measures

Model	PRATIO	PNFI	PCFI
Default model	.792	.741	.751
Saturated model	.000	.000	.000
Independence model	1.000	.000	.000

NCP

Model	NCP	LO 90	HI 90
Default model	371.436	307.824	442.576
Saturated model	.000	.000	.000
Independence model	7200.494	6923.349	7483.951

FMIN

Model	FMIN	F0	LO 90	HI 90
Default model	.836	.666	.552	.793
Saturated model	.000	.000	.000	.000
Independence model	13.119	12.904	12.407	13.412

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.084	.076	.091	.000
Independence model	.328	.322	.334	.000

AIC

Model	AIC	BCC	BIC	CAIC
Default model	548.436	551.013	725.808	766.808
Saturated model	272.000	280.547	860.356	996.356
Independence model	7352.494	7353.500	7421.713	7437.713

ECVI

Model	ECVI	LO 90	HI 90	MECVI
Default model	.983	.869	1.110	.987
Saturated model	.487	.487	.487	.503
Independence model	13.177	12.680	13.685	13.178

HOELTER

Model	HOELTER .05	HOELTER .01
Default model	143	156
Independence model	12	13

Execution time summary

Minimization:	.010
Miscellaneous:	.316
Bootstrap:	.000
Total:	.326

APPENDIX I-9

Multi-group Analysis

G:\SEM\Mink (Juntita Watcharakitipong)\multi-group analysis.amw

Analysis Summary

Date and Time

Date: Wednesday, 27 April 2016
Time: 5:08:03 PM

Title

multi-group analysis: Wednesday, 27 April 2016 5:08 PM

Groups

Group number 1 (Group number 1)

Notes for Group (Group number 1)

The model is recursive.
Sample size = 170

Variable Summary (First time fathers)

Your model contains the following variables (First time fathers)

Observed, endogenous variables
ca1
ca2
ca3
erq9
erq6
erq2
ps1
ps2
ps3
cs1
cs2
cs3
ss4
ss3
ss2
ss1
p_affect1
p_affect2
p_affect3
swls3
swls2
swls1
n_affect3
n_affect2
n_affect1
swls4
swls5
Unobserved, endogenous variables
Cognitive_reappraisal
Expressive_suppression
Marital_satisfaction

Positive_affect
Life_satisfaction
Negative_affect
Unobserved, exogenous variables
Perceived_stress
Perceived_spouse_support
e8
e9
e10
e13
e12
e11
e1
e2
e3
e25
e26
e27
e7
e6
e5
e4
z6
z1
e14
e15
e16
e22
e21
e20
e19
e18
e17
z2
e23
e24
z3
z4
z5

Variable counts (First time fathers)

Number of variables in your model:	68
Number of observed variables:	27
Number of unobserved variables:	41
Number of exogenous variables:	35
Number of endogenous variables:	33

Parameter Summary (First time fathers)

	Weights	Covariances	Variances	Means	Intercepts	Total
Fixed	41	0	0	0	0	41
Labeled	43	1	35	0	0	79
Unlabeled	0	0	0	0	0	0
Total	84	1	35	0	0	120

Group number 2 (Group number 2)

Notes for Group (Group number 2)

The model is recursive.
Sample size = 389

Variable Summary (First time mothers)

Your model contains the following variables (First time mothers)

Observed, endogenous variables
ca1
ca2
ca3
erq9
erq6
erq2
ps1
ps2
ps3
cs1
cs2
cs3
ss4
ss3
ss2
ss1
p_affect1
p_affect2
p_affect3
swls3
swls2
swls1
n_affect3
n_affect2
n_affect1
swls4
swls5
Unobserved, endogenous variables
Cognitive_reappraisal
Expressive_suppression
Marital_satisfaction
Positive_affect
Life_satisfaction
Negative_affect
Unobserved, exogenous variables
Perceived_stress
Perceived_spouse_support
e8
e9
e10
e13
e12
e11
e1
e2
e3
e25
e26
e27
e7
e6
e5
e4
z6
z1
e14

e15
e16
e22
e21
e20
e19
e18
e17
z2
e23
e24
z3
z4
z5

Variable counts (First time mothers)

Number of variables in your model: 68
Number of observed variables: 27
Number of unobserved variables: 41
Number of exogenous variables: 35
Number of endogenous variables: 33

Parameter Summary (First time mothers)

	Weights	Covariances	Variances	Means	Intercepts	Total
Fixed	41	0	0	0	0	41
Labeled	43	1	35	0	0	79
Unlabeled	0	0	0	0	0	0
Total	84	1	35	0	0	120

Models

Unconstrained/Variant (Unconstrained/Variant)

Notes for Model (Unconstrained/Variant)

Computation of degrees of freedom (Unconstrained/Variant)

Number of distinct sample moments: 756
Number of distinct parameters to be estimated: 158
Degrees of freedom (756 - 158): 598

Result (Unconstrained/Variant)

Minimum was achieved
Chi-square = 1508.015
Degrees of freedom = 598
Probability level = .000

First time fathers (First time fathers - Unconstrained/Variant)

Estimates (First time fathers - Unconstrained/Variant)

Scalar Estimates (First time fathers - Unconstrained/Variant)

Maximum Likelihood Estimates

Regression Weights: (First time fathers - Unconstrained/Variant)

			Estimate	S.E.	C.R.	P	Label
Cognitive_reappraisal	<---	Perceived_stress	-.043	.117	-.369	.712	b1_1
Expressive_suppression	<---	Perceived_spouse_support	.120	.058	2.074	.038	b2_1
Cognitive_reappraisal	<---	Perceived_spouse_support	.128	.050	2.546	.011	b4_1
Expressive_suppression	<---	Perceived_stress	.009	.127	.072	.942	b6_1
Positive_affect	<---	Perceived_stress	-.369	.102	-3.622	***	b9_1
Negative_affect -	<---	Perceived_stress	.621	.107	5.778	***	b11_1
Positive_affect	<---	Cognitive_reappraisal	.088	.074	1.187	.235	b12_1
Negative_affect	<---	Cognitive_reappraisal	.078	.078	.991	.321	b14_1
Negative_affect	<---	Expressive_suppression	.102	.088	1.160	.246	b15_1
Positive_affect	<---	Expressive_suppression	-.062	.082	-.750	.453	b17_1
Positive_affect	<---	Perceived_spouse_support	.035	.043	.814	.416	b23_1
Life_satisfaction	<---	Perceived_stress	-.656	.205	-3.196	.001	b10_1
Life_satisfaction	<---	Cognitive_reappraisal	.162	.114	1.419	.156	b13_1
Life_satisfaction	<---	Expressive_suppression	.139	.129	1.079	.281	b16_1
Life_satisfaction	<---	Positive_affect	.160	.143	1.120	.263	b18_1
Life_satisfaction	<---	Negative_affect	-.174	.146	-1.193	.233	b19_1
Life_satisfaction	<---	Perceived_spouse_support	.237	.067	3.520	***	b24_1
Marital_satisfaction	<---	Cognitive_reappraisal	.021	.067	.307	.759	b3_1
Marital_satisfaction	<---	Perceived_spouse_support	.402	.044	9.061	***	b5_1
Marital_satisfaction	<---	Perceived_stress	-.070	.122	-.572	.568	b7_1
Marital_satisfaction	<---	Expressive_suppression	-.197	.082	-2.402	.016	b8_1
Marital_satisfaction	<---	Life_satisfaction	.203	.058	3.486	***	b20_1
Marital_satisfaction	<---	Negative_affect	-.014	.085	-.166	.868	b21_1
Marital_satisfaction	<---	Positive_affect	.239	.086	2.791	.005	b22_1
ca1	<---	Cognitive_reappraisal	1.000				
ca2	<---	Cognitive_reappraisal	1.282	.138	9.291	***	a1_1
ca3	<---	Cognitive_reappraisal	1.337	.144	9.314	***	a2_1
erq9	<---	Expressive_suppression	1.203	.260	4.633	***	a3_1
erq6	<---	Expressive_suppression	1.612	.372	4.338	***	a4_1
erq2	<---	Expressive_suppression	1.000				
ps1	<---	Perceived_stress	1.000				
ps2	<---	Perceived_stress	.710	.093	7.646	***	a5_1
ps3	<---	Perceived_stress	.777	.094	8.293	***	a6_1
cs1	<---	Marital_satisfaction	1.000				
cs2	<---	Marital_satisfaction	1.018	.034	30.339	***	a7_1
cs3	<---	Marital_satisfaction	1.014	.035	29.237	***	a8_1
ss4	<---	Perceived_spouse_support	.834	.057	14.612	***	a9_1
ss3	<---	Perceived_spouse_support	.917	.050	18.257	***	a10_1
ss2	<---	Perceived_spouse_support	.887	.047	18.998	***	a11_1
ss1	<---	Perceived_spouse_support	1.000				
p_affect1	<---	Positive_affect	1.000				
p_affect2	<---	Positive_affect	.997	.091	10.935	***	a12_1
p_affect3	<---	Positive_affect	1.079	.093	11.580	***	a13_1
swls3	<---	Life_satisfaction	1.005	.082	12.316	***	a14_1
swls2	<---	Life_satisfaction	1.098	.080	13.653	***	a15_1
swls1	<---	Life_satisfaction	1.000				
n_affect3	<---	Negative_affect	.651	.061	10.621	***	a16_1
n_affect2	<---	Negative_affect	.857	.084	10.237	***	a17_1
n_affect1	<---	Negative_affect	1.000				
swls4	<---	Life_satisfaction	.895	.091	9.832	***	a18_1
swls5	<---	Life_satisfaction	.818	.126	6.477	***	a19_1

Standardized Regression Weights: (First time fathers - Unconstrained/Variant)

			Estimate
Cognitive_reappraisal	<---	Perceived_stress	-.036
Expressive_suppression	<---	Perceived_spouse_support	.231
Cognitive_reappraisal	<---	Perceived_spouse_support	.242
Expressive_suppression	<---	Perceived_stress	.008
Positive_affect	<---	Perceived_stress	-.360
Negative_affect	<---	Perceived_stress	.542
Positive_affect	<---	Cognitive_reappraisal	.102
Negative_affect	<---	Cognitive_reappraisal	.081
Negative_affect	<---	Expressive_suppression	.105
Positive_affect	<---	Expressive_suppression	-.070
Positive_affect	<---	Perceived_spouse_support	.077
Life_satisfaction	<---	Perceived_stress	-.348
Life_satisfaction	<---	Cognitive_reappraisal	.103
Life_satisfaction	<---	Expressive_suppression	.086
Life_satisfaction	<---	Positive_affect	.087
Life_satisfaction	<---	Negative_affect	-.106
Life_satisfaction	<---	Perceived_spouse_support	.284
Marital_satisfaction	<---	Cognitive_reappraisal	.016
Marital_satisfaction	<---	Perceived_spouse_support	.596
Marital_satisfaction	<---	Perceived_stress	-.046
Marital_satisfaction	<---	Expressive_suppression	-.152
Marital_satisfaction	<---	Life_satisfaction	.251
Marital_satisfaction	<---	Negative_affect	-.011
Marital_satisfaction	<---	Positive_affect	.161
ca1	<---	Cognitive_reappraisal	.685
ca2	<---	Cognitive_reappraisal	.825
ca3	<---	Cognitive_reappraisal	.900
erq9	<---	Expressive_suppression	.596
erq6	<---	Expressive_suppression	.806
erq2	<---	Expressive_suppression	.473
ps1	<---	Perceived_stress	.883
ps2	<---	Perceived_stress	.611
ps3	<---	Perceived_stress	.663
cs1	<---	Marital_satisfaction	.941
cs2	<---	Marital_satisfaction	.978
cs3	<---	Marital_satisfaction	.971
ss4	<---	Perceived_spouse_support	.821
ss3	<---	Perceived_spouse_support	.910
ss2	<---	Perceived_spouse_support	.925
ss1	<---	Perceived_spouse_support	.894
p_affect1	<---	Positive_affect	.801
p_affect2	<---	Positive_affect	.803
p_affect3	<---	Positive_affect	.876
swls3	<---	Life_satisfaction	.832
swls2	<---	Life_satisfaction	.903
swls1	<---	Life_satisfaction	.810
n_affect3	<---	Negative_affect	.807
n_affect2	<---	Negative_affect	.770
n_affect1	<---	Negative_affect	.836
swls4	<---	Life_satisfaction	.701
swls5	<---	Life_satisfaction	.492

Covariances: (First time fathers - Unconstrained/Variant)

	Estimate	S.E.	C.R.	P	Label
Perceived_stress <--> Perceived_spouse_support	-.345	.079	-4.396	***	ccc1_1

Correlations: (First time fathers - Unconstrained/Variant)

	Estimate
Perceived_stress <--> Perceived_spouse_support	-.413

Variances: (First time fathers - Unconstrained/Variant)

	Estimate	S.E.	C.R.	P	Label
Perceived_stress	.370	.058	6.354	***	vvv1_1
Perceived_spouse_support	1.883	.254	7.403	***	vvv2_1
z1	.489	.102	4.768	***	vv1_1
z2	.480	.178	2.699	.007	vv2_1
z3	.319	.055	5.754	***	vv4_1
z5	.344	.061	5.611	***	vv6_1
z4	.719	.125	5.758	***	vv5_1
z6	.260	.037	7.103	***	vv3_1
e8	.593	.075	7.948	***	v1_1
e9	.403	.074	5.431	***	v2_1
e10	.220	.069	3.188	.001	v3_1
e13	1.328	.202	6.559	***	v4_1
e12	.710	.259	2.738	.006	v5_1
e11	1.751	.218	8.041	***	v6_1
e1	.105	.031	3.340	***	v7_1
e2	.313	.039	8.119	***	v8_1
e3	.285	.037	7.712	***	v9_1
e25	.110	.014	7.594	***	v10_1
e26	.041	.009	4.478	***	v11_1
e27	.054	.010	5.468	***	v12_1
e7	.634	.078	8.138	***	v13_1
e6	.331	.050	6.662	***	v14_1
e5	.249	.041	6.065	***	v15_1
e4	.473	.067	7.108	***	v16_1
e14	.217	.033	6.631	***	v17_1
e15	.213	.032	6.595	***	v18_1
e16	.137	.030	4.598	***	v19_1
e22	.592	.083	7.166	***	v20_1
e21	.357	.068	5.257	***	v21_1
e20	.690	.092	7.493	***	v22_1
e19	.110	.018	6.045	***	v23_1
e18	.244	.036	6.785	***	v24_1
e17	.209	.039	5.327	***	v25_1
e23	1.090	.130	8.359	***	v26_1
e24	2.751	.308	8.929	***	v27_1

Squared Multiple Correlations: (First time fathers - Unconstrained/Variant)

	Estimate
Expressive_suppression	.052
Cognitive_reappraisal	.067
Negative_affect	.291
Positive_affect	.180
Life_satisfaction	.453
Marital_satisfaction	.696
swls5	.242
swls4	.491
n_affect1	.699
n_affect2	.593
n_affect3	.651
swls1	.656
swls2	.816
swls3	.692
p_affect3	.768
p_affect2	.645
p_affect1	.642
ss1	.799
ss2	.856
ss3	.827
ss4	.674
cs3	.942
cs2	.956
cs1	.886
ps3	.439
ps2	.373
ps1	.779
erq2	.224
erq6	.649
erq9	.355
ca3	.810
ca2	.681
ca1	.469

Modification Indices (First time fathers - Unconstrained/Variant)

Covariances: (First time fathers - Unconstrained/Variant)

	M.I.	Par Change

Variances: (First time fathers - Unconstrained/Variant)

	M.I.	Par Change

Regression Weights: (First time fathers - Unconstrained/Variant)

	M.I.	Par Change

First time mothers (First time mothers - Unconstrained/Variant)

Estimates (First time mothers - Unconstrained/Variant)

Scalar Estimates (First time mothers - Unconstrained/Variant)

Maximum Likelihood Estimates

Regression Weights: (First time mothers - Unconstrained/Variant)

			Estimate	S.E.	C.R.	P	Label
Cognitive_reappraisal	<---	Perceived_stress	-.248	.077	-3.202	.001	b1_2
Expressive_suppression	<---	Perceived_spouse_support	-.032	.027	-1.166	.244	b2_2
Cognitive_reappraisal	<---	Perceived_spouse_support	.052	.040	1.291	.197	b4_2
Expressive_suppression	<---	Perceived_stress	-.126	.057	-2.195	.028	b6_2
Positive_affect	<---	Perceived_stress	-.206	.062	-3.329	***	b9_2
Negative_affect	<---	Perceived_stress	.685	.059	11.527	***	b11_2
Positive_affect	<---	Cognitive_reappraisal	.142	.048	2.950	.003	b12_2
Negative_affect	<---	Cognitive_reappraisal	.023	.043	.523	.601	b14_2
Negative_affect	<---	Expressive_suppression	-.147	.052	-2.842	.004	b15_2
Positive_affect	<---	Expressive_suppression	-.090	.054	-1.672	.095	b17_2
Positive_affect	<---	Perceived_spouse_support	.092	.032	2.907	.004	b23_2
Life_satisfaction	<---	Perceived_stress	-.414	.109	-3.783	***	b10_2
Life_satisfaction	<---	Cognitive_reappraisal	.220	.063	3.497	***	b13_2
Life_satisfaction	<---	Expressive_suppression	-.223	.074	-3.015	.003	b16_2
Life_satisfaction	<---	Positive_affect	.296	.074	3.974	***	b18_2
Life_satisfaction	<---	Negative_affect	-.200	.093	-2.159	.031	b19_2
Life_satisfaction	<---	Perceived_spouse_support	.455	.045	10.124	***	b24_2
Marital_satisfaction	<---	Cognitive_reappraisal	-.067	.042	-1.573	.116	b3_2
Marital_satisfaction	<---	Perceived_spouse_support	.508	.037	13.706	***	b5_2
Marital_satisfaction	<---	Perceived_stress	-.162	.074	-2.188	.029	b7_2
Marital_satisfaction	<---	Expressive_suppression	-.015	.047	-.328	.743	b8_2
Marital_satisfaction	<---	Life_satisfaction	.229	.044	5.209	***	b20_2
Marital_satisfaction	<---	Negative_affect	.031	.062	.499	.618	b21_2
Marital_satisfaction	<---	Positive_affect	.261	.051	5.110	***	b22_2
ca1	<---	Cognitive_reappraisal	1.000				
ca2	<---	Cognitive_reappraisal	.972	.067	14.570	***	a1_2
ca3	<---	Cognitive_reappraisal	1.100	.075	14.719	***	a2_2
erq9	<---	Expressive_suppression	1.192	.169	7.063	***	a3_2
erq6	<---	Expressive_suppression	2.725	.544	5.009	***	a4_2
erq2	<---	Expressive_suppression	1.000				
ps1	<---	Perceived_stress	1.000				
ps2	<---	Perceived_stress	.673	.047	14.189	***	a5_2
ps3	<---	Perceived_stress	.830	.052	15.874	***	a6_2
cs1	<---	Marital_satisfaction	1.000				
cs2	<---	Marital_satisfaction	1.014	.019	52.007	***	a7_2
cs3	<---	Marital_satisfaction	1.008	.020	49.264	***	a8_2
ss4	<---	Perceived_spouse_support	1.134	.046	24.505	***	a9_2
ss3	<---	Perceived_spouse_support	1.172	.043	27.271	***	a10_2
ss2	<---	Perceived_spouse_support	1.063	.039	27.398	***	a11_2
ss1	<---	Perceived_spouse_support	1.000				
p_affect1	<---	Positive_affect	1.000				
p_affect2	<---	Positive_affect	.947	.043	21.818	***	a12_2
p_affect3	<---	Positive_affect	.994	.044	22.348	***	a13_2
swls3	<---	Life_satisfaction	.966	.044	21.992	***	a14_2
swls2	<---	Life_satisfaction	.938	.045	20.941	***	a15_2
swls1	<---	Life_satisfaction	1.000				
n_affect3	<---	Negative_affect	.713	.035	20.087	***	a16_2
n_affect2	<---	Negative_affect	.844	.041	20.489	***	a17_2
n_affect1	<---	Negative_affect	1.000				
swls4	<---	Life_satisfaction	.930	.052	17.768	***	a18_2
swls5	<---	Life_satisfaction	1.026	.066	15.583	***	a19_2

Standardized Regression Weights: (First time mothers - Unconstrained/Variant)

			Estimate
Cognitive_reappraisal	<---	Perceived_stress	-.202
Expressive_suppression	<---	Perceived_spouse_support	-.064
Cognitive_reappraisal	<---	Perceived_spouse_support	.078
Expressive_suppression	<---	Perceived_stress	-.135
Positive_affect	<---	Perceived_stress	-.199
Negative_affect	<---	Perceived_stress	.632
Positive_affect	<---	Cognitive_reappraisal	.168
Negative_affect	<---	Cognitive_reappraisal	.026
Negative_affect	<---	Expressive_suppression	-.126
Positive_affect	<---	Expressive_suppression	-.081
Positive_affect	<---	Perceived_spouse_support	.164
Life_satisfaction	<---	Perceived_stress	-.229
Life_satisfaction	<---	Cognitive_reappraisal	.149
Life_satisfaction	<---	Expressive_suppression	-.114
Life_satisfaction	<---	Positive_affect	.169
Life_satisfaction	<---	Negative_affect	-.120
Life_satisfaction	<---	Perceived_spouse_support	.464
Marital_satisfaction	<---	Cognitive_reappraisal	-.051
Marital_satisfaction	<---	Perceived_spouse_support	.580
Marital_satisfaction	<---	Perceived_stress	-.100
Marital_satisfaction	<---	Expressive_suppression	-.009
Marital_satisfaction	<---	Life_satisfaction	.256
Marital_satisfaction	<---	Negative_affect	.021
Marital_satisfaction	<---	Positive_affect	.167
ca1	<---	Cognitive_reappraisal	.737
ca2	<---	Cognitive_reappraisal	.817
ca3	<---	Cognitive_reappraisal	.849
erq9	<---	Expressive_suppression	.520
erq6	<---	Expressive_suppression	1.059
erq2	<---	Expressive_suppression	.377
ps1	<---	Perceived_stress	.927
ps2	<---	Perceived_stress	.666
ps3	<---	Perceived_stress	.729
cs1	<---	Marital_satisfaction	.957
cs2	<---	Marital_satisfaction	.978
cs3	<---	Marital_satisfaction	.970
ss4	<---	Perceived_spouse_support	.881
ss3	<---	Perceived_spouse_support	.926
ss2	<---	Perceived_spouse_support	.928
ss1	<---	Perceived_spouse_support	.872
p_affect1	<---	Positive_affect	.886
p_affect2	<---	Positive_affect	.857
p_affect3	<---	Positive_affect	.872
swls3	<---	Life_satisfaction	.892
swls2	<---	Life_satisfaction	.864
swls1	<---	Life_satisfaction	.831
n_affect3	<---	Negative_affect	.832
n_affect2	<---	Negative_affect	.845
n_affect1	<---	Negative_affect	.881
swls4	<---	Life_satisfaction	.775
swls5	<---	Life_satisfaction	.706

Covariances: (First time mothers - Unconstrained/Variant)

	Estimate	S.E.	C.R.	P	Label
Perceived_stress <--> Perceived_spouse_support	-.340	.055	-6.174	***	ccc1_2

Correlations: (First time mothers - Unconstrained/Variant)

	Estimate
Perceived_stress <--> Perceived_spouse_support	-.365

Variances: (First time mothers - Unconstrained/Variant)

	Estimate	S.E.	C.R.	P	Label
Perceived_stress	.503	.046	10.975	***	vvv1_2
Perceived_spouse_support	1.717	.159	10.767	***	vvv2_2
z1	.712	.091	7.829	***	vv1_2
z2	.426	.127	3.363	***	vv2_2
z3	.461	.044	10.522	***	vv4_2
z5	.339	.036	9.302	***	vv6_2
z4	.664	.075	8.886	***	vv5_2
z6	.312	.028	10.992	***	vv3_2
e8	.634	.058	10.887	***	v1_2
e9	.357	.042	8.450	***	v2_2
e10	.354	.050	7.114	***	v3_2
e13	1.658	.152	10.922	***	v4_2
e12	-.350	.497	-.706	.480	v5_2
e11	2.614	.198	13.176	***	v6_2
e1	.082	.020	4.092	***	v7_2
e2	.286	.023	12.409	***	v8_2
e3	.305	.026	11.584	***	v9_2
e25	.121	.011	10.762	***	v10_2
e26	.061	.008	7.395	***	v11_2
e27	.083	.009	9.063	***	v12_2
e7	.634	.055	11.532	***	v13_2
e6	.390	.040	9.710	***	v14_2
e5	.312	.033	9.585	***	v15_2
e4	.542	.046	11.752	***	v16_2
e14	.147	.018	8.310	***	v17_2
e15	.175	.018	9.714	***	v18_2
e16	.167	.019	9.026	***	v19_2
e22	.397	.041	9.710	***	v20_2
e21	.494	.046	10.720	***	v21_2
e20	.739	.064	11.507	***	v22_2
e19	.133	.013	10.101	***	v23_2
e18	.168	.017	9.656	***	v24_2
e17	.171	.021	8.075	***	v25_2
e23	.949	.077	12.310	***	v26_2
e24	1.754	.136	12.866	***	v27_2

Squared Multiple Correlations: (First time mothers - Unconstrained/Variant)

	Estimate
Expressive_suppression	.016
Cognitive_reappraisal	.058
Negative_affect	.427
Positive_affect	.145
Life_satisfaction	.598

	Estimate
Marital_satisfaction	.764
swls5	.498
swls4	.601
n_affect1	.776
n_affect2	.714
n_affect3	.693
swls1	.691
swls2	.747
swls3	.795
p_affect3	.761
p_affect2	.734
p_affect1	.786
ss1	.760
ss2	.861
ss3	.858
ss4	.777
cs3	.941
cs2	.957
cs1	.916
ps3	.532
ps2	.444
ps1	.860
erq2	.142
erq6	1.122
erq9	.271
ca3	.721
ca2	.667
ca1	.544

Notes for Model (First time mothers - Unconstrained/Variant)

The following variances are negative. (First time mothers - Unconstrained/Variant)

	e12
	-.350

Notes for Group/Model (First time mothers - Unconstrained/Variant)

This solution is not admissible.

Modification Indices (First time mothers - Unconstrained/Variant)

Covariances: (First time mothers - Unconstrained/Variant)

	M.I.	Par Change
e19 <--> z3	107.596	.158

Variances: (First time mothers - Unconstrained/Variant)

	M.I.	Par Change

Regression Weights: (First time mothers - Unconstrained/Variant)

			M.I.	Par Change
n_affect3	<---	Positive_affect	96.627	.296
n_affect3	<---	p_affect3	87.809	.236
n_affect3	<---	p_affect2	57.773	.197
n_affect3	<---	p_affect1	103.505	.259

			Estimate	S.E.	C.R.	P	Label
ps2	<---	Perceived_stress	.674	.042	16.081	***	a5_1
ps3	<---	Perceived_stress	.808	.045	17.785	***	a6_1
cs1	<---	Marital_satisfaction	1.000				
cs2	<---	Marital_satisfaction	1.015	.017	60.298	***	a7_1
cs3	<---	Marital_satisfaction	1.009	.018	57.505	***	a8_1
ss4	<---	Perceived_spouse_support	1.054	.037	28.442	***	a9_1
ss3	<---	Perceived_spouse_support	1.104	.034	32.360	***	a10_1
ss2	<---	Perceived_spouse_support	1.018	.031	32.783	***	a11_1
ss1	<---	Perceived_spouse_support	1.000				
p_affect1	<---	Positive_affect	1.000				
p_affect2	<---	Positive_affect	.957	.039	24.517	***	a12_1
p_affect3	<---	Positive_affect	1.008	.040	25.257	***	a13_1
swls3	<---	Life_satisfaction	.977	.039	25.175	***	a14_1
swls2	<---	Life_satisfaction	.983	.039	25.061	***	a15_1
swls1	<---	Life_satisfaction	1.000				
n_affect3	<---	Negative_affect	.699	.031	22.591	***	a16_1
n_affect2	<---	Negative_affect	.849	.037	22.762	***	a17_1
n_affect1	<---	Negative_affect	1.000				
swls4	<---	Life_satisfaction	.922	.045	20.266	***	a18_1
swls5	<---	Life_satisfaction	.989	.059	16.872	***	a19_1

Standardized Regression Weights: (First time fathers - Constrained/Invariant)

			Estimate
Cognitive_reappraisal	<---	Perceived_stress	-.142
Expressive_suppression	<---	Perceived_spouse_support	.017
Cognitive_reappraisal	<---	Perceived_spouse_support	.109
Expressive_suppression	<---	Perceived_stress	-.114
Positive_affect	<---	Perceived_stress	-.241
Negative_affect	<---	Perceived_stress	.564
Positive_affect	<---	Cognitive_reappraisal	.162
Negative_affect	<---	Cognitive_reappraisal	.052
Negative_affect	<---	Expressive_suppression	-.079
Positive_affect	<---	Expressive_suppression	-.089
Positive_affect	<---	Perceived_spouse_support	.134
Life_satisfaction	<---	Perceived_stress	-.225
Life_satisfaction	<---	Cognitive_reappraisal	.136
Life_satisfaction	<---	Expressive_suppression	-.071
Life_satisfaction	<---	Positive_affect	.144
Life_satisfaction	<---	Negative_affect	-.113
Life_satisfaction	<---	Perceived_spouse_support	.392
Marital_satisfaction	<---	Cognitive_reappraisal	-.035
Marital_satisfaction	<---	Perceived_spouse_support	.569
Marital_satisfaction	<---	Perceived_stress	-.077
Marital_satisfaction	<---	Expressive_suppression	-.041
Marital_satisfaction	<---	Life_satisfaction	.260
Marital_satisfaction	<---	Negative_affect	-.003
Marital_satisfaction	<---	Positive_affect	.170
ca1	<---	Cognitive_reappraisal	.734
ca2	<---	Cognitive_reappraisal	.796
ca3	<---	Cognitive_reappraisal	.893
erq9	<---	Expressive_suppression	.467
erq6	<---	Expressive_suppression	.970

			Estimate
erq2	<---	Expressive_suppression	.381
ps1	<---	Perceived_stress	.888
ps2	<---	Perceived_stress	.584
ps3	<---	Perceived_stress	.679
cs1	<---	Marital_satisfaction	.949
cs2	<---	Marital_satisfaction	.980
cs3	<---	Marital_satisfaction	.974
ss4	<---	Perceived_spouse_support	.848
ss3	<---	Perceived_spouse_support	.921
ss2	<---	Perceived_spouse_support	.917
ss1	<---	Perceived_spouse_support	.841
p_affect1	<---	Positive_affect	.816
p_affect2	<---	Positive_affect	.801
p_affect3	<---	Positive_affect	.857
swls3	<---	Life_satisfaction	.841
swls2	<---	Life_satisfaction	.883
swls1	<---	Life_satisfaction	.828
n_affect3	<---	Negative_affect	.842
n_affect2	<---	Negative_affect	.769
n_affect1	<---	Negative_affect	.831
swls4	<---	Life_satisfaction	.737
swls5	<---	Life_satisfaction	.591

Covariances: (First time fathers - Constrained/Invariant)

			Estimate	S.E.	C.R.	P	Label
Perceived_stress	<-->	Perceived_spouse_support	-.286	.066	-4.373	***	ccc1_1

Correlations: (First time fathers - Constrained/Invariant)

			Estimate
Perceived_stress	<-->	Perceived_spouse_support	-.401

Variances: (First time fathers - Constrained/Invariant)

	Estimate	S.E.	C.R.	P	Label
Perceived_stress	.369	.050	7.306	***	vvv1_1
Perceived_spouse_support	1.383	.171	8.069	***	vvv2_1
z1	.631	.096	6.580	***	vv1_1
z2	.317	.086	3.672	***	vv2_1
z3	.349	.049	7.184	***	vv4_1
z5	.339	.052	6.516	***	vv6_1
z4	.801	.116	6.878	***	vv5_1
z6	.272	.036	7.607	***	vv3_1
e8	.567	.074	7.608	***	v1_1
e9	.431	.065	6.673	***	v2_1
e10	.232	.058	4.006	***	v3_1
e13	1.580	.188	8.418	***	v4_1
e12	.119	.319	.375	.708	v5_1
e11	1.897	.214	8.861	***	v6_1
e1	.099	.026	3.751	***	v7_1
e2	.323	.038	8.427	***	v8_1
e3	.281	.036	7.840	***	v9_1
e25	.109	.014	7.586	***	v10_1
e26	.042	.009	4.639	***	v11_1
e27	.054	.010	5.543	***	v12_1

	Estimate	S.E.	C.R.	P	Label
e7	.602	.076	7.875	***	v13_1
e6	.302	.048	6.233	***	v14_1
e5	.271	.042	6.392	***	v15_1
e4	.571	.072	7.946	***	v16_1
e14	.206	.031	6.614	***	v17_1
e15	.210	.030	6.893	***	v18_1
e16	.151	.027	5.626	***	v19_1
e22	.593	.082	7.232	***	v20_1
e21	.411	.065	6.306	***	v21_1
e20	.686	.093	7.414	***	v22_1
e19	.101	.017	5.868	***	v23_1
e18	.251	.034	7.279	***	v24_1
e17	.226	.037	6.154	***	v25_1
e23	1.070	.130	8.245	***	v26_1
e24	2.729	.311	8.777	***	v27_1

Squared Multiple Correlations: (First time fathers - Constrained/Invariant)

	Estimate
Expressive_suppression	.015
Cognitive_reappraisal	.044
Negative_affect	.327
Positive_affect	.151
Life_satisfaction	.464
Marital_satisfaction	.723
swls5	.349
swls4	.543
n_affect1	.690
n_affect2	.591
n_affect3	.709
swls1	.686
swls2	.779
swls3	.707
p_affect3	.734
p_affect2	.642
p_affect1	.666
ss1	.708
ss2	.841
ss3	.848
ss4	.718
cs3	.949
cs2	.960
cs1	.900
ps3	.461
ps2	.341
ps1	.788
erq2	.145
erq6	.941
erq9	.218
ca3	.797
ca2	.633
ca1	.538

Modification Indices (First time fathers - Constrained/Invariant)

Covariances: (First time fathers - Constrained/Invariant)

	M.I.	Par Change

Variances: (First time fathers - Constrained/Invariant)

	M.I.	Par Change

Regression Weights: (First time fathers - Constrained/Invariant)

	M.I.	Par Change

First time mothers (First time mothers - Constrained/Invariant)

Estimates (First time mothers - Constrained/Invariant)

Scalar Estimates (First time mothers - Constrained/Invariant)

Maximum Likelihood Estimates

Regression Weights: (First time mothers - Constrained/Invariant)

			Estimate	S.E.	C.R.	P	Label
Cognitive_reappraisal	<---	Perceived_stress	-.190	.063	-3.014	.003	b1_1
Expressive_suppression	<---	Perceived_spouse_support	.008	.024	.337	.736	b2_1
Cognitive_reappraisal	<---	Perceived_spouse_support	.075	.031	2.398	.016	b4_1
Expressive_suppression	<---	Perceived_stress	-.106	.051	-2.082	.037	b6_1
Positive_affect	<---	Perceived_stress	-.255	.052	-4.889	***	b9_1
Negative_affect	<---	Perceived_stress	.659	.052	12.750	***	b11_1
Positive_affect	<---	Cognitive_reappraisal	.128	.041	3.156	.002	b12_1
Negative_affect	<---	Cognitive_reappraisal	.046	.039	1.187	.235	b14_1
Negative_affect	<---	Expressive_suppression	-.098	.044	-2.250	.024	b15_1
Positive_affect	<---	Expressive_suppression	-.101	.046	-2.202	.028	b17_1
Positive_affect	<---	Perceived_spouse_support	.073	.026	2.854	.004	b23_1
Life_satisfaction	<---	Perceived_stress	-.453	.094	-4.828	***	b10_1
Life_satisfaction	<---	Cognitive_reappraisal	.204	.056	3.640	***	b13_1
Life_satisfaction	<---	Expressive_suppression	-.154	.062	-2.495	.013	b16_1
Life_satisfaction	<---	Positive_affect	.275	.066	4.167	***	b18_1
Life_satisfaction	<---	Negative_affect	-.195	.078	-2.509	.012	b19_1
Life_satisfaction	<---	Perceived_spouse_support	.407	.037	10.964	***	b24_1
Marital_satisfaction	<---	Cognitive_reappraisal	-.042	.036	-1.168	.243	b3_1
Marital_satisfaction	<---	Perceived_spouse_support	.480	.029	16.552	***	b5_1
Marital_satisfaction	<---	Perceived_stress	-.126	.061	-2.061	.039	b7_1
Marital_satisfaction	<---	Expressive_suppression	-.072	.040	-1.817	.069	b8_1
Marital_satisfaction	<---	Life_satisfaction	.211	.035	6.087	***	b20_1

			Estimate	S.E.	C.R.	P	Label
Marital_satisfaction	<---	Negative_affect	-.005	.050	-.092	.927	b21_1
Marital_satisfaction	<---	Positive_affect	.263	.044	6.000	***	b22_1
ca1	<---	Cognitive_reappraisal	1.000				
ca2	<---	Cognitive_reappraisal	1.062	.062	17.159	***	a1_1
ca3	<---	Cognitive_reappraisal	1.173	.068	17.337	***	a2_1
erq9	<---	Expressive_suppression	1.170	.139	8.395	***	a3_1
erq6	<---	Expressive_suppression	2.431	.401	6.065	***	a4_1
erq2	<---	Expressive_suppression	1.000				
ps1	<---	Perceived_stress	1.000				
ps2	<---	Perceived_stress	.674	.042	16.081	***	a5_1
ps3	<---	Perceived_stress	.808	.045	17.785	***	a6_1
cs1	<---	Marital_satisfaction	1.000				
cs2	<---	Marital_satisfaction	1.015	.017	60.298	***	a7_1
cs3	<---	Marital_satisfaction	1.009	.018	57.505	***	a8_1
ss4	<---	Perceived_spouse_support	1.054	.037	28.442	***	a9_1
ss3	<---	Perceived_spouse_support	1.104	.034	32.360	***	a10_1
ss2	<---	Perceived_spouse_support	1.018	.031	32.783	***	a11_1
ss1	<---	Perceived_spouse_support	1.000				
p_affect1	<---	Positive_affect	1.000				
p_affect2	<---	Positive_affect	.957	.039	24.517	***	a12_1
p_affect3	<---	Positive_affect	1.008	.040	25.257	***	a13_1
swls3	<---	Life_satisfaction	.977	.039	25.175	***	a14_1
swls2	<---	Life_satisfaction	.983	.039	25.061	***	a15_1
swls1	<---	Life_satisfaction	1.000				
n_affect3	<---	Negative_affect	.699	.031	22.591	***	a16_1
n_affect2	<---	Negative_affect	.849	.037	22.762	***	a17_1
n_affect1	<---	Negative_affect	1.000				
swls4	<---	Life_satisfaction	.922	.045	20.266	***	a18_1
swls5	<---	Life_satisfaction	.989	.059	16.872	***	a19_1

Standardized Regression Weights: (First time mothers - Constrained/Invariant)

			Estimate
Cognitive_reappraisal	<---	Perceived_stress	-.166
Expressive_suppression	<---	Perceived_spouse_support	.016
Cognitive_reappraisal	<---	Perceived_spouse_support	.126
Expressive_suppression	<---	Perceived_stress	-.107
Positive_affect	<---	Perceived_stress	-.250
Negative_affect	<---	Perceived_stress	.621
Positive_affect	<---	Cognitive_reappraisal	.144
Negative_affect	<---	Cognitive_reappraisal	.049
Negative_affect	<---	Expressive_suppression	-.091
Positive_affect	<---	Expressive_suppression	-.097
Positive_affect	<---	Perceived_spouse_support	.137
Life_satisfaction	<---	Perceived_stress	-.259
Life_satisfaction	<---	Cognitive_reappraisal	.134
Life_satisfaction	<---	Expressive_suppression	-.087
Life_satisfaction	<---	Positive_affect	.160
Life_satisfaction	<---	Negative_affect	-.118
Life_satisfaction	<---	Perceived_spouse_support	.447
Marital_satisfaction	<---	Cognitive_reappraisal	-.031
Marital_satisfaction	<---	Perceived_spouse_support	.588
Marital_satisfaction	<---	Perceived_stress	-.081
Marital_satisfaction	<---	Expressive_suppression	-.046
Marital_satisfaction	<---	Life_satisfaction	.236
Marital_satisfaction	<---	Negative_affect	-.003
Marital_satisfaction	<---	Positive_affect	.171
ca1	<---	Cognitive_reappraisal	.711
ca2	<---	Cognitive_reappraisal	.830
ca3	<---	Cognitive_reappraisal	.852
erq9	<---	Expressive_suppression	.547
erq6	<---	Expressive_suppression	1.016
erq2	<---	Expressive_suppression	.404
ps1	<---	Perceived_stress	.934
ps2	<---	Perceived_stress	.670
ps3	<---	Perceived_stress	.720
cs1	<---	Marital_satisfaction	.955
cs2	<---	Marital_satisfaction	.977
cs3	<---	Marital_satisfaction	.969
ss4	<---	Perceived_spouse_support	.874
ss3	<---	Perceived_spouse_support	.923
ss2	<---	Perceived_spouse_support	.931
ss1	<---	Perceived_spouse_support	.883
p_affect1	<---	Positive_affect	.885
p_affect2	<---	Positive_affect	.859
p_affect3	<---	Positive_affect	.875
swls3	<---	Life_satisfaction	.890
swls2	<---	Life_satisfaction	.872
swls1	<---	Life_satisfaction	.825
n_affect3	<---	Negative_affect	.823
n_affect2	<---	Negative_affect	.845
n_affect1	<---	Negative_affect	.880
swls4	<---	Life_satisfaction	.763
swls5	<---	Life_satisfaction	.681

Covariances: (First time mothers - Constrained/Invariant)

	Estimate	S.E.	C.R.	P	Label
Perceived_stress <--> Perceived_spouse_support	-.359	.058	-6.230	***	ccc1_2

Correlations: (First time mothers - Constrained/Invariant)

	Estimate
Perceived_stress <--> Perceived_spouse_support	-.365

Variances: (First time mothers - Constrained/Invariant)

	Estimate	S.E.	C.R.	P	Label
Perceived_stress	.513	.045	11.324	***	vvv1_2
Perceived_spouse_support	1.891	.165	11.434	***	vvv2_2
z1	.635	.076	8.334	***	vv1_2
z2	.495	.124	4.005	***	vv2_2
z3	.455	.042	10.784	***	vv4_2
z5	.349	.036	9.653	***	vv6_2
z4	.655	.070	9.306	***	vv5_2
z6	.317	.028	11.250	***	vv3_2
e8	.659	.057	11.517	***	v1_2
e9	.343	.042	8.134	***	v2_2
e10	.351	.049	7.243	***	v3_2
e13	1.605	.147	10.917	***	v4_2
e12	.091	.395	-.231	.818	v5_2
e11	2.569	.196	13.110	***	v6_2
e1	.075	.019	3.877	***	v7_2
e2	.285	.023	12.460	***	v8_2
e3	.311	.026	11.873	***	v9_2
e25	.121	.011	10.801	***	v10_2
e26	.061	.008	7.423	***	v11_2
e27	.083	.009	9.082	***	v12_2
e7	.649	.055	11.731	***	v13_2
e6	.402	.040	9.979	***	v14_2
e5	.302	.032	9.459	***	v15_2
e4	.532	.046	11.507	***	v16_2
e14	.149	.017	8.568	***	v17_2
e15	.174	.018	9.754	***	v18_2
e16	.166	.018	9.054	***	v19_2
e22	.396	.041	9.752	***	v20_2
e21	.481	.046	10.449	***	v21_2
e20	.740	.064	11.612	***	v22_2
e19	.135	.013	10.377	***	v23_2
e18	.167	.017	9.602	***	v24_2
e17	.169	.021	8.084	***	v25_2
e23	.960	.077	12.419	***	v26_2
e24	1.779	.137	12.990	***	v27_2

Squared Multiple Correlations: (First time mothers - Constrained/Invariant)

	Estimate
Expressive_suppression	.013
Cognitive_reappraisal	.059
Negative_affect	.396
Positive_affect	.151
Life_satisfaction	.584

	Estimate
Marital_satisfaction	.748
swls5	.464
swls4	.582
n_affect1	.774
n_affect2	.714
n_affect3	.677
swls1	.680
swls2	.760
swls3	.791
p_affect3	.766
p_affect2	.739
p_affect1	.783
ss1	.781
ss2	.867
ss3	.852
ss4	.764
cs3	.939
cs2	.955
cs1	.912
ps3	.518
ps2	.450
ps1	.872
erq2	.163
erq6	1.032
erq9	.300
ca3	.725
ca2	.689
ca1	.506

Modification Indices (First time mothers - Constrained/Invariant)

Covariances: (First time mothers - Constrained/Invariant)

			M.I.	Par Change
z1	<-->	z2	41.172	.196
e19	<-->	z3	109.980	.159

Variances: (First time mothers - Constrained/Invariant)

	M.I.	Par Change

Regression Weights: (First time mothers - Constrained/Invariant)

			M.I.	Par Change
Cognitive_reappraisal	<---	Expressive_suppression	40.755	.391
n_affect3	<---	Positive_affect	93.207	.292
n_affect3	<---	p_affect3	84.750	.230
n_affect3	<---	p_affect2	55.575	.193
n_affect3	<---	p_affect1	102.016	.258
ca1	<---	erq9	40.812	.188

Model Fit Summary

CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Unconstrained/Variant	158	1508.015	598	.000	2.522
Constrained/Invariant	115	1579.289	641	.000	2.464
Saturated model	756	.000	0		
Independence model	54	12586.204	702	.000	17.929

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Unconstrained/Variant	.116	.839	.796	.663
Constrained/Invariant	.140	.830	.800	.704
Saturated model	.C00	1.000		
Independence model	.547	.234	.175	.217

Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Unconstrained/Variant	.880	.859	.924	.910	.923
Constrained/Invariant	.875	.863	.921	.914	.921
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

Parsimony-Adjusted Measures

Model	PRATIO	PNFI	PCFI
Unconstrained/Variant	.852	.750	.787
Constrained/Invariant	.913	.799	.841
Saturated model	.000	.000	.000
Independence model	1.000	.000	.000

NCP

Model	NCP	LO 90	HI 90
Unconstrained/Variant	910.015	799.423	1028.265
Constrained/Invariant	938.289	825.368	1058.873
Saturated model	.000	.000	.000
Independence model	11884.204	11523.528	12251.281

FMIN

Model	FMIN	F0	LO 90	HI 90
Unconstrained/Variant	2.707	1.634	1.435	1.846
Constrained/Invariant	2.835	1.685	1.482	1.901
Saturated model	.000	.000	.000	.000
Independence model	22.596	21.336	20.689	21.995

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Unconstrained/Variant	.052	.049	.056	.126
Constrained/Invariant	.051	.048	.054	.254
Independence model	.174	.172	.177	.000

AIC

Model	AIC	BCC	BIC	CAIC
Unconstrained/Variant	1824.015	1867.947		
Constrained/Invariant	1809.289	1841.264		
Saturated model	1512.000	1722.205		
Independence model	12694.204	12709.219		

ECVI

Model	ECVI	LO 90	HI 90	MECVI
Unconstrained/Variant	3.275	3.076	3.487	3.354
Constrained/Invariant	3.248	3.046	3.465	3.306
Saturated model	2.715	2.715	2.715	3.092
Independence model	22.790	22.143	23.449	22.817

HOELTER

Model	HOELTER .05	HOELTER .01
Unconstrained/Variant	244	253
Constrained/Invariant	249	258
Independence model	35	37

Nested Model Comparisons

Assuming model Unconstrained/Variant to be correct:

Model	DF	CMIN	P	NFI Delta-1	IFI Delta-2	RFI rho-1	TLI rho2
Constrained/Invariant	43	71.273	.004	.006	.006	-.003	-.003

Execution time summary

Minimization:	.032
Miscellaneous:	1.515
Bootstrap:	.000
Total:	1.547
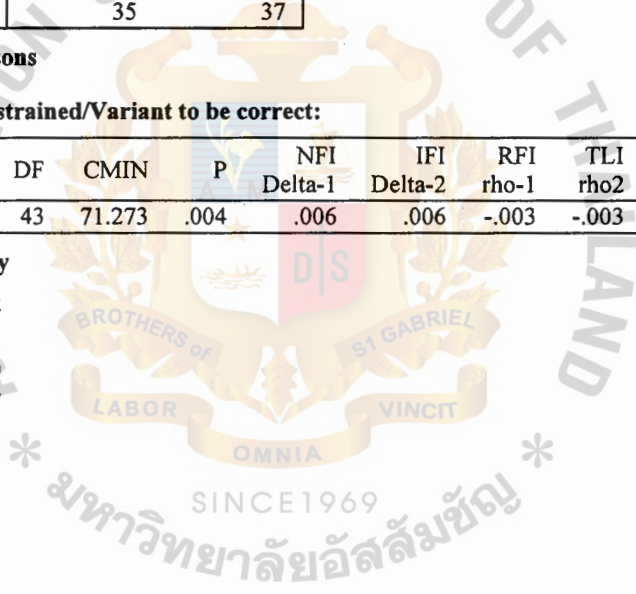
APPENDIX I-10

Demographics for Study III

Frequencies

Statistics

		gender	Age in years
N	Valid	58	58
	Missing	0	0
Mean		1.5517	34.0517
Std. Deviation		.50166	4.80286

Frequency Table

gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	male	26	44.8	44.8	44.8
	female	32	55.2	55.2	100.0
	Total	58	100.0	100.0	

Age in years

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	24.00	1	1.7	1.7	1.7
	25.00	1	1.7	1.7	3.4
	27.00	2	3.4	3.4	6.9
	28.00	3	5.2	5.2	12.1
	29.00	3	5.2	5.2	17.2
	30.00	2	3.4	3.4	20.7
	31.00	5	8.6	8.6	29.3
	32.00	5	8.6	8.6	37.9
	33.00	4	6.9	6.9	44.8
	34.00	3	5.2	5.2	50.0
	35.00	10	17.2	17.2	67.2
	36.00	5	8.6	8.6	75.9
	37.00	3	5.2	5.2	81.0
	38.00	5	8.6	8.6	89.7
	39.00	1	1.7	1.7	91.4
	41.00	1	1.7	1.7	93.1
	42.00	1	1.7	1.7	94.8
	44.00	1	1.7	1.7	96.6
	45.00	1	1.7	1.7	98.3
	50.00	1	1.7	1.7	100.0
	Total	58	100.0	100.0	

Crosstabs

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
gender * group	58	100.0%	0	0.0%	58	100.0%

gender * group Crosstabulation

			group		Total
			experimental group	control group	
gender	male	Count	15	11	26
		% within gender	57.7%	42.3%	100.0%
		% within group	53.6%	36.7%	44.8%
		% of Total	25.9%	19.0%	44.8%
	female	Count	13	19	32
		% within gender	40.6%	59.4%	100.0%
		% within group	46.4%	63.3%	55.2%
		% of Total	22.4%	32.8%	55.2%
Total		Count	28	30	58
		% within gender	48.3%	51.7%	100.0%
		% within group	100.0%	100.0%	100.0%
		% of Total	48.3%	51.7%	100.0%
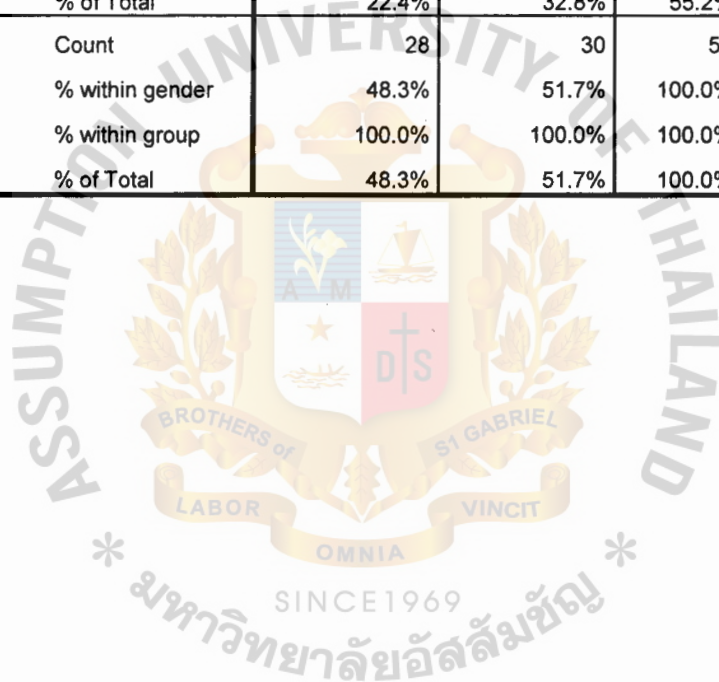
APPENDIX I-11

MANOVA for Repeated Measure

General Linear Model

Within-Subjects Factors

Measure: marital_satisfaction_scores

TRIAL	Dependent Variable
1	mari_sat_pre
2	mari_sat_post1
3	mari_sat_post2

Between-Subjects Factors

		Value Label	N
group	1.00	experimental group	28
	2.00	control group	30

Multivariate Tests[a]

Effect		Value	F	Hypothesis df	Error df	Sig.
TRIAL	Pillai's Trace	.339	14.087[b]	2.000	55.000	.000
	Wilks' Lambda	.661	14.087[b]	2.000	55.000	.000
	Hotelling's Trace	.512	14.087[b]	2.000	55.000	.000
	Roy's Largest Root	.512	14.087[b]	2.000	55.000	.000
TRIAL * group	Pillai's Trace	.196	6.698[b]	2.000	55.000	.002
	Wilks' Lambda	.804	6.698[b]	2.000	55.000	.002
	Hotelling's Trace	.244	6.698[b]	2.000	55.000	.002
	Roy's Largest Root	.244	6.698[b]	2.000	55.000	.002

a. Design: Intercept + group

Within Subjects Design: TRIAL

b. Exact statistic

Mauchly's Test of Sphericity^a

Measure: marital_satisfaction_scores

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Epsilon^b		
					Greenhouse-Geisser	Huynh-Feldt	Lower-bound
TRIAL	.794	12.657	2	.002	.829	.867	.500

Tests the null hypothesis that the error covariance matrix of the orthonormalized transformed dependent variables is proportional to an identity matrix.^a

a. Design: Intercept + group
  Within Subjects Design: TRIAL

b. May be used to adjust the degrees of freedom for the averaged tests of significance. Corrected tests are displayed in the Tests of Within-Subjects Effects table.

Tests of Within-Subjects Effects

Measure: marital_satisfaction_scores

Source		Type III Sum of Squares	df	Mean Square	F	Sig.
TRIAL	Sphericity Assumed	5.468	2	2.734	13.223	.000
	Greenhouse-Geisser	5.468	1.659	3.296	13.223	.000
	Huynh-Feldt	5.468	1.734	3.154	13.223	.000
	Lower-bound	5.468	1.000	5.468	13.223	.001
TRIAL * group	Sphericity Assumed	1.695	2	.847	4.098	.019
	Greenhouse-Geisser	1.695	1.659	1.022	4.098	.026
	Huynh-Feldt	1.695	1.734	.977	4.098	.024
	Lower-bound	1.695	1.000	1.695	4.098	.048
Error(TRIAL)	Sphericity Assumed	23.159	112	.207		
	Greenhouse-Geisser	23.159	92.903	.249		
	Huynh-Feldt	23.159	97.097	.239		
	Lower-bound	23.159	56.000	.414		

Tests of Within-Subjects Contrasts

Measure: marital_satisfaction_scores

Source	TRIAL	Type III Sum of Squares	df	Mean Square	F	Sig.
TRIAL	Level 1 vs. Level 2	9.642	1	9.642	28.209	.000
	Level 2 vs. Level 3	.321	1	.321	1.073	.305
TRIAL *	Level 1 vs. Level 2	3.257	1	3.257	9.530	.003
group	Level 2 vs. Level 3	1.481	1	1.481	4.947	.030
Error(TRIAL)	Level 1 vs. Level 2	19.141	56	.342		
	Level 2 vs. Level 3	16.766	56	.299		

Tests of Between-Subjects Effects

Measure: marital_satisfaction_scores

Transformed Variable: Average

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Intercept	804.204	1	804.204	1160.585	.000
group	.146	1	.146	.210	.648
Error	38.804	56	.693		

Estimated Marginal Means

1. group

Measure: marital_satisfaction_scores

group	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
experimental group	3.776	.157	3.461	4.091
control group	3.676	.152	3.371	3.980

2. TRIAL

Measure: marital_satisfaction_scores

TRIAL	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
1	3.479	.139	3.199	3.758
2	3.887	.105	3.677	4.096
3	3.812	.112	3.587	4.037

3. group * TRIAL

Measure: marital_satisfaction_scores

group	TRIAL	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
experimental group	1	3.424	.201	3.022	3.826
	2	4.069	.150	3.768	4.371
	3	3.835	.162	3.511	4.159
control group	1	3.533	.194	3.145	3.921
	2	3.704	.145	3.413	3.995
	3	3.790	.156	3.477	4.103

Profile Plots

Estimated Marginal Means of marital_satisfaction_scores
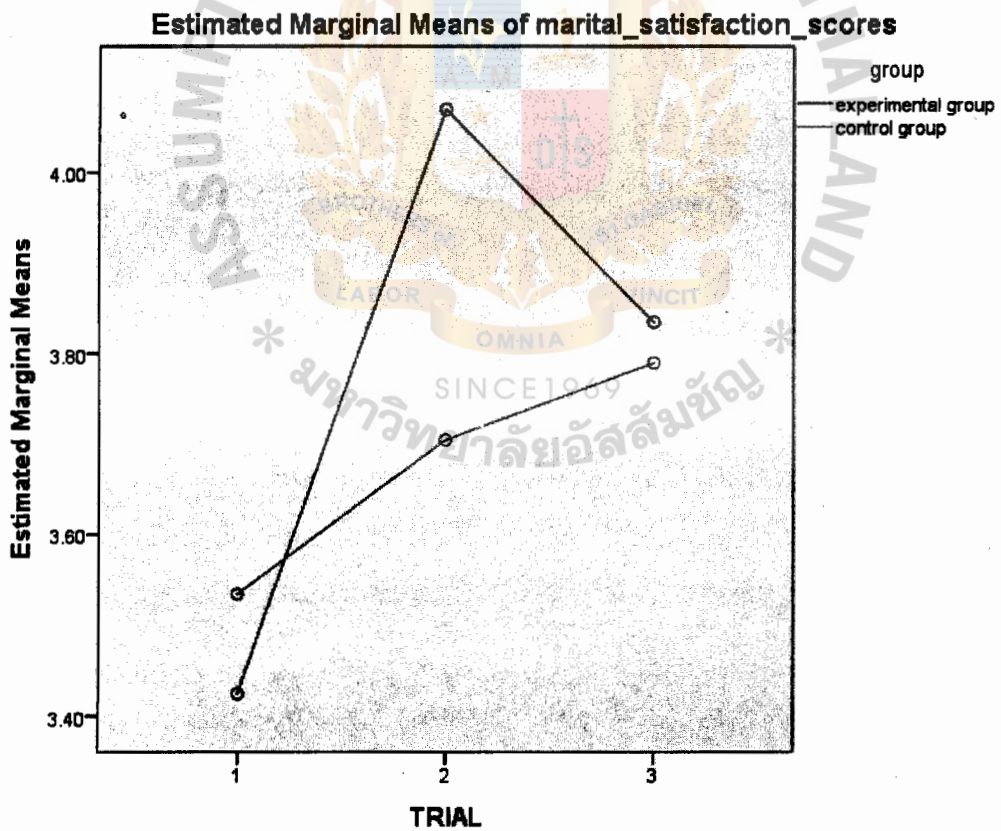
```
GLM life_sat_pre to life_sat_post2 BY GROUP
/WSFACTOR=TRIAL 3 REPEATED
/MEASURE=life_satisfaction_scores
/PLOT=PROFILE(TRIAL*GROUP)
/EMMEANS=TABLES(GROUP)
/EMMEANS=TABLES(TRIAL)
/EMMEANS=TABLES(GROUP*TRIAL).
```

General Linear Model

Within-Subjects Factors

Measure: life_satisfaction_scores

TRIAL	Dependent Variable
1	life_sat_pre
2	life_sat_post1
3	life_sat_post2

Between-Subjects Factors

		Value Label	N
group	1.00	experimental group	28
	2.00	control group	30

Multivariate Tests[a]

Effect		Value	F	Hypothesis df	Error df	Sig.
TRIAL	Pillai's Trace	.258	9.570[b]	2.000	55.000	.000
	Wilks' Lambda	.742	9.570[b]	2.000	55.000	.000
	Hotelling's Trace	.348	9.570[b]	2.000	55.000	.000
	Roy's Largest Root	.348	9.570[b]	2.000	55.000	.000
TRIAL * group	Pillai's Trace	.007	.199[b]	2.000	55.000	.820
	Wilks' Lambda	.993	.199[b]	2.000	55.000	.820
	Hotelling's Trace	.007	.199[b]	2.000	55.000	.820
	Roy's Largest Root	.007	.199[b]	2.000	55.000	.820

a. Design: Intercept + group

 Within Subjects Design: TRIAL

b. Exact statistic

Mauchly's Test of Sphericity[a]

Measure: life_satisfaction_scores

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Epsilon[b]		
					Greenhouse-Geisser	Huynh-Feldt	Lower-bound
TRIAL	.806	11.858	2	.003	.838	.876	.500

Tests the null hypothesis that the error covariance matrix of the orthonormalized transformed dependent variables is proportional to an identity matrix.[a]

a. Design: Intercept + group

 Within Subjects Design: TRIAL

b. May be used to adjust the degrees of freedom for the averaged tests of significance. Corrected tests are displayed in the Tests of Within-Subjects Effects table.

Tests of Within-Subjects Effects

Measure: life_satisfaction_scores

Source		Type III Sum of Squares	df	Mean Square	F	Sig.
TRIAL	Sphericity Assumed	10.130	2	5.065	11.357	.000
	Greenhouse-Geisser	10.130	1.675	6.048	11.357	.000
	Huynh-Feldt	10.130	1.752	5.783	11.357	.000
	Lower-bound	10.130	1.000	10.130	11.357	.001
TRIAL * group	Sphericity Assumed	.103	2	.051	.115	.891
	Greenhouse-Geisser	.103	1.675	.061	.115	.857
	Huynh-Feldt	.103	1.752	.059	.115	.866
	Lower-bound	.103	1.000	.103	.115	.735
Error(TRIAL)	Sphericity Assumed	49.952	112	.446		
	Greenhouse-Geisser	49.952	93.807	.532		
	Huynh-Feldt	49.952	98.091	.509		
	Lower-bound	49.952	56.000	.892		

Tests of Within-Subjects Contrasts

Measure: life_satisfaction_scores

Source	TRIAL	Type III Sum of Squares	df	Mean Square	F	Sig.
TRIAL	Level 1 vs. Level 2	10.231	1	10.231	8.706	.005
	Level 2 vs. Level 3	1.308	1	1.308	2.541	.117
TRIAL *	Level 1 vs. Level 2	.010	1	.010	.008	.927
group	Level 2 vs. Level 3	.188	1	.188	.365	.548
Error(TRIAL)	Level 1 vs. Level 2	65.805	56	1.175		
	Level 2 vs. Level 3	28.817	56	.515		

Tests of Between-Subjects Effects

Measure: life_satisfaction_scores

Transformed Variable: Average

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Intercept	1494.711	1	1494.711	1666.903	.000
group	.212	1	.212	.236	.629
Error	50.215	56	.897		

Estimated Marginal Means

1. group

Measure: life_satisfaction_scores

group	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
experimental group	5.019	.179	4.661	5.378
control group	5.140	.173	4.794	5.486

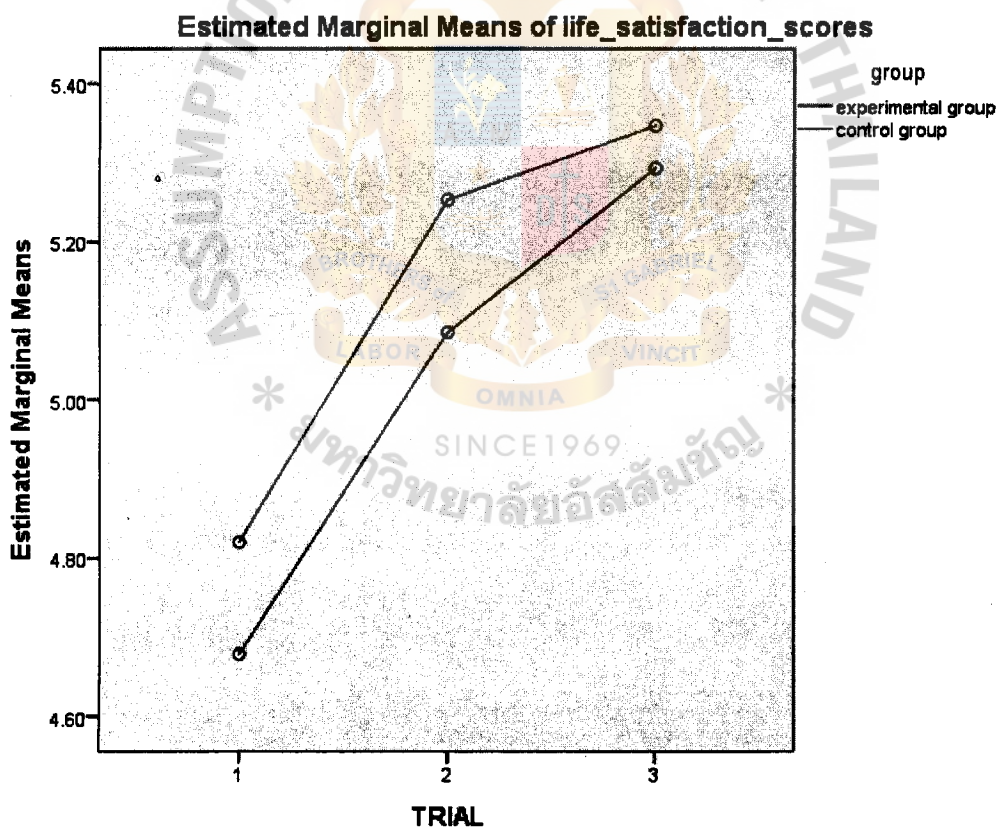## 2. TRIAL

Measure: life_satisfaction_scores

TRIAL	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
1	4.749	.160	4.429	5.069
2	5.170	.136	4.896	5.443
3	5.320	.133	5.053	5.587

3. group * TRIAL

Measure: life_satisfaction_scores

group	TRIAL	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
experimental group	1	4.679	.230	4.218	5.139
	2	5.086	.196	4.693	5.478
	3	5.293	.192	4.909	5.677
control group	1	4.820	.222	4.375	5.265
	2	5.253	.189	4.874	5.633
	3	5.347	.185	4.976	5.717

Profile Plots

Estimated Marginal Means of life_satisfaction_scores

General Linear Model

Within-Subjects Factors

Measure: positive_affect_scores

TRIAL	Dependent Variable
1	pos_aff_pre
2	pos_aff_post1
3	pos_aff_post2

Between-Subjects Factors

		Value Label	N
group	1.00	experimental group	28
	2.00	control group	30

Multivariate Tests[a]

Effect		Value	F	Hypothesis df	Error df	Sig.
TRIAL	Pillai's Trace	.093	2.834[b]	2.000	55.000	.067
	Wilks' Lambda	.907	2.834[b]	2.000	55.000	.067
	Hotelling's Trace	.103	2.834[b]	2.000	55.000	.067
	Roy's Largest Root	.103	2.834[b]	2.000	55.000	.067
TRIAL * group	Pillai's Trace	.020	.562[b]	2.000	55.000	.573
	Wilks' Lambda	.980	.562[b]	2.000	55.000	.573
	Hotelling's Trace	.020	.562[b]	2.000	55.000	.573
	Roy's Largest Root	.020	.562[b]	2.000	55.000	.573

a. Design: Intercept + group
 Within Subjects Design: TRIAL

b. Exact statistic

Mauchly's Test of Sphericity[a]

Measure: positive_affect_scores

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Epsilon[b]		
					Greenhouse-Geisser	Huynh-Feldt	Lower-bound
TRIAL	.942	3.314	2	.191	.945	.994	.500

Tests the null hypothesis that the error covariance matrix of the orthonormalized transformed dependent variables is proportional to an identity matrix.[a]

a. Design: Intercept + group

Within Subjects Design: TRIAL

b. May be used to adjust the degrees of freedom for the averaged tests of significance. Corrected tests are displayed in the Tests of Within-Subjects Effects table.

Tests of Within-Subjects Effects

Measure: positive_affect_scores

Source		Type III Sum of Squares	df	Mean Square	F	Sig.
TRIAL	Sphericity Assumed	1.001	2	.500	3.513	.033
	Greenhouse-Geisser	1.001	1.890	.530	3.513	.036
	Huynh-Feldt	1.001	1.988	.503	3.513	.033
	Lower-bound	1.001	1.000	1.001	3.513	.066
TRIAL * group	Sphericity Assumed	.180	2	.090	.632	.534
	Greenhouse-Geisser	.180	1.890	.095	.632	.525
	Huynh-Feldt	.180	1.988	.090	.632	.533
	Lower-bound	.180	1.000	.180	.632	.430
Error(TRIAL)	Sphericity Assumed	15.948	112	.142		
	Greenhouse-Geisser	15.948	105.813	.151		
	Huynh-Feldt	15.948	111.349	.143		
	Lower-bound	15.948	56.000	.285		

Tests of Within-Subjects Contrasts

Measure: positive_affect_scores

Source	TRIAL	Type III Sum of Squares	df	Mean Square	F	Sig.
TRIAL	Level 1 vs. Level 2	.191	1	.191	.774	.383
	Level 2 vs. Level 3	.897	1	.897	3.525	.066
TRIAL *	Level 1 vs. Level 2	.238	1	.238	.964	.330
group	Level 2 vs. Level 3	.003	1	.003	.014	.907
Error(TRIAL)	Level 1 vs. Level 2	13.806	56	.247		
	Level 2 vs. Level 3	14.243	56	.254		

Tests of Between-Subjects Effects

Measure: positive_affect_scores

Transformed Variable: Average

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Intercept	757.837	1	757.837	2482.972	.000
group	1.722	1	1.722	5.643	.021
Error	17.092	56	.305		

Estimated Marginal Means

1. group

Measure: positive_affect_scores

| group	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
experimental group	3.789	.104	3.580	3.998
control group	3.444	.101	3.242	3.647

2. TRIAL

Measure: positive_affect_scores

TRIAL	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
1	3.537	.085	3.367	3.707
2	3.595	.085	3.424	3.765
3	3.719	.079	3.560	3.878

3. group * TRIAL

Measure: positive_affect_scores

group	TRIAL	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
experimental group	1	3.664	.122	3.420	3.909
	2	3.786	.122	3.541	4.031
	3	3.918	.114	3.690	4.146
control group	1	3.410	.118	3.174	3.646
	2	3.403	.118	3.167	3.640
	3	3.520	.110	3.299	3.741

Profile Plots

Estimated Marginal Means of positive_affect_scores
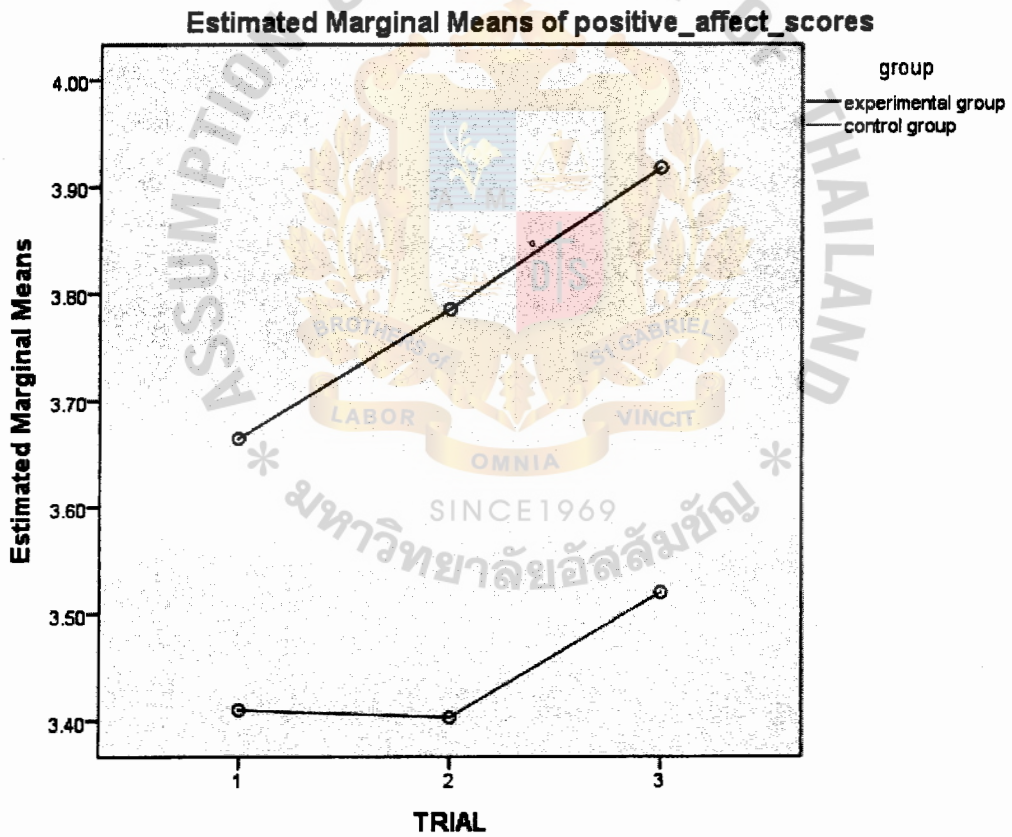
General Linear Model

Within-Subjects Factors

Measure: negative_affect_scores

TRIAL	Dependent Variable
1	neg_aff_pre
2	neg_aff_post1
3	neg_aff_post2

Between-Subjects Factors

		Value Label	N
group	1.00	experimental group	28
	2.00	control group	30

Multivariate Tests[a]

Effect		Value	F	Hypothesis df	Error df	Sig.
TRIAL	Pillai's Trace	.295	11.514[b]	2.000	55.000	.000
	Wilks' Lambda	.705	11.514[b]	2.000	55.000	.000
	Hotelling's Trace	.419	11.514[b]	2.000	55.000	.000
	Roy's Largest Root	.419	11.514[b]	2.000	55.000	.000
TRIAL * group	Pillai's Trace	.013	.373[b]	2.000	55.000	.691
	Wilks' Lambda	.987	.373[b]	2.000	55.000	.691
	Hotelling's Trace	.014	.373[b]	2.000	55.000	.691
	Roy's Largest Root	.014	.373[b]	2.000	55.000	.691

a. Design: Intercept + group
 Within Subjects Design: TRIAL

b. Exact statistic

Mauchly's Test of Sphericity[a]

Measure: negative_affect_scores

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Epsilon[b]		
					Greenhouse-Geisser	Huynh-Feldt	Lower-bound
TRIAL	.995	.300	2	.861	.995	1.000	.500

Tests the null hypothesis that the error covariance matrix of the orthonormalized transformed dependent variables is proportional to an identity matrix.[a]

a. Design: Intercept + group

  Within Subjects Design: TRIAL

b. May be used to adjust the degrees of freedom for the averaged tests of significance. Corrected tests are displayed in the Tests of Within-Subjects Effects table.

Tests of Within-Subjects Effects

Measure: negative_affect_scores

Source		Type III Sum of Squares	df	Mean Square	F	Sig.
TRIAL	Sphericity Assumed	3.893	2	1.947	12.537	.000
	Greenhouse-Geisser	3.893	1.989	1.957	12.537	.000
	Huynh-Feldt	3.893	2.000	1.947	12.537	.000
	Lower-bound	3.893	1.000	3.893	12.537	.001
TRIAL * group	Sphericity Assumed	.116	2	.058	.375	.688
	Greenhouse-Geisser	.116	1.989	.059	.375	.687
	Huynh-Feldt	.116	2.000	.058	.375	.688
	Lower-bound	.116	1.000	.116	.375	.543
Error(TRIAL)	Sphericity Assumed	17.391	112	.155		
	Greenhouse-Geisser	17.391	111.395	.156		
	Huynh-Feldt	17.391	112.000	.155		
	Lower-bound	17.391	56.000	.311		

Tests of Within-Subjects Contrasts

Measure: negative_affect_scores

Source	TRIAL	Type III Sum of Squares	df	Mean Square	F	Sig.
TRIAL	Level 1 vs. Level 2	6.030	1	6.030	18.357	.000
	Level 2 vs. Level 3	.006	1	.006	.022	.883
TRIAL *	Level 1 vs. Level 2	.181	1	.181	.552	.461
group	Level 2 vs. Level 3	.168	1	.168	.580	.450
Error(TRIAL)	Level 1 vs. Level 2	18.394	56	.328		
	Level 2 vs. Level 3	16.198	56	.289		

Tests of Between-Subjects Effects

Measure: negative_affect_scores

Transformed Variable: Average

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Intercept	214.582	1	214.582	601.629	.000
group	.372	1	.372	1.044	.311
Error	19.973	56	.357		

Estimated Marginal Means

1. group

Measure: negative_affect_scores

| group	Mean	Std. Error	95% Confidence Interval Lower Bound	Upper Bound
experimental group	2.005	.113	1.779	2.231
control group	1.844	.109	1.626	2.063

2. TRIAL

Measure: negative_affect_scores

TRIAL	Mean	Std. Error	95% Confidence Interval Lower Bound	Upper Bound
1	2.136	.091	1.954	2.319
2	1.814	.087	1.639	1.988
3	1.824	.089	1.645	2.003

3. group * TRIAL

Measure: negative_affect_scores

group	TRIAL	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
experimental group	1	2.236	.131	1.973	2.498
	2	1.857	.125	1.606	2.108
	3	1.921	.128	1.664	2.179
control group	1	2.037	.126	1.783	2.290
	2	1.770	.121	1.528	2.012
	3	1.727	.124	1.478	1.975

Profile Plots

Estimated Marginal Means of negative_affect_scores
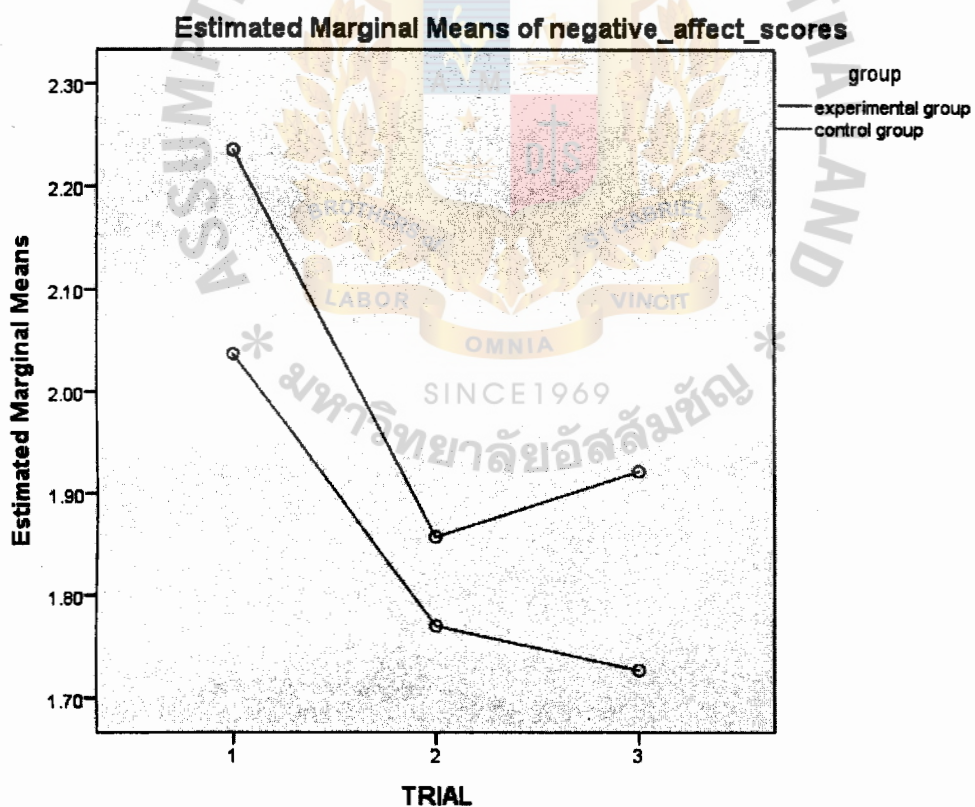
APPENDIX I-12

Related T-test for Post-intervention and Follow-up Condition for Experimental Group

T-Test

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	marital satisfaction post-intervention	4.0692	28	.78770	.14886
	marital satisfaction followup-intervention	3.8348	28	.88195	.16667

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	marital satisfaction post-intervention & marital satisfaction followup-intervention	28	.845	.000

Paired Samples Test

		Paired Differences				
				Std. Error Mean	95% Confidence Interval of the Difference	
		Mean	Std. Deviation		Lower	Upper
Pair 1	marital satisfaction post-intervention - marital satisfaction followup-intervention	.23438	.47404	.08959	.05056	.41819

Paired Samples Test

		t	df	Sig. (2-tailed)
Pair 1	marital satisfaction post-intervention - marital satisfaction followup-intervention	2.616	27	.014