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# THE DEVELOPMENT OF AN INSTRUMENT TO MEASURE SPIRITUAL WELL-BEING OF THAI ELDERLY WITH CHRONIC ILLNESS

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PENNAPA UNSANIT: THE DEVELOPMENT OF AN INSTRUMENT TO MEASURE SPIRITUAL WELL-BEING OF THAI ELDERLY WITH CHRONIC ILLNESS. ADVISORY COMMITTEE: WANLAPA KUNSONGKEIT, Ph.D., RACHANEE SUNSERN, Ph.D., MARY ELIZABETH O'BRIEN, Ph.D., PATRICIA C. MCMULLEN., Ph.D. 228 P. 2011.

The purpose of this study was to develop and test an instrument for assessing spiritual well-being in Thai elderly with chronic illness. Both qualitative and quantitative approaches were employed in the development and testing of a Thai spiritual well-being assessment instrument (TSWBA). In the qualitative phase, items were developed from the synthesis of research reviews and content analysis resulted from focus groups (n = 12) and in-depth interviews (n = 15). Therefore, the first version of TSWBA consisted of 5 domains and 57 items. Five domains included happiness in life, life equilibrium, a purpose in life, an effective way of coping, and passion for life. In the quantitative phase, content validity was determined by 7 experts. The content validity index ranged from .82 to .95. Reliability and construct validity were determined by Cronbach's alpha coefficient, principle components analysis (PCA), and confirmatory factor analysis with 2,160 older adults from six regions of Thailand.

The PCA resulted the final TSWBA contained 8 factors and 41 items, which accounted for 81.90% of the total explained variance. Eight factors included acceptance of chronic illness, happiness in life, life equilibrium, self-transcendence, optimistic personality, passion for life, a purpose in life, and willingness to forgive. Cronbach's alpha coefficient of each factor ranged from .81-.94. Result of confirmatory factor analysis indicated the spiritual well-being model fit well ($\chi^2$ = 821.09, df = 747, $\chi^2$ /df = 1.10, GFI = .96). Thus, the TSWBA appeared to be a valid and reliable instrument for measuring the spiritual well-being of Thai elderly with chronic illness.

The spiritual well-being assessment tool (TSWBA) for elderly people with chronic illness may confidently be used to assess the elderly only, but may eventually from the basis for instruments that address other groups of people in Thailand. The scale absences of a precise cut-off point for spiritual well-being versus the lack of spiritual well-being. Thus, further testing of this instrument is warranted.

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# CHAPTER 1
# INTRODUCTION

## Background and significance of the study

### The importance of spirituality to health

Spirituality is determined to be and represented as an essential core part of human beings (Burkhardt, 1989; Burkhardt & Nagai-Jacobson, 2005; Chiu, Emblen, Hofwegen, Sawatzky, & Meyerhoff, 2004; Delgado, 2005; Emblen, 1992; Hicks, 1999; Kunsongkeit & McCubbin, 2002; Stoll, 1989; Tanyi, 2002; Wasi, 2004), and functions as a connection and integration among and between the physical, psychological, and social dimensions of human beings by achieving wholeness and wellness (Burkhardt & Nagai-Jacobson, 1997; Carson, 1989; Chiu et al., 2004; O'Brien, 2008; Tanyi, 2002; Wasi, 2004). The spiritual dimension constitutes one fourth of the overall health profile of all human beings and involves values, virtue, ultimate being, and religion. These elements of the spiritual dimension can help human beings achieve wellness or health; thus, spirituality is viewed as significant in regards to affecting the optimal health of every person regardless of sex, age, ethnicity, religion, health or illness, and especially the health of elderly people (Dossey, Keegan, Guzzetta, & Kolkmeier, 1995; Hicks, 1999; Lawler-Row & Elliott, 2009; Wasi, 2004).

There are empirical data, including qualitative and quantitative studies, that demonstrate the important role of the spiritual dimension in regards to the optimal health of the human being (Koeing, 2004; Wasi, 2004) including physical well-being (Koenig, George & Titus, 2004; Koenig, George, Titus, & Meador, 2004), psychological well-being (Kandasamy, Chaturvedi, & Desai, 2011; Visser, Garssen, & Vingerhoets, 2010), quality of life (Beery, Baas, Fowler, & Allen, 2002; Tate & Forchheimer, 2002), recovery from illness (Bussema & Bussema, 2007; Torosian & Biddle, 2005; Walton, 1999), and peaceful death (Hughes, Schumacher, Jacobs-Lawson, & Arnold, 2008; Nilmanat & Street, 2007; Reed, 1987). Moreover, the website of the Spiritual Research Foundation (Athavale & Maharaj, 2007) provides important information on the effects of spirituality on other dimensions of health. This website

reported that up to 80 percent of the causes of life and health problems of human beings are rooted in the spiritual dimension. Spiritual alternations can cause symptoms of physical and psychological illness by impairing the function of various organs and systems in a person's body and mind. Accordingly, the spiritual dimension is a crucial aspect to the optimal health of every person.

Accordingly, the World Health Organization has added spiritual dimension to the definition of health: "*health is a dynamic state of complete physical, mental, spiritual and social well-being and not merely the absence of disease and infirmity*" (World Health Organization [WHO], 1998 cited in Sein, 2002, p. 50-51). Theorists and scholars from many disciplines, including the discipline of nursing, such as Jean Watson, Margaret Newman, Betty Neuman, and Barbara Dossey, have recognized that the spiritual dimension is a crucial component for optimal health (Dossey et al., 1995; Neuman, 1995; Wright, 2005). Consequently, the researcher and theorists are interest about effect of spirituality to health outcomes. Unfortunately, this concept lack of a consensual definition (Meraviglia, 1999; Tanyi, 2002) because it is a broad concept and is a universal human phenomenon, yet definitions and concepts are abstract, intangible, elusive, ambiguous, and confusing (Burkhardt & Nagai-Jacobson, 2005; Delgado, 2005; Kunsongkeit & McCubbin, 2002). Moreover, a conceptual of spirituality inconsistency exists as it applies to larger cultural contexts (Chiu et al., 2004), and can be defined in many ways (Barnum-Stevens, 1996; Burkhardt, 1994; Burkhardt & Nagai-Jacobson, 2005; Fry, 1998; Kunsongkeit & McCubbin, 2002); also it is difficult to measure this phenomenon.

**Definition of spirituality, spiritual health and spiritual well-being**

Spirituality is derived from the word 'spirit' which come from the Latin word 'spiritus', meaning breath, courage, vigor or life, which is suggested a broad concept of the essence of life (Piles, 1990). For spirit of an individual that mean their life force, the essence and energy of their being. It is this force that develops in an individual the ability to transcend the natural laws and orders of this life, allowing access to a mysterious or transcendent dimension. The "spirit" drives and motivates individuals to find meaning and purpose, allowing expression in all aspects and experiences of life, especially in times and crisis need (McSherry, 2000). For religious perspective, spirituality defined as an encompasses the ideology of the image of 'God'

or soul, existing within every person, making the individual a thinking, feeling, moral, creative being that is able to relate meaningfully to a God and Supreme or Higher Being (Hunter, Malony, Mills, & Patton, 1990; MacQuarrie, 1992; Meraviglia, 1999). For humanistic perspective, spirituality defined as a perceive values embraced by the individual that having the ability to motivate the individual's life style towards a fulfillment of individual needs, goals and aspirations, leading to the ultimate achievement of self-actualization (Atchley, 2000; Narayanasamy, 1999; Pargament, 1997). In psychology, spirituality is defined from the humanistic perspective and focuses on examining the mental process for discovering what provides people with meaning and where they look for guidance and authority (Meraviglia, 1999). Conversely, sociology, medicine, and nursing disciplines define spirituality from the religious and humanistic perspective combination because they view a person's spirituality in terms of their status a human being (Anandarajah & Hight, 2001; Meraviaglia, 1999; Tongprateep, 2004b; Wright, 2005). Spirituality is a complex and multidimensional part of the human experience that is comprised of cognitive or philosophic (Dyson, Cobb, & Forman, 1997), experiential or emotional and behavioral aspects (Anandarajah & Hight, 2001; Burton, 1998; Oldnall, 1996; Meraviglia, 1999). According to the literature, the researcher summarizes that the word "spirituality," "spirit," and "spiritual dimension" is used in the same meaning.

Spiritual health is a dynamic state of being in a relationship with God or a Supreme Being that is evident by the extent to which people live in harmony within that relationship, which include personal meaning, purpose and value in life, community, morality, culture, environment and transcendence. These components are not isolated, but are interrelated (Fisher, 1998; Fisher, Francis, & Johnson, 2000). Furthermore, spiritual health as a state of well-being and equilibrium or balance in that part of a person's essence and existence (Kunsongkeit, Suchaxaya, Panuthai, & Sethabouppha, 2004; O'Brien, 2008) as it is related to their physiological, psychological, sociological, and spiritual dimension. Accordingly, it consists of a continuum state of distress and progress to well-being, also state of health (O'Brien, 2008; Stoll, 1989; Tongprateep, 2004b). Additionally, Wasi (2004) defined spiritual health as the inner sense of self, having faith and wisdom that contributes to ultimate goodness and, finally, the happiness that arises from this experience; hence, happiness

is commonly viewed as being a sign of spiritual well-being.

The National Interfaith Coalition on Aging (1975), defined spiritual well-being as the affirmation of life in relationship with God, as well as the perception that one's life has meaning. Ellison (1983) and Moberg (1971, 1979, 1984) theorized that spiritual well-being consists of a horizontal and vertical dimension. The horizontal dimension is the existential dimension, or existential well-being. It measures how well people relate to each other, if they have a purpose or meaning in life, and if they have a sense of life satisfaction. The vertical dimension measures religious well-being, which is well-being that comes from a relationship with God. Moreover, the relevant literature focusing on nursing indicates that several authors and nurse researchers present spiritual well-being as a sub-concept of spirituality (Ellison, 1983; Meraviglia, 1999; O'Brien, 2008) and indicate a level of spiritual health that can be observed and assessed may be both overt and covert, and can be placed on a continuum ranging from wellness to illness (Brooke, 1987; Fehring, Miller, & Shaw, 1997; Fisher et al., 2000; O'Brien, 2008; Stoll, 1989).

However, searching from database found that there are many papers tried to define the definition of spirituality and its related concept such as spirit, spiritual health, spiritual distress, spiritual care, spiritual need, spiritual well-being, etc. and measure them. Furthermore, when searching word "spirituality" "spiritual health" or "spiritual well-being" it was found that these three words use in the same meaning and use interchangeably in the most of research paper. Conversely, Moberg (1971, 1979) and Ellison (1983) who theorized and developed the spiritual well-being scale confirm that spiritual well-being is different from spirituality and spiritual health. They saw spiritual health as an underlying state of which spiritual well-being is an expression. It is a sign or symptom of a person's spiritual health. Therefore, spiritual well-being is the one way of measuring spiritual health. Accordingly, this study is emphasis to define definition of spiritual well-being and measure this concept in order to assess spiritual well-being because spiritual well-being reflects spiritual health and spirituality of person.

**The importance of spiritual well-being to health and illness**

From literature reviews, spiritual well-being has an important influence upon humans and their behavior (Miller & Thoresen, 2003) because it is an important

cultural factor that structures human experiences, beliefs, values, and behaviors, as well as illness patterns (Lukoff, Lu, & Turner, 1995; Turner, Lukoff, Barnhouse, & Lu, 1995). Spiritual well-being plays a crucial role in one's perception of health and illness. It also strongly affects the way people interpret and respond to the signs and symptoms of illness. Spiritual well-being brings meaning and direction to life and is a form of dynamic energy that gives people inner strength to overcome physical and psychological suffering, to reduce stress, and to strengthen regulation (Greenstreet, 2006; Lai & Gau, 2009; Potter & Zauszniewski, 2000; Spector, 2004). Spiritual well-being can promote positive and active adjustment by facilitating individual effective functioning in the use of skills, cognition, behavior, and resources to deal with emotional and psychological pain. This may help ease disease-induced uncertainty and anxiety (Greenstreet, 2006; Kaye & Raghavan, 2002; McNulty, Livneh, & Wilson, 2004; Potter & Zauszniewski, 2000).

Furthermore, research suggests that spiritual well-being may be an effective self-care resource for reducing stress in illness, promoting positive psychological adjustment to chronic illness and strengthening adaptation to illness (Greenstreet, 2006; Lawler-Row & Elliott, 2009; Phillips, Mock, Bopp, Dudgeon, & Hand, 2006). Additionally, spiritual well-being is a valuable coping resource that influences psychological well-being, and it is positively related to coping abilities in regards to stress and chronic illness (Carson, Soeken, & Grimm, 1988; Hodges, 1988, O'Brien, 2008). Consequently, spiritual well-being is frequently identified as an important factor in regards to maintaining health and well-being, and coping with illness (Hendricks-Ferguson, 2006; Landis, 1996; Vollman, LaMontagne, & Wallston, 2009). In terms of health promotion and illness prevention, spiritual well-being can promote health-related behaviors and lifestyles, reduce the risk of disease, enhance overall well-being and provide social support (Levin, Larson, & Puchalski, 1997). Spiritual well-being constitutes a coping skill that improves the process of recovery from illness because it helps patients look at their problems in a positive way, promotes a sense of hope, and facilitates empowerment, a relaxed state, and a sense of well-being (Wood & Ironson, 1999). In addition, spiritual well-being is acknowledged to be an important resource in coping with stressful events (Carson & Green, 1992), in general well-being, and in improved quality of life in various groups (Cotton, Levine,

Fitzpatrick, Dold, & Targ, 1999).

**The significance of problem that lead to develop the spiritual well-being instrument for Thai elderly with chronic illness**

1. Definition and measurement of spiritual well-being

Although the spiritual well-being is recognized and accepted by scholars, health practitioners, policy makers, and professional nurses as an important component of optimal health, the conducting research about spiritual well-being and interventions surrounding spiritual health are difficult due to the lack of a universal definition, definite indicators, and appropriate assessment tools (Burkhardt, 1989; Burkhardt & Nagai-Jacobson, 1997; Chiu et al., 2004; Meraviglia, 1999; Power, 2006). These barriers are especially evident in Thailand, where an accepted definition of spirituality and its sub-concepts does not exist, those definitions that are present are confusing, and the terms spirituality, spiritual health, and spiritual well-being are used interchangeably. This lack of distinction exists because the concept has only recently been recognized and become the object of study (Kunsongkeit & McCubbin, 2002; Sermsin, Swangsri, & Sherpan, 2003; Wanaprueks, Bovornkitti, & Bovornkitti, 2004). Furthermore, spiritual well-being has been defined from various perspectives that are personally relevant to experience, beliefs, faith, religious beliefs, culture, and environmental contexts (Chiu et al., 2004; Meraviglia, 1999; Pincharoen & Congdon, 2003). Thus, spiritual well-being has a different meaning depending on the individual's perceptions, experiences and cultural contexts. In addition, many studies regarding spiritual well-being concept (Ellision, 1983; Hungelmann, Kenkel-Rossi, Klassen, & Stollenwerk, 1985, 1996) are relevant to the western culture, religion and context; there are only a few studies regarding eastern culture, especially regarding the Thai cultural context. This study will seek to further knowledge in this regard: spiritual well-being within Thai culture and context. Thus, qualitative study should be conduct to confirm conceptual and operational definition of spiritual well-being in this study.

2. Spiritual well-being instrument

Literature on the subject of spiritual well-being assessment has a few instruments and has not gained widespread acceptance (Power, 2006). In addition, spiritual well-being assessment tools have some limitations because some tools were

developed based on an assumption of religion, and were measured on some attributes of spiritual well-being. Furthermore, almost all of the instruments were constructed from the dominant conceptual framework in western culture, religion, and context, especially the Judeo-Christian tradition (Cella et al., 1993; Ellison, 1983; Gomez & Fisher, 2003; Hungelman et al., 1996; O'Brien, 2008). A review of the literature also indicates that there are instruments that are also used for assessing spiritual well-being in various groups of people, such as patients with cancer, persons with a disability, those with congestive heart failure, and individuals with other chronic diseases, but do not specifically address the elderly.

Only one tool of relevance is the JAREL Spiritual Well-Being instrument, which is used for measuring spiritual well-being in elderly populations (Hungelman et al., 1985, 1996). This instrument measures the concept of spiritual beliefs/ faith, purpose in life, lack of belief, and life satisfaction. However, in regards to the application of this tool, it is primarily used for assessing the spiritual well-being of students more than the elderly and has been administered almost exclusively in the western cultures. Another tool named Spiritual Well-Being Scale (Ellison, 1983; Paloutzian & Ellison, 1982) used to assess spiritual well-being in various groups of age, health status, acute and chronic disease. The last instrument is named Spiritual Assessment Scale (O'Brien, 2008) that used to assess spiritual well-being of patients with chronic illness.

Spiritual Well-Being Scale was developed by Paloutzain and Ellison (1982) that builds on work undertaken by Moberg (1979). This instrument measures 2 components that are religious well-being and existential well-being. The religious dimension focuses on one's relationship with God and the existential dimension focuses on life purpose and satisfaction.

Gomez and Fisher (2003) developed the Spiritual Well-Being Questionnaire that had four domains, the personal, communal, environmental, and transcendental domain. The personal domain deals with how one intra-related with oneself with regard to meaning, purpose and values in life. The communal domain is expressed in the quality and depth of inter-personal relationships, between self and others, and includes love, justice, hope, and faith in humanity. The environmental domain deals with enjoyment, nurture for the physical and biological world, including a sense of

awe, wonder and unity with the environment. The transcendental domain deals with the relationship of self with something or someone beyond the human level, such as cosmic force, transcendental reality, or God, and the source of mystery of the universe.

The Spiritual Assessment Scale (SAS) was developed by O'Brien (2008), which a standardized instrument which measures the construct of spiritual well-being. The SAS measures three subscales including personal faith, religious practices and spiritual contentment. This construction is based on the middle-range theory of spiritual well-being in illness. Thus, this tool was chosen to be used in the proposed study. However, content in this instrument emphasizes the Christian tradition, so it will need to be modified in order to be appropriately used for every religion in the Thai culture.

3. Spiritual well-being in elderly with chronic illness

The ageing phenomenon, the rapid increase in the proportion of the population 60 years of age and older, is a worldwide phenomenon (Jitapunkul & Bunnag, 1997; National Economic and Social Development Board, 2004; Skeldon, 1999). Certainly, Thailand must consider how to deal with the crisis posed by the ageing phenomenon. This phenomenon makes the elderly person confront several problem issues. Due to their vulnerable health, physical changes and deterioration, structural age-related changes, and changes in family roles and structures, elderly people are at greater risk of encountering health problems and face chronic illnesses and disability problems (Jitapunkul & Chayovan, 2001; Moriki-Durand, 2004). They also confront psychological and social problems (Moon, 2001; Moriki-Durand, 2004). Because the problems faced by elderly people occur frequently, and are associated with increased morbidity and mortality, this group of the Thai population is of particular interest in terms of their healing mechanisms and how they maintain and promote their health by enhancing their spiritual well-being.

Chronic disease refers to an illness with irreversible pathological change, often resulting in disability. These impacts of illness affect the body, mind, and spirituality (Greenstreet, 2006; Manning-Walsh, 2005). For patients, the suffering associated with chronic disease amplifies its incurability and may adversely affect physical function, psychology, spirituality, and social relationships. Disease causes an

ever-present state of radical change that may cause patients to alter their perspectives on life and living. Because the disease may eventually be fatal, patients often feel hopeless and helpless (Greenstreet, 2006; Narayanasamy, 2002). However, a very limited number of research studies address the spiritual well-being of patient with chronic illness.

One study, Lin, Gau, Lin, and Lin (2011) used meta-synthesis technique for exploring spiritual well-being in patients with rheumatoid arthritis from 675 empirical qualitative articles that was published between 1995-2009. They found the many benefits of spiritual well-being to people with chronic illness; spiritual well-being effects to attitude and external behavior on adaptation to disease, acceptance of physical obstacles and discomfort caused by changing and unpredictable symptoms of the disease, learning to live with the disease, integrating the disease into daily life, and achieving equanimity. Lin and Bauer-Wu (2003) used integrative review of 43 quantitative and qualitative studies, explored spiritual well-being in patients with cancer. This review found that spiritual well-being enhances patients to able cope more effectively with the process of terminal illness and find meaning in the experience. In addition, prognostic awareness, family and social support, autonomy, hope and meaning in life all contribute to positive spiritual well-being. Importantly, spiritual well-being helps to release emotional distress, anxiety, helplessness, hopelessness and fear of death in patients with chronic disease (Fehring et al., 1997; Pace & Stables, 1997). Consequently, enhancing spiritual well-being plays an important role to help patients with chronic illness deal with suffering and living with their symptoms as a normal life (Hogstel, 1995).

Spiritual well-being plays a number of important roles which can provide for and help elderly people to cope with their problems and to heal, protect, improve, maintain and promote their health and wellness (Chiu et al., 2004; Craig, Weinert, Walton & Derwinski-Robinsin, 2006; Fehring, et al., 1997; Fetzer, 1999; Koenig, 2004; Riley et al., 1998; Rippentrop, Altmaier, Chen, Found, & Keffala, 2005; Tate & Forchheimer, 2002). In conclusion, the enhancement of spiritual well-being is important to protect, promote, heal, and maintain the health of every person, particularly elderly persons who are confronted with health problems caused by aging degeneration, including the increasing vulnerability of health, physical changes and

deterioration (Fehring et al., 1997; Fetzer, 1999). Accordingly, there are many factors that influenced why this study is focused on the importance of spiritual well-being in the senior population group. First, older people are rapidly increasing in number and are becoming a larger part of the population around the world, which is referred to as the ageing phenomenon. Second, this group of people has many health problems, including physical, psychological, and social health problems, especially in terms of chronic illnesses and disability. Finally, spiritual well-being has an important role in helping older people meet the complex problems of their lives.

According the significance of problem, the researcher analyses about problem of definition of spiritual well-being, spiritual well-being instrument, and benefit effects of spiritual well-being to elderly person with chronic illness; summarizes follow:

1. Spiritual well-being is a multidimensional concept that involves the connection of a person within oneself, between a person and others, person and God/ Higher Being/ Supreme Being, person and nature/ environment, meaning and purpose in life, personal beliefs, self-transcendence and inner strength. Accordingly, contemporary instruments have generally measured some attributes that may not be ideal for measuring the concept of spiritual well-being.

2. Spiritual well-being is based on personal experiences, perceptions, beliefs, cultures and contexts, and most instruments are constructed via western traditions, cultures and contexts. This constitutes the one reason that the exits of spiritual well-being instruments are not totally appropriate for measuring spiritual well-being in the Thai culture and context.

3. There is one instrument that can be used to measure spiritual well-being of elderly people and there are a few instruments used to measure spiritual well-being of persons with chronic illnesses. However, these instruments are derived from the Judeo-Christian tradition, western culture, and western context. Therefore, in order to accurately assess spiritual well-being among Thai elderly with chronic illnesses, an instrument should be developed that fits this group.

4. There are no specific assessments or indicators of spiritual well-being in the Thai culture, especially in regards to elderly people and chronically ill persons.

Consequently, there are many reasons that the existing instruments may not be appropriate for measuring spiritual well-being in the Thai elderly population affected by chronic illness. In order to effectively measure the spiritual well-being of Thai elderly people with chronic illnesses within the Thai culture and context, it is necessary to develop an instrument that assesses spiritual well-being in this particular group.

## Significance of the study in nursing

The researcher anticipates that spiritual well-being assessment may provide knowledge base that is essential for current clinical practice, for theory development, for policy, for the education of nursing students, and, for future research. The conducting process the development of spiritual well-being assessment makes the researcher more understand about spiritual growth to have spiritual well-being within Thai culture and context, and provide the knowledge base of spiritual well-being of Thai elderly with chronic illness. Therefore, it is likely that such an assessment will be beneficial for chronically ill elderly persons in Thailand in order to assess level of spiritual well-being. After that, health professional can provide or enhance an appropriate of holistic care, especially, spiritual care to them. With respect to this phenomenon, the researcher expects that the findings of this study may provide benefits to both the discipline of nursing and to elderly people with chronic illness as follows:

In the nursing discipline, there are four important factors that need to be considered to understand patients' worldviews in order to provide effective services/ care, respect for patients' autonomy, the emergence of a strengths perspective, and the importance of grounding practice in professional ethics. Caring is an essential human need (Leininger & Watson, 1990) and the central unifying characteristic of nursing, providing the means through which the nurse interacts with the whole person. Quality care must include consideration of the spirit and must enable holistic integration of the patient's inner resources, so nursing requires knowledge base of spiritual well-being.

In terms of nursing practice, findings of the proposed research, especially the qualitative phase, can provide fundamental information and guidelines for nurses

and other health care professionals to understand person's spiritual well-being and is likely to help to improve the quality and effectiveness of holistic care. It is critical that professionals develop some understanding of patients' basic worldviews in order to provide effective, patient-centered services, also. Accordingly, a spiritual well-being assessment tool may be used to increase the quality of nursing care, especially spiritual care and palliative care in elderly persons with chronic illness, because nurses can use the instrument to assess the level of spiritual well-being that indicate status of spiritual health of chronically ill patients and tailor specific interventions for individual patients. Moreover, it can assess the effectiveness or quality of holistic care because assessing spiritual well-being by using instrument can represent nurses' respect for patient what those beliefs and values are. After the assessment, nurses can provide planning, implementation and evaluation of nursing care in relation to the level of spiritual well-being for an individual patient. Additionally, health professional should recognize the strengths that exist in faith-based cultures and should demonstrate competence and sensitivity in their service provision, and are ethically compelled to obtain education about religious diversity and the various forms of religious oppression people may encounter. However, it is difficult to comply with these ethical stipulations without the knowledge of a patient's spiritual beliefs and values. Thus, the knowledge base from the process of conducting a spiritual well-being instrument may enables helping professionals to comply with common ethical standards.

Within the framework of nursing education, the nursing student needs to be educated on how to deal with spiritual dimensions and should recognize patients' beliefs, culture, and behaviors (American Association of Colleges in Nursing [AACN], 1986). This ability is dependent on an understanding of a person's spirituality, and therefore nurses should develop an understanding of human values and embrace a personal philosophy that provides a foundation for personal and professional life. Moreover, a review of the literature showed that practicing nurses lack knowledge about spiritual care, and a survey study by Piles (1990) demonstrated that nurses agreed that spiritual care content should be included in every basic nursing program. The educational process for nurses should include correct identification of spiritual problems so that patients' spiritual needs are appropriately met to restore

spiritual well-being (Carson, 1989; Carson, Soeken, Shanty, & Terry, 1990; Miller, 1985; Stoll, 1989). These findings can be the guidelines in beginning to formally integrate undergraduate, graduate and advanced practice nursing curriculum/ programs both theoretically and practically in order to ensure competent performance of professionals and adequately prepare nurse generalists and advanced practice nurses to perform this role competently.

With regard to nursing research, construction of valid and reliable spiritual well-being assessment tools can provide new knowledge about the meaning/ definition, concept, and framework of spiritual well-being. Importantly, the proposed tool will be the first assessment tool that can be used for measuring spiritual well-being among the Thai elderly with chronic illnesses. However, it is likely that this tool will require several revisions. Such a tool will certainly aid in the conduct of nursing research in the future. In addition, this assessment measure will provide a support to educate nurses and others in regards to the spiritual needs, spiritual problems, and the spiritual care of those Thai elderly with chronic illnesses. A further outcome of the proposed research is that such study can provide suggestions for further research concerning development of interventions or spiritual care programs to enhance the spiritual well-being of elderly with chronic illnesses. It is hoped that this study will serve as a springboard to further the understanding of spiritual well-being with other groups in other settings.

In conclusion, the development and testing of a spiritual well-being assessment tool is beneficial for nursing research in Thailand. More importantly, there are many reasons for undertaking a spiritual well-being assessment that benefit elderly people. First, spiritual well-being affects the prognosis of an illness, so a valid and reliable assessment tool should help to predict how older persons will cope with illness. Second, spiritual well-being is an important part of older persons' life experiences, so they will need to work through the impact of their illness using their belief systems to discover meaning. In addition, the assessment of spiritual well-being is of interest because it uses patients' strengths to address and overcome problems: research indicates that spiritual well-being is often a significant strength, and it becomes more prominent during difficult times. In order to enhance patients' strengths, professionals must have an understanding of the strengths that animate their

patients' lives. Thus, conducting a spiritual well-being assessment provides a framework for eliciting patients' spiritual strengths. Third, spiritual functioning is dynamic, so monitoring spiritual reflections shows how older persons are progressing and adjusting to their illness. Finally, spiritual well-being assessment can give indications about suitable interventions to treat problems. Therefore, a spiritual assessment tool can help elderly persons to care for their health on their own, which involves the promotion, protection, maintenance, and improvement of their health. Furthermore, elderly people may receive enhanced care from health practitioner and nurses. For elderly persons with chronic illnesses, the spiritual well-being assessment can indicate problems in their spiritual health so they might receive suitable care or interventions in order to enhance spiritual well-being. As a result, such a measure and resulting interventions will likely promote improved health outcomes for this group.

## The purpose of the study and research questions

The main purpose of this study was to develop an assessment tool to measure spiritual well-being in Thai elderly persons with chronic illnesses. The specific objective was to examine the psychometric properties of the instrument, including internal consistency reliability, content validity and construct validity. Therefore, this study was divided into two phases, including both a qualitative phase and a quantitative phase.

**Phase I: Qualitative phase**

The purpose of phase I was to confirm the conceptual framework of the study, which was based on the middle-range theory of spiritual well-being in illness. Because this theory was not used in the Thai culture and context, and spiritual well-being was perceived by Thai older with chronically ill persons as important, some issues may be different from the theoretical framework. Accordingly, the conceptual framework in this study should be confirmed by using a qualitative approach. Research questions in this phase consist of:

1. What was the meaning of spiritual well-being as perceived by Thai elderly persons with chronic illnesses?
2. How was spiritual well-being related to the health of a Thai elderly person with a chronic illness?

3. How did Thai elderly persons with chronic illnesses find spiritual meaning in the experience of their illness?

**Phase II: Quantitative phase**

The purpose of Phase II was to develop items and test psychometric properties of a spiritual well-being assessment tool for Thai elderly persons with chronic illnesses. Research questions in this phase consist of:

1. Did the measurement tool adequately capture the dimensions and manifestations of spiritual well-being of Thai elderly persons with chronic illness?
2. How accurate of the assessment tool measure the spiritual well-being for Thai elderly persons with chronic illness?
3. Did the effective of constructed assessment tool assess the spiritual well-being of Thai elderly persons with chronic illnesses?

## Theoretical framework: The middle-range theory of spiritual well-being in illness

O'Brien (2008) constructed the middle-range theory of spiritual well-being in illness. This theory is grounded in the belief that human beings are holistic persons composed of body, mind, and spirit, and that they have spiritual needs. It is based on the belief that the human person, who is a spiritual being, has the ability to transcend. The theory was derived from earlier conceptualizations in the area of spiritual well-being, in which a central focus of the framework is the concept of finding meaning in the experience of illness. It was inductively derived and concretized through a number of nursing studies exploring the importance of spiritual well-being in coping with illness and disability.

The concept of spiritual well-being in this theory is comprised of two dimensions. The first dimension is one's personal relationship with God or the transcendent; the second dimension is religiosity that reflects an individual's practice of faith beliefs. A diagrammatic model of the theory of spiritual well-being in illness is presented in Figure 1 to identify that a sick or disabled individual's ability to find spiritual meaning in an experience of illness or suffering is perceived as being influenced by his or her spiritual and religious attitudes, beliefs, and practices,

including personal faith, spiritual contentment and religious practice concepts. Thus, the foundational premise of this theory is that an ill person has the ability to find spiritual meaning in the experience of illness. This can ultimately lead to an outcome of spiritual well-being for the sick person.

The capacity to find spiritual meaning in an occurrence of illness or suffering is influenced by personal, spiritual, and religious attitudes and behaviors. These attitudes and behaviors include variables related to personal faith, spiritual contentment, and religious practice. Thus, empirical referents of spiritual well-being are conceptualized in terms of personal faith, spiritual contentment and religious practice.

Personal faith refers to belief in God, peace in spiritual and religious beliefs, confidence in God's power, strength received from personal faith beliefs, and trust in God's providence. An ill person's faith not only consists of whether or not he or she believes in the existence of a God/ Supreme Being, but also of his or her trust in the power and goodness of God's care, a sense of peacefulness about these beliefs, and the courage and strength derived from them. Personal faith is critical to whether the individual will be able to identify and/ or accept an illness experience as having a spiritual dimension (O'Brien, 2008).

Spiritual contentment refers to satisfaction with faith, a feeling of closeness to God, lack of fear, reconciliation, and security in God's love as well as faithfulness. An ill person may indeed believe in a God's/ Supreme Being's existence, his power, his care for all of humankind (O'Brien, 2008).

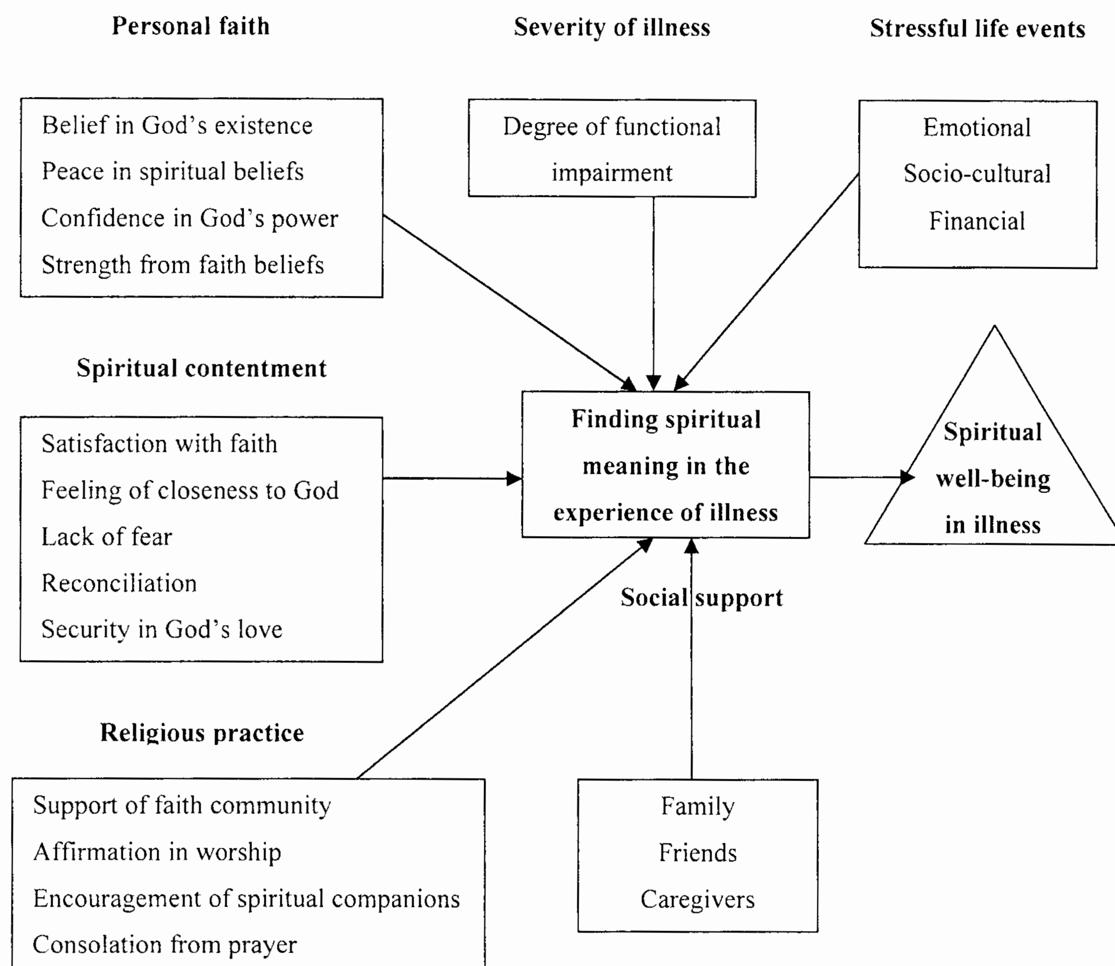


Figure 1 Theoretical framework: The middle-range theory of spiritual well-being in illness (O'Brien, 2008)

Religious practice refers to support of a faith community, affirmation in worship, encouragement of spiritual companions, consolation from prayer, and communication with God through religious practices. Religious practice may not be necessary for somebody to find spiritual meaning in illness or disability, but coping with illness can be greatly facilitated if a sick person has the support of such devotions as prayer or spiritual reading. The encouragement of a faith community with whom one may occasionally share worship or whose members pray for sick parishioners during communal worship services and/ or guidance of a pastor or spiritual companion can also be a very comforting spiritual support in times of illness and suffering (O'Brien, 2008).

In the diagrammatic model, there are a number of potentially encouragements of a faith community with whom one may occasionally share worship or whose members pray for sick parishioners during communal worship services and/ or guidance of a pastor or spiritual companion can also be a very comforting spiritual support in times of illness and suffering. These variables include severity of illness, social support, and stressful life events. Severity of illness is defined as the degree of functional impairment. Social support is concerned with the support of family, friends, and/ or caregivers. Current stressful events may be of emotional, socio-cultural, and/or financial origin.

## Initial conceptual framework

In this study, the researcher constructed initial conceptual framework of spiritual well-being for Thai elderly with chronic illness by integrated the synthesizing from literature reviews including a concept analysis, integrative reviews, critical analysis of spirituality and spiritual well-being, as well as findings of qualitative and quantitative research and compared with the middle-range theory of spiritual well-being in illness (O'Brien, 2008).

From a systematic literature review, no one research of a concept analysis of spiritual well-being. Only found a concept analysis of spirituality by Burkhardt (1989) and Kunsongkeit and McCubbin (2002), and a study of critical review of this concept by Chiu and colleague (2004) as well as Meraviaglia (1999). However, Ellison (1983) who developed Spiritual Well-Being Scale follows definition of spiritual well-being of Moberg (1971). He defined spiritual well-being consists of existential well-being and religious well-being. Existential well-being measures how well people relate to each other, if they have a purpose or meaning in life, and if they have a sense of life satisfaction. Religious well-being measures well-being that comes from a relationship with God. Stoll (1989) defined spiritual well-being as a behavioral expression and perception of life experience which influences personal faith, religious belief, and relationships with others, and God or Supreme Being. Thus, individual spiritual well-being is determined by aspects of life that are deeply personal and specific, such as values, beliefs and relationships. Paloutzian and Ellison (1982) provided a conceptualization of spiritual well-being that has two basic dimensions: the personal

relationship with God and a person's perspectives that include social relationships, a sense of personal life satisfaction, and a meaning and purpose in life.

The sense of wholeness is easily threatened by illness, loss, disruption of lifestyle, or the continuous changes that occur with aging. As the individual ages, there are increasing more life experiences, both positive and negative, upon which one can reflect and explore the meaning of one's life. Accordingly, Brook (1987) defined that spiritual well-being comprises four characteristics: 1) life experiences of several decades that have a unique meaning to the individual; 2) an inner life that allows wholeness and integration of the self; 3) long-term relationships with family, friends, and communities; 4) multiple, gradual changes in the biological, psychological, and social domains. Hungelmann, Kenkel-Rossi, Klassen, and Stolenwerk (1985, 1996) defined the concept of spiritual well-being in older adult as a sense of harmonious interconnectedness between others, self, nature, and ultimate other, achieved through the growth process, which leads to a realization of the ultimate meaning and purpose in life.

In Thailand, Pilaikiat, Fongkaew, Plianpadoong, and Tongprateep (2003) performed a qualitative study to explore spiritual well-being in persons that are HIV/ AIDS positive. The findings indicated that the components of spiritual well-being consist of happiness, a peaceful mind, mindfulness, loving kindness-compassion, and inner strength. Spiritual well-being in Thai people is based on a Buddhist tradition that provides spiritual guidelines. Thai people practice according to the teachings of Buddha, perform Buddhist activities, and follow the rituals of traditional cultural practices. Factors that affect spiritual well-being consist of both positive and negative factors, including hope, acknowledging one's condition, accepting this as a fact of life, fostering self-esteem, social support, maintaining positive attitudes, weakness of mind, income, and experience of the past, personality, family history, and health status.

A sense of connectedness with oneself and other persons refers to respect for oneself, having confidence in oneself, and having a relationship with family members, friends, and other respected persons. In the Thai culture, the strength of family bonds creates a relationship of love, caring, concern and understanding among members of the family (Kunsongkeit et al., 2004; Tongprateep, 2000). Other persons provide

social support when they have life problems. Friends or respected persons can make elderly individuals in Thailand feel better when they are suffering and can facilitate happiness, comfort, joy and cheer, as well as safety. In addition, participants believed that the power of a respected person can provide strength to protect them from dangerous things. In conclusion, from an eastern perspective, the connection with all of one's life, and especially religion, is important to the construct of spiritual well-being in Thai elderly people, but it does not emphasize meaning in life or finding meaning in life.

From a synthesis of available literature, it can be concluded the concept of finding spiritual meaning in one's experiences is focused on a central as well as a middle range theory of spiritual well-being in illness (O'Brien, 2008). The capacity to find spiritual meaning in an occurrence of illness or suffering is influenced by personal faith, including religious beliefs and beliefs in Higher Being/ Supreme Being/ Ultimate values, connectedness including a personal relationship with God/ Supreme Being, oneself, other persons, and nature and transcends relationships and religious practices. Although some concepts have different names, the meaning is the same, so the researcher has concluded that the core concepts that constitute spiritual well-being are the same as the middle-range theory of spiritual well-being in illness. In addition, other concepts, including severity of illness or health status, social support and stressful life events or life experiences, are also important factors that influence meaning in life and spiritual well-being. Finally, the researcher has summarized a middle range theory of spiritual well-being in illness that can be used to develop a spiritual well-being assessment tool for Thai elderly persons with chronic illness. However, as the proposed research unfolds, it is likely that each key concept should be examined to ascertain a central meaning that does not predominant any one religion.

In conclusion, based upon synthesized literature reviews, the definition and conceptualization on finding meaning in life or finding spiritual meaning was determined to be a central focus of spiritual well-being. The factors or components that influence the process of finding meaning in life are life experiences, especially multiple gradual changes toward the aging process in elderly people, the ability to integrate wholeness by an inner power of life, connectedness/relationship with self,

others, communities, nature, God/Supreme Being, transcendent relationships such as virtues, ultimate values or morality, and behaviors and feelings that express the existence of love, faith, hope and trust.

Consequently, the initial conceptual framework of spiritual well-being of Thai elderly with chronic illness that the researcher constructed by integrating the finding of synthesize literature reviews and compared with the middle-range theory of spiritual well-being in illness consisted of 5 components: 1) personal faith, 2) religious practices, 3) spiritual contentment, 4) the finding of spiritual meaning, and 5) spiritual well-being.

**1. Personal faith**

Personal faith has two sub-concepts including religious beliefs and beliefs in a Higher Being/ Supreme Being. All people have some basic beliefs, and spirituality can be expressed through a belief system and faith in each person. However, belief in the meaning of spirituality is not limited to one set of religious beliefs, though all beliefs have a driving force to give meaning in the life of the individual (Banks, Poehler, & Russell, 1984; Dossey et al., 1995; Emblen, 1992). Dyson et al. (1997) stated that both religious and non-religious belief systems comprise an individual's belief system that enables persons to have meaning and hope, and helps to explain meaning in life. Faith is the belief in and assents to God or a Supreme Being that can be seen as positively affirming life. Faith represents more than just belief; it includes having a trusting relationship with God or a Supreme Being that provides a basis for meaning and hope in life (Emblen, 1992; Haase, Britt, Coward, Leidy, & Penn, 1992). Thus, these beliefs shaped a person's thinking patterns and practices in daily life that do good or bad actions, and are bound to bring about effects not only in the present life but also in future lives. Furthermore, those beliefs were the foundation of concern for the persons to proceed towards the ultimate goal in life (Kunsongkeit & McCubbin, 2002; Meraviaglia, 1999, Tanyi, 2002). Consequently, elderly persons who respected and believed in religion, nature and supernatural powers reported that these beliefs affected their life and health because they have feeling of easiness and comfort, peace in mind, and safety in lives. Therefore, persons who had a belief in religion, nature and supernatural power, oneself, and other persons providing the feeling of support, comfort, peace, happiness, and security in their life.

1.1 Religious beliefs

Religious beliefs may be the most essential cultural factor that constitutes human experiences, beliefs, values, behaviors and illness perceptions (Lukoff et al., 1995). Furthermore, individual beliefs are culturally determined, and affect health and self-care practices (Hjelm, Bard, Nyberg, & Apelqvist, 2003). Pincharoen and Congon (2003) and Tongprateep (2000) study spirituality in Thai elderly person, findings showed that religious beliefs among Buddhists included a belief in the law of karma and life after death, and these Buddhist beliefs shaped persons' thinking patterns and practices in daily life. Buddhists believe that good or bad actions are bound to bring about effects, not only in the present life but also in future lives. Therefore, these two beliefs were foundational for a person to proceed to the ultimate goal in life. After they had realized the law of karma from those life experiences, pilot study participants tried to develop meritorious actions, such as doing no harm to others by words or by bodily actions. The participants hoped that if they accumulated meritorious acts in their lives they would get good results both in this life and in the next. Accordingly, religious beliefs and practices help Buddhist people understand the notion that life is processed under the law of karma. This understanding also helped them to remain calm in the face of difficulty or suffering in life. Meritorious acts and other religious practices served as a means to release them of fear, anxiety, and disappointment in life.

1.2 Belief in a supernatural power, and higher being/ supreme being/ ultimate values

Spiritual well-being of the individual goes beyond religious affiliation, striving for meaning, purpose, truth, harmony, wholeness, wisdom, and transcendence, even though an individual may not be religious or have particular religious beliefs (Banks et al., 1984; Dossey et al., 1995; Emblen, 1992). Therefore, human spiritual well-being can be addressed both within and outside the context of religion (King, Speck, & Thomas, 1994; Moberg, 1971). Persons that are non-religious have an individual belief system as well. Faith is a belief in a higher transcendent power, not necessarily defined as God and not necessarily achieved through the rituals or beliefs of an organized religion (Brady, Peterman, Fitchett, Mo, & Cella, 1999). In Thailand, the belief in natural and supernatural powers refers to believing in

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a higher power that is intangible and invisible, such as a sacred thing or worship. It consists of unseen forces that have an influence on people's lives and health. Belief or faith and respect in this supernatural power made their pilot participants lives safer in regards to daily living. The supernatural things were described as ghosts (phi) or guardians (chao thi). People believed that these things could affect their lives in good or bad ways. They expressed their belief in worshiping supernatural things by offering food, praying for respect and asking for better things in this life and later life, wealth, happiness, good health, improvement of an illness and protection (Pincharoen & Congon, 2003; Tongprateep, 2000). In addition, participants also expressed their beliefs by asking for assistance from a higher power after they acted in meritorious and virtuous ways, give alms, and pray.

**2. Religious practices**

Religious practices may assist people in finding or creating a personal meaning that can help make sense of an illness (Beery et al., 2002; Mickley, Soeken, & Belcher, 1992). Religious groups offer members a complex set of beliefs regarding a god/ supreme being, ethics, human relationships, and life and death, beliefs, which are directly relevant to health. Subjective beneficial effects of participating in religious services, prayer, and Bible reading plays a role in strengthening religious beliefs systems that lead to having a strong religious faith, and being happier and more satisfied with their lives (Fetzer, 1999). In Buddhism, study of Pincharoen and Congdon (2003) and Tongprateep (2000) can summarized that people believe in the law of karma and life after death, they try to be meritorious in various ways. Buddha prescribed the ways in which to act to bring about the desired effect or the attainment of Nirvana. The main objective of merit-making is to eliminate selfishness and greed. In order to achieve good results according to Buddhist doctrine, people engage in all kinds of meritorious acts and must practice religion on their own. They base their religious practices on those of their ancestors, who taught them about Buddhist rites. They go to the temple (Wat) and practice all kinds of meritorious acts that are convenient for them, including the arrangement of merit-making ceremonies, observance of moral precepts or self-restraint, and mind development or meditation. They offer food to the monks at the Wat, listen to special sermons and observe additional precepts. After those activities, they may experience happiness and peace

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of mind. Thai laity observes five moral Buddhist precepts. They can develop other meritorious acts in their own home for example sharing merit, rejoicing in others' merit, or practicing meditation. These religious activities can facilitate the person's spiritual contentment.

**3. Spiritual contentment**

Spiritual contentment, the opposite of spiritual distress, is the spiritual peace that indicates satisfaction with faith, a feeling of closeness to God, lack of fear, reconciliation, security in God's love, and faithfulness (O'Brien, 2008). For eastern traditions, spiritual contentment is a state of peace, happiness and satisfaction with life. Contentment is not the fulfillment of what we want, but the realization of how much we already have. Accordingly, this concept consists of connectedness, harmony/ wholeness, and self-transcendence. Connectedness is a person's feel to relate to/ be close to a God/ Supreme Being, oneself, others, and nature, which expresses a feeling of security in life, peace of mind, lack of fear, faithfulness, and hopefulness. Harmony/ wholeness is the person's feel to integrate all aspects (mind-body-spirit) of a person's life and expresses the existence of happiness in life. Self-transcendence is expressed by demonstrating the existence of love, compassion, reconciliation, and life satisfaction. This concept is a little different from O'Brien's Theory that based on Judo-Christian religion only by adding happiness in life and self-transcendence.

3.1 A sense of connectedness

Spiritual well-being is frequently expressed and experienced through a sense of connectedness with all of life. A sense of connectedness is the essential element of spirituality and is basic to exploration of spirituality in life because it enhances one's inner resources, reveals wholeness in oneself, and motivates the person's spiritual development. Connectedness is described in terms of a person's life and actions as they relate to a god/ supreme being, to oneself, other people, and to nature (Burkhardt, 1989; Dyson et al., 1997; Meraviglia, 1999; Tanyi, 2002). The recognition and acceptance of a connection or relationship between the self, others, the world, and an ultimate other is often achieved through reflective self-examination and growth that can occur in the search for meaning (Hungelmann et al., 1996). Therefore, persons who have connectedness with all aspects of life can provide

comfort, happiness, peace of mind and at the time of death, safety and well-being (Burkhardt, 1989; Chiu et al., 2004; Craig, Weinert, Walton, & Derwinski-Robinson, 2006; Kunsongkeit & McCubbin, 2002; Tongprateep, 2000). Furthermore, this connectedness gives people's lives more meaning and purpose and leads to having inner strength that can be used to cope with problems such as suffering, pain, misery, anxiety, and symptoms of illness

In Thailand, Kunsongkeit et al. (2004) explored the meaning of spiritual health in Thai persons. Connectedness is having adherence to a religion, having relationships with self, other people such as family members, friends, and other persons and having a belief in a supernatural power were all noted. A sense of connection with religion is reflected through the person's belief/ faith in religion, adopting a religious doctrine, and practicing religious activities. A sense of connectedness with oneself and other persons refers to respect for oneself, having confidence in oneself, and having a relationship with the participants' family members, friends, and other respected persons. These relationships provide and secure a feeling of support, comfort, peace, happiness and safety in a person's life. Moreover, persons in the Kunsongkeit study stated that these connections lead to having inner strength for coping with life problems such as suffering, pain, misery, and anxiety.

In the Thai culture, the strength of family bonds creates a relationship of love, caring, concern and understanding among members of a family. For friends and neighbors, family can support and understand persons who have problems and are suffering, and help them feel happiness, comfort, joy and cheer, and safety. In addition, the person's faith in respected persons such as ancestors, monks and the Royal family supported the belief in those persons' goodness and their power to protect participants from dangerous events and objects. Accordingly, social supports including friends, family members and persons in the community were important to affect the development of a person's spiritual well-being.

3.2 Harmony/ wholeness

Harmony or wholeness is the person's feeling to reach to integrate all aspects (mind-body-spirit) of a person's life and expresses the existence of happiness in life. Hungelmann et al. (1996) addressed the notion that a person who has harmony/

interconnectedness in regards to all aspects of life can achieve reflective self-examination which can help in the search for meaning in life. Happiness in life is a feeling of complete contentment in one's life, comfort that is related to life experiences, the quality of one's society, freedom from fear and prejudice, and belief in a god/ supreme being (Veenhoven, 1997). Accordingly, happiness results from being satisfied with one's personal, family and social life, and having a meaningful life and can then serves as a power for living. Power for living refers to inner energy that encourages a person to cope with their life's problems and wishes or desire to continue living. Thus, the person who is capable of having a wholly integrated mind, body and spirit has a sense of happiness. It refers to the feeling of absolute contentment in all of things in life at the present time and is caused by having life satisfaction, a peaceful mind, mindfulness, loving kindness, compassion, and mental strength. Furthermore, people stated that happiness increased when they practiced religious activities, and meditation, performed meritorious acts, felt satisfaction with their lives at the present time, and helped/ supported other persons and saw happiness in other persons (Pincharoen & Congdon, 2003). Accordingly, persons used their religion to cultivate harmony of mind, body, and spirit (Pincharoen & Congdon, 2003), so these practices arose from a person's holistic integration of mind, body, and spirit.

3.3 Self-transcendence

Transcendence is an essential feature of spiritual well-being that refers to a level of awareness through which a person achieves new perspectives and experiences that exceed ordinary physical boundaries. Transcendence is described as reaching beyond personal boundaries and attaining a wider perspective, which facilitates finding meaning in life's experience (Coward, 1991, 1996). Transcendence is inspired by the desire go beyond the self, as it is delimited by the material and the concrete aspects of living, to expand self-boundaries and life perspectives. It embodies aspects of belonging, connecting, giving life, holding commitments, struggling and surrendering the ego, turning inward and becoming free. Transcendence is a developmental and evolutionary process of integration and inclusion into a greater wholeness (Chui et al., 2004) and is expressed by the existence of self-less love, compassion, caring, reconciliation and life satisfaction.

**4. Finding spiritual meaning in the experience of illness**

Meanings are individual and people who are relevant to the person's experiences, events, expectations, belief systems, and core values. Meaning in life is a major component of spirituality. It is the person's ability to search for relationships and situations that give him or her sense of worth and a reason for living (Burkhardt, 1989; Craig et al., 2006; Oldnall, 1996; Tanyi, 2002). In addition, meaning in life is one's view and behaviors in the search for meaning in life as a person needs to find the answers to ultimate questions about the meaning of life, illness, and death. Kunsongkeit et al. (2004) stated that having a meaningful life refers to one's self-esteem and having pride in oneself. Having self-esteem is valuable to oneself and others, and having pride in oneself refers to the feeling of pride and honor, which results from using one's abilities and doing good deeds. Chronically ill and disabled individuals revealed that one finds meaning in life and made sense of suffering once they embody a sense of spiritual awareness. This awareness made them hopeful, and their connection to a higher power provided a source of support in their lives (Tanyi, 2002). Frankl (1992) described that there were 4 basic sources of meaning in life, including creativity, experience, attitude, and the historical context of meaning in one's self. Creativity refers to the satisfaction of work and accomplishments, good deed and dedication to causes greater than one's own personal concerns. Experience refers to relationships with loves ones, love of nature, beauty, art, and music. Attitude refers to the attitude one takes towards suffering and existential problems. The historical context of meaning in one's self refers to the importance of legacies past, present and future.

**5. Spiritual well-being in illness**

A sense of well-being refers to the notion of finding harmony through a healthy mind and body. The character of a person's wellness or health is the person's expression of finding harmony in the mind and body. A healthy body allowed Thai elderly to complete their activities of daily living that caused happiness and peace of mind (Kunsongkeit et al., 2004; Tongprateep, 2000, 2004). Spiritual well-being as perceived by elderly Thai persons with chronic illnesses is a sense of happiness. It helped them focus on the present and forget their problems by balancing their lives

with physical exercise, self-improvement, mental well-being, and a feeling of self-worth within their families and communities.

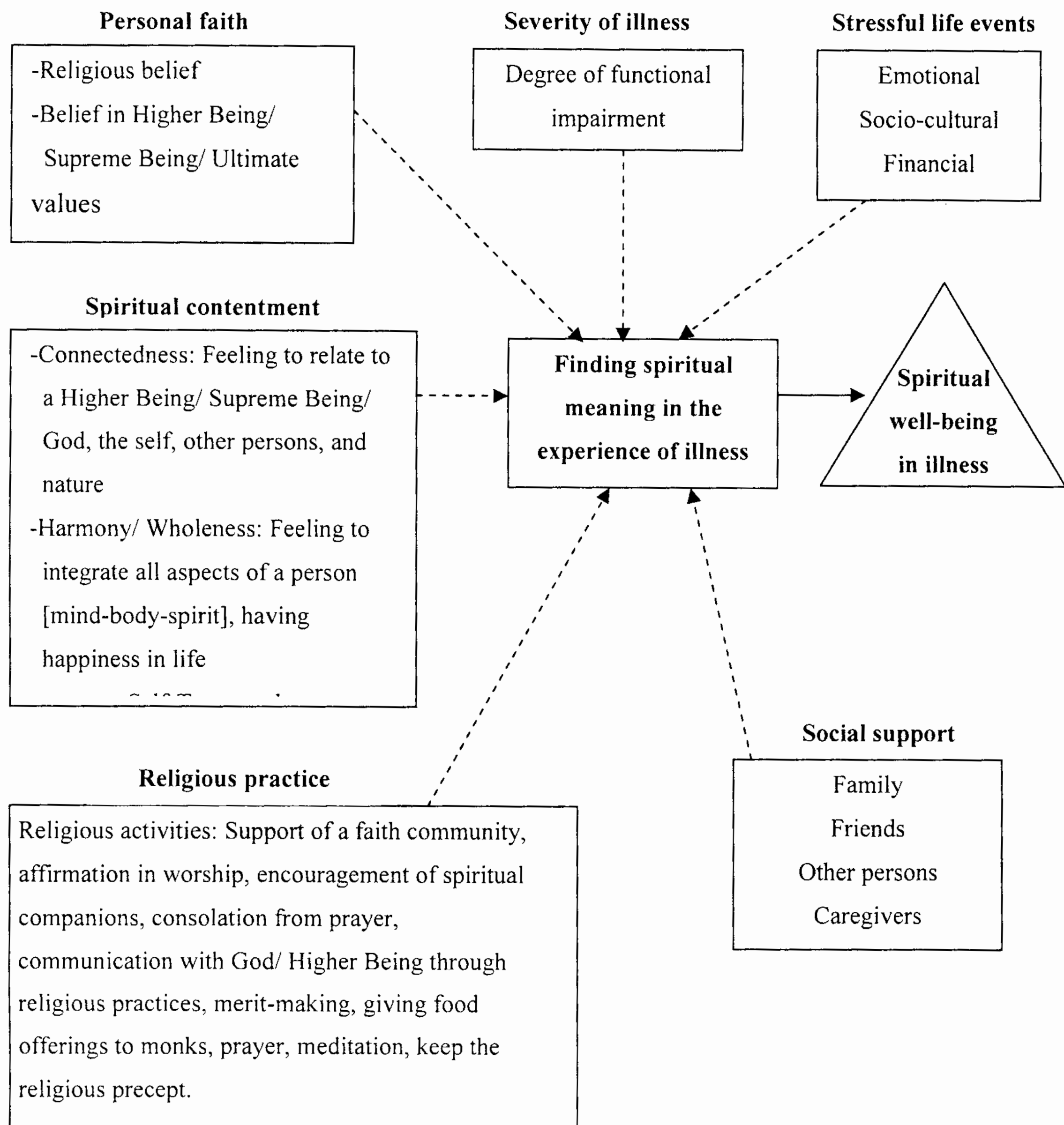



Figure 2 Initial conceptual framework of this study based on integrated the synthesize of literature reviews and compared with the middle-range theory of spiritual well-being in illness

*** Dash line indicated concepts in rectangle frame that not measured in this study

## Initial conceptual and operational definition of spiritual well-being

### Conceptual definition

Spiritual well-being is an experience of achieving harmonious interconnectedness, peace and acceptance within all dimensions of existence and progressing through the different developmental stages and experiences of life.
It refers to the notion of finding harmony through a healthy mind and body.
The character of a person's wellness or health is the person's expression of finding harmony in the mind and body. A healthy body allowed older Thai persons to complete their activities of daily living that caused happiness and peace of mind.

### Operational definition

Spiritual well-being is identified as behavioral expressions of spiritual health and spirituality. As an initial operational definition, spiritual well-being was defined as having happiness in life, having a purpose in life, having life equilibrium, having passion for life, and having an effective way to coping.

# CHAPTER 2
# LITERATURE REVIEWS

This chapter presented a review of literature on the ageing population in Thailand. Additionally, their problems, the definition and concept of spirituality and spiritual well-being, a middle range theory of spiritual well-being in illness, spiritual well-being assessment tools, and the empirical literature about the importance of spiritual well-being and health/wellness are considered. The purposes of this literature review were to assist in developing conceptualization relevant to the proposed study, provided information on the significance of this problem and the state of knowledge about spirituality and spiritual well-being, and to consider an initial conceptual framework for this research. Therefore, the major parts were presented as follows:

1. Current status and problems of the ageing in populations with chronic illnesses
2. Synthesis of the definition and concept of spirituality, spiritual health and spiritual well-being
3. The importance of spirituality to the human being and human health
4. The importance of spirituality to physical and psychological health
5. The importance of spirituality to aging health and the chronically ill person
6. The importance of spiritual well-being
7. Synthesis of Buddhist, Islamic, and Catholic spiritual well-being
8. Synthesis of spiritual well-being assessment tools
9. A middle range theory of spiritual well-being in illness

## Current status and problems of the ageing populations with chronic illnesses

The first part of this literature review presented current information on the ageing population including two issues. These issues included the definition of ageing, and the situation of the ageing population in Thailand, including the rapid increase in numbers in the aging population and the problems experienced by those

who are elderly. The area to be considered was the definition of ageing. This research focuses on studies in Thailand, so the definition of ageing was drawn from Thailand's Act on Aging (2006). It stated that ageing, elderly, or the older population of persons included those who were over 60 years of age and over. Furthermore, the ageing group could be sub-divided into three groups, the young old (60-69 years), medium old (70-79 years), and oldest old (over 80 years) (Sritunyarat & Arunsang, 2002).

Ageing is a worldwide phenomenon, affecting the developed and developing world (Moon, 2001; Moriki-Durand, 2004; Skeldon, 1999). The crisis of the ageing phenomenon in society is indicated by two points. The first point is that the proportion of people, who are over 60 years of age, exceeds 7 percents of the total population. The second point is that the speed of increase within the ageing population is rapid, more than twofold (College of Population Studies, Chulalongkorn University, 2001 cited in Sritunyarat & Arunsang, 2002). According to two indicators within current Thai legislation, Thailand is the one nation that confronts the crisis of ageing phenomenon; this crisis is explained in the second issue. The second issue presented in Thai literature and legislation has considered the increasing number of the aged and their problems. There are three situations that affect the increase in the number of ageing people in Thailand. These situations include the remarkable gain in life expectancy at birth (Moon, 2001; Prasartkul & Rakchanyaban, 2002), the decrease in the total fertility rate, (Prasartkul & Rakchanyaban, 2002) and the decline in the mortality rate (Institute for Population and Social Research, Mahidol University, 2007). Moreover, these factors are interrelated and impact the ageing phenomenon.

The remarkable gains in life expectancy at birth, in largely attributable to the rapid decline in fertility rates and decline in mortality rates at old age (Institute for Population and Social Research, Mahidol University, 2007). The life expectancy at birth increased from less than 60 years in 1960-1970 to 65 years in 1980-1985, and increased from 68 and over 70 years from 1995 to the present (Jitapunkul, Kunanusont, Phoolcharoen, Suriyawongpaisal, & Ebrahim, 2003; Prasartkul & Rakchanyaban, 2002). Moreover, the life expectancy at birth is projected to continue to increase over the next 50 years and is likely to approach 80 years of age. Moreover, for life expectancy at age 60, has been gradually increasing from 15.7 years to 19.3

years of remaining life for the elderly (Prasartkul & Rakchanyaban, 2002). In addition, the total fertility rate of Thailand decreased from six to five births per woman from 1965-1970, down to 3 births per woman from 1980-1985, and down to 1 birth per woman from 1995-2000 (Gajeena, 2004; Prasartkul & Rakchanyaban, 2002). Accordingly, Thailand is the one country that is home to a rapidly ageing population and a shift in the population structure from young to old (Prasartkul & Rakchanyaban, 2002). This trend is expected to rise dramatically over the next decade (Skeldon, 1999). Therefore, Thailand is currently experiencing rapid rates of population ageing, which is similar to other parts of the world (Moriki-Durand, 2004; Skeldon, 1999).

Many reports and much research from a variety of institutes (Jitapunkul & Chayovan, 2001; Prasartkul & Rakchanyaban, 2002) focusing on population issues had demonstrated that the proportion of the ageing population is rapidly increasing. In 1970, the proportion of people aged 60 and over was just under five percent. After that, it increased from seven to 7.4 percents in 1990 and from eight to 9.2 percents in 2000. The next 10 years saw an increase from 10.8 to11.9 percents and an increase from 15 to 20 percents in 2020-2025. Furthermore, the expected latest report states that it will increase from 24 percents in 2040, and comprise from 28.1 to 29.6 percents in 2050 of the total population. In addition, the United Nations projections showed that the number of people at a very old age (80 years and over) will be rapidly increasing in the future (Skeldon, 1999). Accordingly, Thailand has experienced the ageing phenomenon since 2004 and is facing the crisis of the aging phenomenon by the year 2020. Consequently, this ageing phenomenon led to several problems in many countries, including Thailand. Such problems consisted of physical health problems, mental health problems and social problems that include many factors that influence these problems (Jitapunkul & Chayovan, 2001; Jitapunkul, Kunanusont, Phoolcharoen, Suriyawongpaisal, & Ebrahim, 2003a; Moriki-Durans, 2004; Prasartkul & Rakchanyaban, 2002).

**1. Health problems**

**1.1 Physical health problems**

Physical appearance and body functions of these elderly persons were significantly changed from the earlier ages and had deteriorated, including the impairment of the organ systems and the immune system. As a result of all these

changes, a large number of elderly people suffer from chronic or longstanding illnesses (Jitapunkul et al., 2003a; Moon, 2001). Furthermore, old age often accompanied by psychological changes, such as memory loss, less motivation to learn new things, stress and depression resulting from both physical changes and deterioration (Moon, 2001). Accordingly, elderly populations with a long life expectancy are likely to see an increase in the prevalence of chronic diseases and disability well into the future (Jitapunkul et al., 2003a; Moriki-Durans, 2004; Prasartkul & Rakchanyaban, 2002).

At an international meeting in 2001, research by the Institute of Geriatrics, Ministry of Public Health, Thailand showed that older people suffer from chronic diseases, including back pain (68%), arthritis (40%), hypertension and gastric ulcers (22%), coronary artery disease (13%), cataracts (11%), and other diseases (National Economic and Social Development Board, 2004; Moon, 2001). Major health problems of Thai elderly people consist of chronic illnesses, which affect about 80 percent of this group (Moriki-Durand, 2004; Prasartkul & Rakchanyaban, 2002). Not only chronic disease, but also disability was a major problem for elderly people, particularly activities of daily living (ADL) problems. More importantly, the prevalence of disability was a relevant problem for an elder person suffering from chronic diseases (Moriki-Durand, 2004; Prasartkul & Rakchanyaban, 2002). The proportion of elderly people with ADL problems significantly increased with advancing age. A study conducted by Prasartkul and Rakchanyaban (2002) found that 2.7 percents of people aged 60 to 69 had functional limitations with ADLs, a number that increased to 6.9 percents for those aged 70 to 79, and increased again to 13.7 percents for those aged 80 to 89; finally, this number increased to 50 percents of elderly people who were 90 years old and over. In addition, 14 percents of Thai people aged 80 and over were not able to take care of basic personal needs by themselves.

**1.2 Psychological, social and financial problems**

The increase in the older population in Thailand affects the changing age structure that reflected the problem of old-age dependency ratios. Old-age dependency ratios referred to the ratio of the population aged 60 years and over in proportion to the working population 15-59 years old. This is primarily a demographic index,

indicating the working populations support for the elderly group (Jitapunkul et al., 2003a; National Economic and Social Development Board, 2004). In Thailand, the old-age dependency ratios in 1990 increased to 11.3 in rural areas, and 9 in urban areas, showing a trend towards an increase to a level of 13.6 per 100 working-age individuals in 2000, and 14.7 per 100 working-age individuals in 2003 (National Statistical office, 2004). According to population projections reported by the United Nations, after 2026, the old age dependency ratio in Thailand will be higher than it has been in the past, and will tend to dramatically increase by 2050 (Jitapunkul & Chayovan, 2001). Moreover, the report of the National Statistical office (2004) demonstrated that the proportion of the potential support ratio is decreasing from 709.8 per 100 ageing in 2000, to 679.1 per 100 ageing in 2003. Thus, this information reflected the notion that the elderly population is encountering social and financial problems due to these situations.

Thailand has undergone a changing of the roles and structures of the family as well as in regards to labor patterns and migration, which is called urbanization (Moon, 2001). As a result of urbanization, young people migrate to cities in search of jobs; the roles and social status of women is changing, granting them a greater chance to work outside their home; family structure shows a shift from a compound family to a single family by shrinking from an average of 5.6 in 1960 to 4.4 persons per family in 1990 and decreasing to 3.09 persons per household in 2020 (Wibulpolprasert, 2004). These factors may lead to a decrease in assistance and care for older persons, who may be more likely to be abandoned, resulting in more negative impacts on the health of the elderly. Furthermore, these factors led to a rise in the rate of elderly people who live alone, in particular elderly women. The main problem of living alone included having no one to care for a person during illness, loneliness, financial and social problems, and difficulties carrying out daily tasks. Accordingly, elderly people were confronted with complex problems, and these problems threaten their living conditions.

In conclusion, the rapid increase in the portion of the population 60 years of age and older is a worldwide phenomenon. Certainly Thailand must address the crisis of the ageing phenomenon. This phenomenon forces the elderly person to confront several problems. Due to vulnerable health, physical changes and deterioration, age

structural changes, and changes in roles and structures of the family elderly people face risk health problems, chronic illnesses and disability problems, and are confronted with psychological and social problems. Accordingly, elderly people are likely to experience complex problems, and these problems both directly and indirectly threaten their living conditions. The researcher interested this population group because these problems affecting elderly people demonstrated high volume, high risk, high variation, and high complexity. Moreover, much empirical data (Greenstreet, 2006; Lawler-Row, & Elliott, 2009; Lin & Bauer-Wu, 2003; Lin et al., 2011; Phillips et al., 2006; Rippentrop, Altmaier, Chen, Found, & Keffala, 2005; Tate & Forchheimer, 2002; Vollman et al., 2009) demonstrated that spiritual well-being plays an important role that can be provided for and help them to cope with their problems; spiritual well-being can be protected, improved, and maintained their health and well-being. Thus, the purpose of this study was to emphasize the important role of spiritual well-being to age-related health and the need to assess spiritual well-being in order to enhancing healing, maintenance, and promotion of elder's health by developing an assessment tool for measuring spiritual well-being.

## Synthesis of the definition and concept of spirituality, spiritual health, and spiritual well-being

### 1. Definition of spirituality

Spirituality is a broad concept and is a universal human phenomenon, yet definitions and concepts are abstract, intangible, elusive, ambiguous, and confusing (Burkhardt & Nagai-Jacobson, 2005; Delgado, 2005; Kunsongkeit & McCubbin, 2002; Meraviglia, 1999). Moreover, a conceptual inconsistency exists as it applies to larger cultural contexts (Chiu et al., 2004), and can be defined in many ways (Barnum-Stevens, 1996; Burkhardt, 1994; Burkhardt & Nagai-Jacobson, 2005; Fry, 1998; Kunsongkeit & McCubbin, 2002; Wright, 2005). Thus, there is the lack of a consensual definition (Meraviglia, 1999; Tanyi, 2002; Walton, 1999). Drawing from the abundant discipline-related literature such as theology, psychology, sociology, medicine, and nursing; spirituality is defined in different and various ways as well.

Although many disciplines defined spirituality in different ways, in general, spirituality was defined from the religious and humanistic perspective and represents a necessary essence of life that energizes both thoughts and actions (Meraviglia, 1999). The religious perspective that was the most related to the Judeo-Christian religion encompasses the ideology of the image of 'God' or soul, existing within every person, making the individual a thinking, feeling, moral, creative being that was able to relate meaningfully to a god and supreme/ higher being (Hunter et al., 1990; MacQuarrie, 1992; Meraviglia, 1999). Therefore, in theology, spirituality was defined from a religious perspective.

The humanistic perspective perceives values embraced by the individual as having the ability to motivate the individual's life style towards a fulfillment of individual needs, goals and aspirations, leading to the ultimate achievement of self-actualization (Atchley, 2000: Meraviglia, 1999; Narayanasamy, 1999; Pargament, 1997). In psychology, spirituality was defined from the humanistic perspective and focuses on examining the mental process for discovering what provides people with meaning and where they look for guidance and authority (Meraviglia, 1999). Conversely, sociology, medicine and nursing defined spirituality from the religious and humanistic perspective combination because they viewed a person's spirituality in terms of their status a human being (Anandarajah & Hight, 2001; Meraviaglia, 1999; Tongprateep, 2004; Wright, 2005). It was a complex and multidimensional part of the human experience that was comprised of cognitive or philosophic (Dyson et al., 1997), experiential or emotional and behavioral aspects (Anandarajah & Hight, 2001; Burton, 1998; Labun, 1988; Meraviglia, 1999).

The cognitive aspect of spirituality included the search for meaning, purpose and truth in life and the beliefs and values by which an individual lives (Anandarajah & Hight, 2001; Meraviglia, 1999; Wright, 2005). The experiential aspect involved feelings of hope, inner peace, comfort, and support that was reflected in the quality of an individual's inner resources, the ability to give and receive spiritual love, and the types of relationships and connections with the self, the community, the environment and nature and the transcendent (supreme being, higher power, a values system, God, cosmic conscious) (Anandarajah & Hight, 2001; Emblen, 1992; Meraviglia, 1999; O'Brien, 2008; Reed 1992). The behavioral aspect involved the way that a person

externally manifests individual spiritual beliefs and an inner spiritual state (Anandarajah & Hight, 2001; Burton, 1998; Labun, 1988; Oldnall, 1996; Meraviglia, 1999). Consequently, spirituality is the dimension that connects individuals internal spirit with outward behaviors related to caring and ultimately helps in the fulfillment of life's meaning. In addition, the spirituality dimension was influenced by individual cultural and developmental life experiences, so its' uniqueness depends on the phenomenon and life experiences as perceived by the person. It was related to the human traits consisting of honesty, love, caring, wisdom, imagination, and compassion. The dynamic balance in spirituality allowed and created healing of the body-mind-spirit (Dossey et al., 1995).

Moreover, definitions of spirituality were derived from the many literature reviews involving features of an integrative review, such as concept analysis, and critical analysis of the concept that demonstrate clearly the main characteristics of the concept of spirituality which included a sense of harmonious interconnectedness between the self, others, nature, and the supreme being (Burkhardt, 1989; Chiu et al., 2004; Delgado, 2005; Hungelmann et al., 1985; Meraviglia, 1999), searching for meaning in life (Craig et al., 2006; Ross, 1994) or allowing a person to experience a transcendent meaning in life, a transcendence of the self (Craig et al., 2006), a belief/ faith in religion, supreme being, and other persons (Delgado, 2005; Ross, 1994; Stoll, 1989), and inner strength (Burkhardt, 1989; Chiu et al., 2004; Delgado, 2005; Meraviglia, 1999). Moberg (1971) defined spirituality as the inner resources of the individual, particularly related to ultimate concern, the central philosophy of life, and reflecting a sense of inner peace and harmony. However, currently, the literature indicated the emergence of consensus on the definition of spirituality, describing it as a subjective experience (Dyson et al., 1997; Sawatzky, Ratner, & Chiu, 2005; Tanyi, 2002), a complex and multidimensional concept (Chiu et al., 2004; Stoll, 1989; Tanyi, 2002; Walton, 1999).

In conclusion, definition of spirituality was a broad, multidimensional, multifaceted concept that may be specifically related and unique to each person's lived experiences (Burkhardt, 1989; Farran, Fitchett, Quiring-Emblen, & Burk, 1989). Spirituality reflected the dimension of principle of one's being (Burkhardt & Nahai-jacobson, 2005; Emblen, 1992; Reed, 1992; Wasi, 2004), a sense of searching

for meaning and purpose in life, the experience of connecting to a God or Supreme Being as a mysterious transcendent force (Beery et al, 2002; Dossey et al, 1995; Emblen, 1992; McSherry & Cash, 2000; Stoll,1989; Wright, 2005), an intangible motivation and a commitment directed towards ultimate values (Stoll, 1989), connecting and belonging as the desire to belong to someone, something or somewhere (Dossey et al., 1995; Wright, 2005), giving life as the desire to give to others, to make life better, being free as the desire to have and seek out choices, and individual beliefs, faith and perception that guides their behavior (Burkhardt, 1994).

**2. Definition of spiritual health**

Spirituality had related many concepts that included the spiritual needs, spiritual care, spiritual health, spiritual distress, and spiritual well-being (Stoll, 1989). Spiritual health was defined in many ways as a definition of spirituality. Rattakul (2004) affirmed this by emphasizing that spiritual health had a different meaning, and often defined differently, depending on each religion. From analysis of contemporary literature, spiritual health defined as a dynamic state of being in a relationship with God or a Supreme Being that was evident by the extent to which people live in harmony within that relationship, which included personal faith, beliefs, meaning, purpose and value in life, community, morality, culture, environment and transcendence (Fisher, 1998; Fisher et al., 2000). These components were not isolated, but interrelated. Furthermore, spiritual health was a state of well-being and equilibrium or balance in that part of a person's essence and existence (O'Brien, 2008) as it was related to their physiological, psychological, sociological, and spiritual dimension. Accordingly, it consisted of a continuum state of distress and progress to well-being, also state of health (O'Brien, 2008; Stoll, 1989; Tongprateep, 2004).

Furthermore, spiritual health defined as a result of feeling of being generally alive, purposeful, and fulfilled (Ellison, 1983). This experience was mostly due to the ability of the human spirit to motivate the individual to his or her fullest potential, including the ability to discover, articulate and act on one's own basic purpose in life (Chapman, 1986, 1987; Ellison, 1983), to seek the supernatural or some meaning that transcends oneself, to learn how to give and receive love (Chapman, 1986), joy and peace, to pursue a fulfilling life, (Chapman, 1987) and to synthesize the total personality as well as to provide a sense of energizing direction and order (Ellison,

1983). Additionally, Labun (1988) provided the level of the person's spiritual health which determined by 3 statements of spirituality. These statements comprised 1) an aspect of the total person which was related to an integrated with the functioning and expression of all other aspects of the person; 2) had a relational nature which was expressed through interpersonal relationship between persons and through a transcendent relationship with another realm; and 3) involved relationships and produces behaviors and feeling which demonstrate the existence of love, faith, hope and trust that providing meaning to live and a reason for being.

From an Eastern perspective, especially Buddhism, a person's spiritual health was reflected in how one lives one's daily life; hence, religious influence penetrates every aspect of an individual's life (Tongprateep, 2009; Wasi, 2004). The notion of good health was emphasized by the balanced interaction between the mind, body, and spirit (Tongprateep, 2009; Wasi, 2004). Spiritual health may be viewed as the ability to attain harmonious living with the universe by following the Dharma path that promotes a good relationship between oneself and society. These can be led to sense of peace, happiness and enlightenment (Kunsongkeit et al., 2004). Furthermore, spiritual health was a state of happiness and satisfaction in one's life, having faith and religious practice that included a sense of value in being a human being and giving love and compassion to all mankind, including the environment and nature (Kunsongkeit et al., 2004). Additionally, Wasi (2004) defined spiritual health as the inner sense of self, having faith and wisdom that contributes to ultimate goodness and, finally, the happiness that arises from this experience; hence, happiness is commonly viewed as being a sign of spiritual well-being. This definition was supported by a qualitative study conducted by Kunsongkeit et al. (2004), which used a phenomenological approach to understand the life experiences of spiritual health as perceived by Thai people. Nineteen informants, who lived in Chaing Mai and were, aged 18 year old and older and whose health status ranged from illness to having good health participated in this study. The findings indicated that spiritual health was comprised of three characteristics, including having a sense of connectedness in life, having happiness in life, and having the strength to live life to the fullest.

In conclusion, spiritual health was a sub-concept of spirituality that expresses a state of well-being and equilibrium of human spirit that motivates

individuals to search for meaning and purpose in life, to seek the supernatural or some meaning that transcended oneself in order to live in the wholeness of life. These definitions of spiritual health were the same in western and the eastern perspectives.

**3. Definition of spiritual well-being**

Spiritual well-being was analogous to the presence of spiritual health in the individual (Moberg, 1971; Stoll, 1989) and is an indicator of spiritual health (Moberg, 1971, 1984; O'Brien, 2008; Stoll, 1989). Spiritual well-being was integrated with physical, mental, emotional, and social aspects of human wholeness and life; it was uniquely expressed in terms of meaning in and satisfaction with life; it may be included a transcendent component of a relationship with a higher being (Moberg, 1984; Paloutzian & Ellison, 1982; Stoll, 1989). Spiritual well-being arisen from an underlying state of spiritual health, and it was a behavioral expression of spiritual health (Ellison, 1983; Stoll, 1989); it further indicated an individual's quality of life in the spiritual dimension of health (Fehring et al., 1997; Paloutzian & Ellison, 1982; Stoll, 1989).

Based on a systematic review of the literature Burkhardt (1989) claimed that spiritual well-being consisted of a life-affirming relationship or harmonious interconnectedness with the deity, self, community, and environment; it was a process of being and becoming through being, the health of the totality of the inner resources of person, the wholeness of one's spirit and unifying dimension of health, a process of transcendence, and the perception of life as having meaning. This definition was supported by Stuart, Deckro, and Mandle (1989), who stated that spiritual well-being was a cornerstone of health, enabling holistic integration of one's inner resources, the often compartmentalized facets of the physical body, rational mind, emotional psyche, and intuitive spirit (p.36). For the elderly person, spiritual well-being adhered to the same definition. A qualitative study by Hungelmann, Kunkel-Rossi, Klassen, and Stollenwerk, (1985) led these investigators to define spiritual well-being with older adults as a sense of harmonious interconnectedness between self, others, nature, and the ultimate other, which existed throughout and beyond time and space. It was achieved through a dynamic and integrative growth process that led to a realization of the ultimate meaning and purpose in life (p. 394).

From a western perspective, spiritual well-being was defined as an affirmation of life in a relationship with God, self, the community and the environment that nurtures and celebrates wholeness (National Interfaith Coalition on Aging, 1975). In addition, spiritual well-being was the individual's expression of the harmony within relationships between the personal domain, the communal domain, the environmental and the transcendental domain (Fisher et al., 2000). It was comprised both of a religious component and a socio-psychological component (Ellison, 1983). Moberg (1971) stated that spiritual well-being was comprised of two dimensions, including a vertical and a horizontal dimension. The vertical dimension was described as a person's sense of well-being in relation to God that is referenced to as the religious component and the horizontal dimension described the person's sense of meaning and purpose in life and satisfaction with life that was referenced to as the socio-psychological component. Consequently, spiritual well-being was the dimension that underlies and gave meaning to all aspects of life and brings wholeness, integration and health to our total being (Balch, 1999). It was a man who had set a life goal for himself to become a 'holy man', someone who was focused on the meaning of life and the essence of being and doing well. Spiritual well-being was the satisfaction with one's life in a relationship with God or in relation with a supreme value and a perception of life as having meaning (Miller, 1985; Stoll, 1989).

In Thailand, the definition of spirituality, spiritual health, and spiritual well-being were used interchangeably in research. Presently, spiritual well-being did not exist as a definition. From the eastern perspective, there were only a few studies about spiritual well-being. Pilaikiat et al. (2003) conducted a qualitative study to explore spiritual well-being in persons who were HIV/ AIDS positive. Nine persons suffering from HIV/ AIDS were interviewed about the experiences of their lives with HIV/ AIDS; findings showed that their spiritual well-being perspective consisted of happiness, a peaceful mind, mindfulness, loving kindness and compassion as well as mental strength. In Buddhism, the construct of spiritual well-being consisted of using a spiritual guideline that follows the teachings of Buddha, practicing according to the teachings of Buddhism, performing Buddhist activities, and following the rituals and traditional cultural practices.

In conclusion, spiritual well-being consisted of a wide range of concepts, including concepts such as peace of mind, peace of God, personality integration, happiness, inner peace, meaning in life, faith in God, belief in Jesus Christ, faith in people, harmony with oneself, and many other characteristics.

Related literature from the field of nursing and several other related disciplines presented spiritual well-being as a sub-concept of spirituality (Ellison, 1983; Meraviglia, 1999; O'Brien, 2008), and indicated that a level of spiritual health can be observed and assessed, be it overt and covert, and can be placed on a continuum of wellness to illness (Brooke, 1987; Fehring et al., 1997; Fisher et al., 2000; O'Brien, 2008; Stoll, 1989). Accordingly, spiritual well-being was indicative of the presence of spiritual health in the person and was identified via behavioral expressions of the state or level of one's spiritual health (Ellison, 1983; Moberg, 1984; Stoll, 1989). Many researchers (Burkhardt, 1989; Clark, Cross, Deane, & Lowry, 1991; Moberg, 1984; Paloutzian & Ellison, 1982) proposed the wholeness of the spirit to be reflected by the spiritual well-being of a person, which, in turn, pervades the mind and body and, ultimately, affects overall well-being and quality of life experiences. Thus, spiritual well-being was an indicator of spiritual health (Ellison, 1983; Moberg, 1971; O'Brien, 2008; Stoll, 1989).

## The importance of spirituality to the human being and human health

### The importance of spirituality to human being

Spirituality is an inherent component (Chiu et al., 2004; Kunsongkeit & McCubbin, 2002; Tanyi, 2002) and an essential core principle for human beings (Burkhardt, 1989, 1994; Burkhardt & Nagai-Jacobson, 2005; Chiu et al., 2004; Delgado, 2005; Hicks, 1999; Tanyi, 2002; Stoll, 1989). Newman's systems model described spirituality as an innate variable that was a component of an individual's basic structure, facilitating optimal wellness, health, and stability (Newman, 1989 cited in Tanyi, 2002). In addition, spirituality was the deepest part of a person's life (Burkhardt & Nagai-Jacobson, 2005; Hicks, 1999; Meraviglia, 1999), it permeates a person's life, shapes a person's life journey (Burkhardt & Nagai-Jacobson, 2005), inspires a person to discover inner strength and meaning or purpose in his or her life (Burkhardt & Nagai-Jacobson, 2005; Tanyi, 2002), enables us to transcend the realm

of the material (Emblen, 1992; O'Brien, 2008) and empowers individuals to live life fully and holistically (Emblen, 1992; Kunsongkeit & McCubbin, 2002; McSherry & Cash, 2000). Thus, spirituality was the vital life force that motivates persons to be alive and influences everything in their lives in a good way (Burkhardt, 1994; Golberg, 1998; McSherry & Cash, 2000; Tanyi, 2002). Therefore, spirituality reflected the quality of an individual's inner resources, the ability to give and receive spiritual love, connections that exist between the self and the community and environment or nature, and transcendence (Anandarajah & Hight, 2001).

**The importance of spirituality to human health**

Spirituality was an aspect of the whole person that influences and correlates with physiological, psychological, and social aspects. Accordingly, a holistic perspective viewed the health of the human being as an integration of the bio-psycho-social-spiritual dimension, and such an environment cannot be separated (Burkhardt & Nagai-Jacobson, 2005; Wasi, 2004). Consequently, the spiritual dimension viewed as significantly affecting the optimal health of person. Therefore, the importance of the role of the spiritual dimension of the human being was considered to be an aspect of health; and Wasi (2004) described spirituality as a crucial component of optimal health for every person, because the spiritual dimension affected the other health dimensions as depicted in Figures 3 and 4, below.

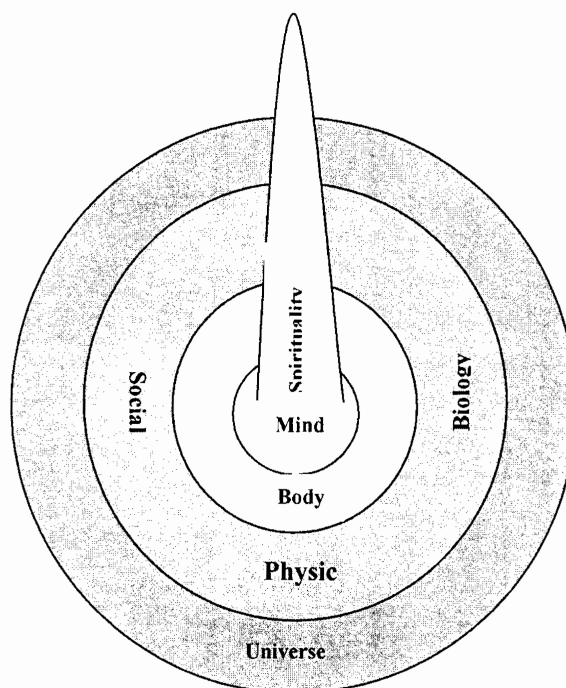



Figure 3 Dynamic interconnectedness (Wasi, 2004)

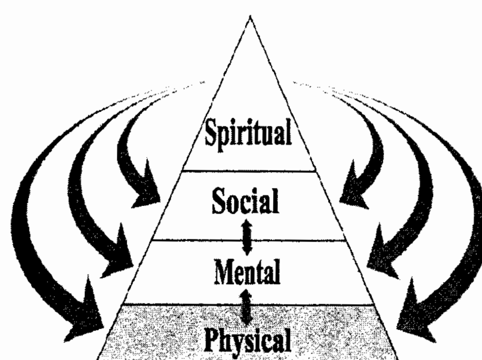



Figure 4 The influence of spiritual dimension to other health dimensions: Physical, mental, and social (Wasi, 2004)

This perspective was explained in a similar manner by Stallwood and Stoll (1975) and Stoll (1989), who developed the conceptual Model of the Nature of Humans (Figure 5), which was used to explain the concept of spirituality. They emphasized that man is a composite of body, mind, and spirit rather than "a mechanized collection of separate entities" (p. 1086). Three concentric rings depicted the human

person as a whole, emphasizing the body, mind, and spirit. The spirit is at the core of the person with an adjacent ring representing the biological component. They are interconnected, one part affecting and being affected by the other parts. All three components were conceptualized in this model as having dynamic interrelationships. Therefore, a deficit in one component impacted the whole person.

Furthermore, Stoll (1989) described the outer circles as representing the physical body and stated that the physical body is what is seen and experienced by others, and also allows an individual to be in touch with his or her senses.
The biological component provided a person with sensory information about the immediate external environment, and the larger entities in the world as well.
The second circle presented the psychosocial part, but was described further as representing the emotions, intellect, moral sense, and will. The psychosocial component provided self-consciousness via the intellect, emotion, will, and moral sense. Intellect referred to the thought processes which develop wisdom, knowledge, and reasoning. Emotions included a wide spectrum of overt and covert expressions, which, ultimately, are relevant to the likes and dislikes of a person. Personality, individualism, and self-identity were broad concepts related to emotions. The will of a person related to the choices made by that person. The moral sense determined right from wrong. In conclusion, the four aspects of the psychosocial component were interdependent and interactive.

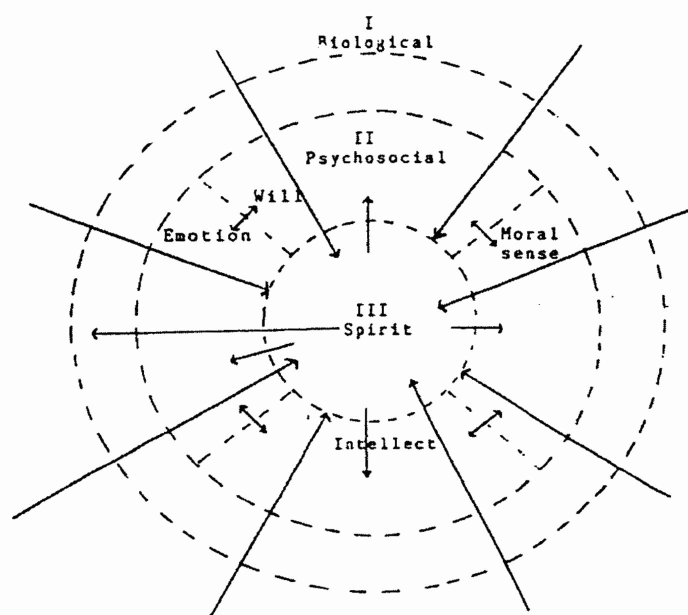
The innermost circle, the spirit, was difficult to comprehend because of its mystery and empirically indefinable nature. The spirit is the core of a person and interacts with the two outer components. Wasi (2004) clarified that the spirit pervades all other dimensions of the person. It had a continuous interrelationship between and among the inner being of the person, the person's vertical relationship with the transcendent/ god, or whatever supreme values guide the person's life. The person's horizontal relationships (i.e. love, forgiveness, and trust) with the self, others and the environment, was a result in meaning and purpose in the life of that individual.

Additionally, Stoll (1989) depicted spiritual interrelationships through a person's horizontal relationships with others and the self, and a vertical relationship with God, to take place through forgiveness, love, and trust. A relationship with the environment was depicted as a horizontal relationship. God is a unifying focus in

one's life pertaining to "the transcendent/God or whatever supreme values guide the person's life". Developmental-time and health-illness continue as influences on the well-being or distress of a person's spiritual interrelatedness. In conclusion, the conceptual model of the nature of humans by Stallwood and Stoll (1975) helped support the notion that humans harbor a dimension of spirituality.

In addition, the website of the Spiritual Research Foundation (http://www. spiritualresearchfoundation.org) provided important information on the impact of spiritual well-being on other dimensions of health and demonstrates that up to 80 percent of the cause of problems in life and health problems of human beings had their root cause in spiritual dimensions, which can be cause any of the symptoms of physical and psychological illness by impairing the function of the various organs and systems of the person's body and mind.

Conceptual Model of the Nature of Humans




The Conceptual Model of the Nature of Humans.
I.Biological: Five senses, world-conscious.
II.Psychosocial: Soul, self-concious; self-identity.
III.Spirit: God-conscious; relatedness to diety.

Figure 5 The conceptual model of the nature of humans (Stallwood & Stoll, 1975; Stoll, 1989)

In summary, a review of applicable literature and theories demonstrated that spirituality plays an important role and affects optimal health of individuals because spirituality is a crucial component for optimal health and functions as an integrator of all health dimensions, aiding people to attain "wholeness" and helping them achieve health and wellness. Therefore, persons with spiritual well-being, an indicator of spiritual health, might also enjoy good health. Accordingly, the important role of spirituality to a human's health led to an interest in the study and assessment of the spiritual well-being of human beings, especially persons suffering from chronic illness. This is true because they can be received suitable ways of enhancing spiritual well-being in order to heal, promote, and maintain their health after they were evaluated in regards to their level of spiritual well-being.

## The importance of spirituality to physical and psychological health

Via a systematic literature review, Koeing (2004) and Koeing, George, and Titus (2004) synthesized the important role of spirituality from a literature review of over 500 articles, and demonstrated that spirituality positively affected physical health by improving the functioning of the immune and endocrine systems in older adults, such as immune increases in CD-4 production, T-lymphocytes, natural killer cells and cytokine interleukin-6 cortisol levels. Furthermore, for patients with cardiovascular disease, the findings showed that spirituality has been associated with lower systolic and diastolic blood pressure, and a review of the literature indicated a 20% reduction in the CAD death rate. Additionally, spirituality can help to promote health in humans by changing health behaviors in the positive ways. Research findings further indicated that spirituality associated with lower rates of smoking, increased exercise, lower cholesterol and better sleep patterns.

In regards to psychological health, the scientific literature has shown that spirituality may help to counteract the negative stressors that set off the fight-flight response. Koenig (2004) reviewed and synthesized literature had demonstrated that spirituality plays an important role by helping to counteract negative stressors, reducing depressive symptoms, decrease the prevalence of depression, and help speed up recovery from depression. They concluded that persons who confess to greater spirituality have a positive world view that helps them make sense of negative life

experiences, especially chronic physical illnesses and disabilities. Additionally, spirituality has been associated with less fear of death, lower levels of discomfort, decreased loneliness, more positive emotional adjustment, and positive death perspectives for terminally ill cancer patients (Miller, 1985; O'Brien, 2008; Pace & Stables, 1997; Reed 1987). Additionally, in terminally ill cancer patients, spirituality can help them face death with less fear, decrease levels of discomfort, reduce rates of loneliness, enhance emotional adjustment, and maintain positive perspectives on death (Miller, 1985; O'Brien, 1982; Pace & Stables, 1997; Reed 1987). These positive effects occur when people engage in religious practices on a frequent basis. These practices provided social (Boswell, 2003; Koenig, 2004) and network support (Boswell, 2003) that affected health outcomes in persons, especially elderly groups. Social supports have been found to be an important resource for older people's adjustment to illness (Felton, 1990).

In conclusion, the literatures showed benefits of the spiritual dimension to health, including the promotion of health, prevention of disease, enhanced well-being and quality of life, better coping with stress, and improved recovery from illness in various populations such as patients with HIV (Tanyi, 2002), cancer (Riley et al., 1998; Sawatzky et al., 2005; Tate & Forchheimer, 2002), cardiac disease (Beery et al., 2002; Walton, 1999), and chronic illness (Craig et al., 2006; Pace & Stables, 1997; Rippentrop et al., 2005; Woods & Ironson, 1999), elderly persons (Fehring et al., 1997; Knestrick & Lohri-Posey, 2005; Lowry & Conco, 2002; Tongprateep, 2000).

## The importance of spirituality to aging health and chronically ill person

### The importance of spirituality to aging health

Elderly people typically experience a multiplicity of chronic illness conditions including back pain, arthritis, coronary artery disease, renal disease, hypertension, and diabetes mellitus. Tournier (1983) describes the movement from adulthood to older age as one of the great turning points in life that occur, with negative physiological and psychological changes accompany the aging process. As a result of these changes, older persons may experiences social isolation, financial

concerns, anxiety and depression. Despite aging as a factor in physical impairments or decreasing energy levels, the spiritual development of the elderly includes the creation of a new self-image as the elderly learn to adjust to and finding meaning in life that often leads to the adoption of a simpler lifestyle, and promotion and maintenance of a high quality of life. As a result, the elderly can find a sense of identity and worth in relationships as well as intellectual growth when they have relationships with family and friends. This strategy for aging well means cultivating a positive attitude toward life, choosing activities one enjoys, and maintaining a healthy diet and exercise regimen (Hogstel, 1995). In addition, spirituality can bring relief from anxiety and provide a sense of purpose, meaning, and self-integration that can be a source of personal self-esteem, a coping resource for the elderly with illnesses, and help in the preparation for death (Fehring et al., 1997) as well as facing death (Pace & Stables, 1997; Reed, 1987).

Many studies about older persons show that spirituality plays an important role in terms of well-being, such as diminishing the degree of cognitive impairment (Rice, Beck, & Stevenson, 1997), decreasing the problems of loneliness, and decreasing anxiety regarding future uncertainty. Therefore, spirituality is an important dimension of well-being in the elderly. Older adults express their spirituality through their religion, religious practices and behaviors, all of which are commonly used by elderly persons to cope with acute and chronic illnesses (Fehring et al., 1997). Consequently, the spiritual dimension is a crucial aspect of the optimal health of every person, so the enhancing of spiritual well-being must be protected, promoted, improved, and maintained for every person, particularly the elderly person confronted by a health problem caused by age-related degeneration including vulnerable health, physical changes and deterioration.

### The importance of spirituality for the chronically ill person

Spirituality has been most frequently studied in nursing literature in relation to ill individuals, especially those with a life-threatening or chronic illness (Albaugh, 2003; Hall, 1997; Hermann, 2001; Highfield, 1992; Pace & Stables, 1997; Tuck, McCain, & Elswick, 2001) because terminal or chronic illnesses create a time of crisis in a person's life that may result in increased expression of spirituality and increased use of spiritual support as a coping mechanism (Kendall, 1999). Furthermore,

Coward, and Reed (1996) stated that self-transcendence, a process associated with spirituality, is a natural component that facilitates healing in the chronically ill person. In addition, spirituality, particularly in terms of spiritual well-being and religious beliefs, is a key factor in successful long-term adaptation for many chronically ill people (Landis, 1996). Accordingly, spirituality has been linked to the emotional well-being of patients, and is a vital component in the care of the ill person (Pace & Stables, 1997; Reed, 1987).

Many studies have shown that spirituality might influence psychological adjustment (Siegel & Schrimshaw, 2002). Researchers have found significant associations between chronic illnesses and spirituality, religious variables and diverse indicators of adjustment and well-being (Siegel, Anderman, & Schrimshaw, 2001), including psychological stress (Koenig et al., 1992), life satisfaction (Reed, 1987) and quality of life. Walton (1999) used grounded theory to explore the influence of spirituality on the recovery from illness. Her findings indicated that spirituality is expressed in terms of the presence of family, friends, health care providers, the divine and creation. These were life-giving forces to recovery from illness in persons with acute myocardial infarction and provided and developed inner strength, comfort, peace, wellness, wholeness, enhanced coping, and decreased fear and anxiety.

In conclusion, spirituality is an integral part of human beings and plays a crucial role in the lives of persons who are coping with a chronic illness (Wright, 1998). An individual's spiritual dimensions are mutually dependent on and related to all other dimensions, embracing biological, psychological and social aspects (Carson & Green, 1992). Spirituality may represent an important element of the whole person and exist in all cultures, but may be expressed differently by each culture (Thinganjana, 2007). Consequently, spirituality is a concept closely related to the care of the ill patient because spirituality has been linked to the emotional well-being and quality of life of the patient. It is essential to caring for the ill patient (Pace & Stables, 1997). For a holistic view of a person, Brallier (1978) pointed out the notion that human beings are greater than the sum of their parts, functioning as integrated "bio-psycho-social-spiritual beings." Furthermore, the cornerstone of holistic health care is human beings as spiritual, emotional, intellectual, and physical beings. This view is supported by O'Brien (2008), who added that one's biological, psychological,

sociological, and spiritual facets are distinct and yet interrelated, so each part is attached and interrelated to the next part and all of the parts share importance and cannot function in isolation (McSherry & Cash, 2000; Wasi, 2004). Moreover, O'Brien (2008) suggested that these elements themselves must be individually healthy in order to facilitate and maintain overall health and a state of well-being. Accordingly, the role of spirituality is important because it can be made up of many components of the health dimension, together constituting the whole person (Emblen, 1992; Chiu, 2000; McSherry & Cash, 2000; Wasi, 2004).

Thus, spirituality is a process of evolving toward a person's wholeness and integration by linking body, mind, and spirit together (Burkhardt & Nagai-Jacobson, 2005; Chiu et al., 2004, Wasi, 2004).

There are many theories that support and explain the phenomenon of spirituality and spiritual development in human beings, such as the human needs theory, the theory of human development, the theory of faith, and the conceptual model of the nature of humans. Initially, Maslow (1940), who developed the human needs theory, stated that at the top of hierarchy of human needs was the need for self-actualization. The fully self-actualized person, according to Maslow, has the ability to connect the past and future to the present and deal positively with life's situations, adding meaning to one's life. Thus, his work clearly moved toward spiritual development (Barnum-Stevens, 1996; Kozier, Erb, & Blais, 1992). Later, Erickson (1950) identified stages of growth and development, from infancy to old age, which an individual experiences in life. Success at one stage of life is dependent on the successful resolution of previous stages. Thus, old age is viewed as a successful stage when an individual reviews his or her life and finds that it is a meaningful whole, or they look back with regret on failures. According to Erickson, the acceptance of life's situations leads to wisdom and existential identity of their own existence (Kimble, McFadden, Ellor, & Seeber, 1995).

At a later period in time, Levinson's Theory of human development (Kimble et al., 1995) arose and proposed that at any given time, the individual journeying through adulthood, experiences three aspects of development. These include the aspect of the self, the socio-cultural world, and the individual's relationship and participation in the world. Successful lifelong progression of these aspects leads the

person toward late-life wisdom and wholeness (Barnum-Stevens, 1996). Additionally, Fowler (1981) conducted qualitative research in the 1970's for 7 years, focusing on 400 persons, to support his theory that faith is a prerequisite for development of spiritual growth, leading to a meaningful life for that individual. Moreover, he found the concepts of faith and spirituality is universally present in non-religious as well as religious people.

In summary, spirituality is an essential dimension within every person, regardless of religion or ethnicity (Stoll, 1989). It is an invisible force that brings unity and harmony to the self, others and the universe (Emblen, 1992; Labun, 1988; McSherry & Cash, 2000), hence it reflects on an integration of all human dimensions (Emblen, 1992; Hicks, 1999; Meraviglia, 1999). Furthermore, spirituality functions as a connection between the bio-psycho-social-spirit dimensions in human beings that leads toward wellness or health (Burkhardt, 1994; Tanyi, 2002). Looking at the literature, many authors posit that spirituality plays an important role in the ways of life that influence the health and wellness of the human beings. Spirituality affects how individuals live and die, and functions as a resource during multiple losses and change (Moberg, 1982; Pace & Stables, 1997). Therefore, spirituality is interesting to health professionals, and it is important to understand how spirituality influences the health or wellness of the human being.

## The importance of spiritual well-being

There are many studies that demonstrate that spiritual well-being plays an important role for other dimensions of human health. The majority of studies have been performed in regards to the most common themes of spiritual well-being in persons with AIDS (Belcher, Dettmore, & Holzemer, 1989; Carson et al., 1990), cancer patients and terminally ill patients (Reed, 1987) as well as the elderly (DeCrans, 1990; Hungelmann et al., 1985, 1996). These studies show the significant correlation between spiritual well-being and psychological health, health promotion, illness prevention, coping with stress, recovery from illness, quality of life, and life satisfaction. Therefore, spiritual well-being can provide and help persons to cope with their problems, and can help with the healing, protection, improvement and maintenance of their health and wellness.

**1. Spiritual well-being and psychological health**

Spiritual well-being is a valuable coping resource that influences psychological well-being, and it is positively related to coping abilities in regards to stress and chronic illness (Carson et al., 1988; Fehring et al., 1987; Hodges, 1988; O'Brien, 2008). There are many studies that demonstrate the important role of spiritual well-being in regards to mental health for various groups of people, such as elderly people, patients with chronic illnesses, healthy persons, patients with cancer and patients with HIV. The empirical data from surveys and descriptive, comparative, and correlational studies indicate that spiritual well-being has an inverse relationship between levels of depression, negative mood states such as tension, anxiety, confusion and anger (Fehring et al., 1987; Kaczorowski, 1989), and the amount of pain and loneliness one experiences (Granstrom, 1987). Conversely, empirical data demonstrates that spiritual well-being has a positive relationship to the highly optimistic or hopeful, hardiness (Carson et al., 1990), religious beliefs, church attendance, income, number of children, marital status, and degree of impairment (Granstrom, 1987). In addition, Reed (1987) reported that patients faced with death exhibited a significantly greater spiritual perspective. Furthermore, Koenig's (2004) review of the literature focusing on qualitative and quantitative studies, concluded that there is reason to believe that religious/ spiritual beliefs and practices might be related to better mental health, and that a positive world view helps make sense of negative life experiences, especially those related to chronic physical illness and disability.

**2. Spiritual well-being and health promotion and illness prevention**

Providing purpose in life and promoting greater peace and self-confidence, contributes to the prevention of disease (Larson et al., 1989). Spiritual practices promote health-related behaviors and lifestyles, reduce the risk of disease, enhance well-being and provide social support (Levin et al., 1997). Spiritual well-being might influence health by enhancing a positive and adaptive evaluation of the meaning of a traumatic event and promoting one's self-esteem and sense of belonging in sustaining valued health behaviors. There is much research that has found that higher levels of spirituality were associated with having positive health habits in cancer survivors and cardiac patients (Nathongkham, 2000).

**3. Spiritual well-being and recovery from illness**

Walton (1996) found that the benefit of spiritual well-being is that it constitutes a coping skill that improves the process of recovery from those experiencing an acute illness or surgery. In addition, Walton and Clair (2000) found that spirituality helps patients recover from heart transplantations and aids in the transition from chronic illness to wellness. It helps patients look at their problems in a positive way, and fosters adaptation to heart disease and regain of emotional and physical control. For medically ill patients, spirituality, especially beliefs and connections to a higher power, themselves, and others, promotes a sense of hope, and facilitates empowerment, a relaxed state, and a sense of well-being, which influences recovery (Woods & Ironson, 1999).

**4. Spiritual well-being and coping with stress**

When people encounter stressful events, they engage in various ways of coping to manage the stressor based, on available resources. Presently, spiritual well-being is acknowledged to be an important resource in coping with stressful events that involve an element of personal threat or loss, such as in the case of illness (Carson & Green, 1992). Spiritual well-being provides an interpretative or cognitive framework that allows a person to make sense of the world and its vagaries, and it is a ready resource for coping with life changes (Hall, 1998; Henry, 2003; Mullen, Smith, & Hill, 1993). There is much research that has found that higher levels of spirituality were associated with better coping and reduced anxiety (Chiu, 2000; Fredette, 1995; McGee, 1998; Tansriratanawong, 1998).

**5. Spiritual well-being in relation to quality of life and life satisfaction**

Spiritual well-being can be a resource for general well-being and improved quality of life in various groups, such as cancer patients and elderly persons (Beery et al., 2002; Cotton et al., 1999; Tate & Forchheimer, 2000). Moreover, Brady et al. (1999) examined the relationship between symptom control and spiritual well-being suggested that patients who exhibit a high degree of spiritual well-being (a high degree of faith and sense of meaning) were able to better tolerate pain, fatigue and other physical symptoms, and were apt to maintain a better quality of life. Tate and Forchheimer (2002) found that spiritual well-being was associated with both improved life satisfaction and quality of life among elderly persons. Because spiritual

well-being influenced emotional and physical well-being, it improved their ability to enjoy life, even when experiencing symptoms caused by their illness.

**6. Spiritual well-being in relation to aging with chronic illness**

There are many studies that demonstrate that spiritual well-being plays an important role in human health, particular in the elderly. DeCrans (1990) determined the levels and characteristics of spiritual well-being of older adults in rural areas, and found that older adults have a high level of spiritual well-being than other age groups. Additionally, Brooke (1987) proposed that the aging process involves a collection of positive and negative life experiences, which can be reviewed and bring about meaning and purpose in life (p. 195). The four characteristics of spiritual well-being in elderly persons include the life experiences of several decades that have a unique meaning to the individual, inner life that allows wholeness and integration of the self, long-term relationships with family, friends and communities, and multiple and graduate changes in the biological, psychological, and social domains. Thus, spiritual well-being is an important resource for elderly chronically ill persons who have to cope with their life problems, especially health problems.

Older persons use spiritual well-being as a strategy for cultivating a positive attitude toward life, choosing activities that one enjoys, and maintaining good health (Hogstel, 1995). In addition, spiritual well-being can bring relief from anxiety and provide a sense of purpose, meaning, and self-integration that can be a source of personal self-esteem, a coping resource for elderly persons with illness, and a source of help in preparation for death (Fehring et al., 1997) as well as facing death (Pace & Stables, 1997; Reed, 1987). Therefore, spiritual well-being is an important concept that can provide for and help the elderly cope with aging problems, and it helps these people heal, protect, improve, and maintain their health and wellness (Chiu et al., 2004; Craig et al., 2006; Fehring et al., 1997; Fetzer, 1999; Koenig, 2004; Riley et al., 1998; Rippentrop et al., 2005; Tate & Forchheimer, 2002).

A number of studies, including both qualitative and quantitative approaches, have now demonstrated that spiritual well-being influences the process of coping with cancer, control of pain and other symptoms (Koenig et al., 1992; Brady et al., 1999; Nelson, Rosenfeld, Breitbart, & Galietta, 2002). Spiritual well-being is an important cultural factor structuring human experiences, beliefs, values and behavior, as well as

illness patterns (Lukoff et al., 1995), so it can influence humans and their behavior (Miller & Thoresen, 2003). It is clearly the relationship between the aspects of spiritual well-being and emotional well-being, that enhances a person's ability to cope with stress and illness (Coward, 1991; Ferrell, Smith, Juarez, & Melancon, 2003; Narayanasamy, 2002; Pace & Stables, 1997; Reed, 1987; Tuck, Alleyne, & Thinganfana, 2006; Tuck & Thinganjana, 2007), decrease depression and anxiety (Smith et al., 1993) as well as loneliness (Miller, 1985).

Furthermore, cancer patients have identified meaning and spirituality as important issues in dealing with illness (Breitbart, 2005). Thus, spiritual well-being is the key factor for successful long-term adaptation for many chronically ill people (Landis, 1996). Persons who report they felt comfort from their spiritual beliefs, trust in God and the strength of their spiritual beliefs, and feel blessed despite their illness, report a deeper meaning in life after their illness. Thus, the spirituality of these participants contributed to positive attitudes about their illnesses (Albaugh, 2003). In patients with human immunodeficiency virus (HIV), there are 3 studies indicating that spiritual well-being is of importance. First, Pace and Stables (1997) found that loneliness and lack of social support were the best predictors (47% of the variance) of spiritual well-being. Second, Somlai et al. (1996) reported that spiritual well-being affected mental health by decreasing loneliness, depression, anxiety and suicidal tendencies. Third, Tuck et al. (2001) examined the relationship between spiritual well-being and psychosocial factors, and found that spiritual well-being showed the strongest negative correlation with the uncertainty scale as well as stress and coping scales.

Based on the aforementioned, spiritual well-being is frequently identified as an important factor in maintaining health and well-being, and coping with illness (Landis, 1996). According to Spector (2004), spiritual well-being plays a crucial role in one's perception of health and illness. It also strongly affects the way people interpret and respond to the signs and symptoms of illness. Furthermore, spiritual well-being plays an important role in facing death, a notion that is supported by the studies conducted by two researchers. For example, Hermann (2001) reported that dying patients perceived the meaning of spirituality as God, faith in God or religion, and noted it was a part of their total existence. Participants supported the premise that

spiritual well-being was an important component at the end of one's life. Second, Reed (1987) found that the terminally ill patient group had a higher spiritual perspective than other groups did. There was a positive relationship between a higher spiritual perspective and a higher sense of well-being for the terminally ill hospitalized group. Accordingly, spiritual well-being may be a significant variable in the dying process.

Importantly, a sense of hope is generated by spiritual well-being, and it provides a sense of empowerment for chronically ill persons. In addition, Stoll (1989) suggests that trust, hope, perseverance, and courage are potential spiritual resources to assist persons in the coping process. For persons with chronic illnesses, the relational activities of expressing forgiveness, receiving and giving love, valuing self, and having life satisfaction are indicative of spiritual well-being. Spiritual well-being assists persons in dealing with maturational and situational crises in their lives.

However, studies about spiritual well-being and chronically ill persons have found that, in general, the sample population was recruited based the criterion of believing in a Christian religion (Conco, 1995; Emblen & Halstead, 1993; Highfield, 1992). Very few research studies include subjects with other religions or no religious affiliation. Spiritual well-being has been studied in groups of patients who are experiencing a disease process, in mixed groups of well and ill persons, and in healthy groups. Studies of the chronically ill persons found that spiritual well-being increase with advancing age and the progression of chronic illness (Smith et al., 1993).

McClain, Rosenfeld, and Breitbart (2003) studied the significance of spiritual well-being with coping with a terminal illness. One hundred and sixty patients in a palliative care hospital with life expectancy of less than 3 months were interviewed. Result found the significant correlations between spiritual well-being and desire for hastened death, hopelessness, and suicidal ideation. Spiritual well-being was strong correlate of end-of-life despair, providing a unique contribution to the prediction of hopelessness, desire for hastened death, and suicidal ideation even after controlling for the effect of depressive symptoms and other relevant variables.

Accordingly, this study was focused on the spiritual well-being in the elderly who suffering from chronic illnesses, and who practice various religions are relevant to Thai culture and context.

**The importance of spiritual/religious beliefs to the aging person**

Many seriously ill older adults use religious beliefs to cope with their illness (Koenig, 2002; Lynn, 2000). Religious involvement is a widespread practice that tends to be associated with successful coping with physical illness (Koenig, Larson, & Larson, 2001). Several studies have shown that religiosity/spirituality has been associated with improved recovery from surgery, lower levels of substance abuse, better coping mechanisms in regards to serious illnesses, improved immune function in HIV-infected patients, blood pressure control, and lower levels of health care utilization (Olive, 2004). Furthermore, empirical data shows that spirituality and religion is an important factor in the lives of the elderly (Commerford & Reznikoff, 1996). Such authorities have found that religious beliefs and behaviors are more prevalent in people over the age of 50 than they are in younger populations. Older adults often turn to religion as a means of coping with stressful events (Daaleman, Perera, & Studenski, 2004). Coping activities include prayers, seeking support and strength from God or a higher power, or social support from one's religious community. Spirituality is an important social and psychological factor in the lives of many older adults in the United States (Daaleman & Frey, 2004). Accordingly, in elderly people, spirituality and religiosity cannot be separated.

**Spirituality and culture**

Regardless of cultural differences, spirituality is viewed as a fundamental part of each person. It represents a holistic human characteristic that is important to health and well-being (Reed, 1992). The concept of spirituality exists in all cultures, but it is expressed differently by each culture (Shirahama & Inoue, 2001). Western spiritual philosophy is centered on the religions of Judaism, Christianity, and Islam (Halstead & Mickley, 1997). Previously, in western society, spirituality and religion have often been used interchangeably (Cavendish et al., 2004; Wright, 1998). The Judeo-Christian view of man is that God, as Creator, formed the unity of body, mind, and spirit in the human personality.

Eastern spirituality includes Buddhism, Hinduism, and Confucianism. Buddhist tradition evolves from Hindu philosophy (Halstead & Mickley, 1997), and states that each person should proceed toward enlightenment by confronting his/her individual situation and predicaments. Karma is a major facet of Buddhism that

involves a person's acts and their ethical consequences. Good deeds are rewarded and evil ones punished, so Karma functions as a kind of universal, natural, and moral law. Additionally, Karma determines one's destiny, and whether one is reborn as a human, animal, or some other creature, such as a devil or a god (Pincharoen & Congdon, 2003).

Among Thai people, spirituality is a part of their daily lives that is based on religious and supernatural beliefs (Pincharoen & Congdon, 2003). Only two qualitative research studies have explored spirituality in older Thai persons, and demonstrate how they relate to their health. First, Tongprateep (2000) used hermeneutic phenomenology to understand and describe spirituality among rural Thai elderly people. Three categories and nine themes emerged through the process of a hermeneutic phenomenological data analysis that included spiritual beliefs, religious practices, and consequences of spirituality. The spiritual belief consists of two themes, including the law of karma and life after death. The religious practice category consists of four themes, including merit making—the notion of doing good in order to help redress the balance of one's own, possibly bad karma, or to help balance good karma for another person (Caffrey, 1992); observance of moral precepts; gratitude and caring in the family; and meditation. The spirituality category consists of three themes, including coping with vicissitudes of life, being hopeful, and having a peaceful mind. Therefore, this study designated spirituality as the driving force for the persons' thoughts, feelings, perceptions and expressions through their Buddhist beliefs. Concepts of spirituality were comprised of spiritual beliefs in karma and life after death, Buddhist religious practices, and the consequences of an individual's spirituality.

Secondly, Pincharoen and Congdon (2003) used the ethnographic approach to describe spirituality as perceived and experienced by older persons to explain how spirituality helped them maintain their health. Five themes and 16 sub-themes emerged from the data. The major themes were: 1) connecting with spiritual resources provided comfort and peace through seeking religious resources, maintaining religious beliefs, and practicing religious activities; 2) finding harmony through a healthy mind and body by letting go of conflict, problems, anger and worries, sustaining a body that is free of disease and disability, and continuing one's favorite

activities; 3) living a valuable life by successfully coping with difficult life experiences, attaining life goals, and contributing to society; 4) valuing tranquil fulfilling relationships with family and friends by hoping for a good future for their children, desiring respect from grandchildren and preserving social relationships with friends, and 5) experiencing meaning and confidence in death by preparing for death, desiring a comfortable death, and hoping for a positive reincarnation. This study indicated that spirituality is a personal, lived experience within a cultural context. A person's values and beliefs were described in relation to their culture of origin. Their spirituality is focused on religion and sacred beliefs and practices rather than a personal propensity to find healing, meaning and interpretation of life. Thus, Thai elderly people cannot remove religion from their lives and beliefs.

During a critical life event, such as chronic illness, Jirojwong, Thassri, and Skolnik (1994) reported that Buddhism and spiritual power were two of the four principles that influenced their explanation for the cause of disease among Thai people. They believed that previous actions (karma) were the major cause of illness, which is consistent with Buddhist teachings. Health and illness beliefs and behaviors of Buddhists, including Thais, are influenced by the Buddhist philosophy that teaches acceptance of one's fate (Geurtsen, 2005). They believed that one's karma in this life cannot be changed or controlled, so good deeds and actions in this life have a positive influence in the next life.

In conclusion, from religious and cultural perspective spirituality, spiritual health, and spiritual well-being, are viewed as fundamental parts of each person and exist in all religions and cultures, but it is expressed differently by each culture (Shirahama & Inoue, 2001). Spirituality represents a holistic human characteristic that is important to health and wellness. Each culture usually has a set of beliefs about the meaning of health/ illness and health maintenance, and about the behaviors for preventing illness. One's spirituality may be determined entirely by cultural norms, or by both these norms and the life experiences of individuals (Chiu, 2001). In terms of the unique nature of spirituality, Narayanasamy (1991) demonstrated that individual spirituality may be determined by aspects of life that are deeply personal and specific, such as values, beliefs and relationships.

## Synthesis of the spiritual well-being in Buddhism, Islam, and Christianity

Religion plays a very important role in Thai life. Religion is considered an essential pillar of society, it is not only the major moral force of Thai family and community but has also contributed to the molding of freedom loving, individualistic, and tolerant people. Theravada Buddhism is the national religion of Thailand but there is total religious freedom and all major religions can be found in practice. Buddhism is the faith of 95 percent of the population, 4 percent are Muslims, .50 percent and Christians, and the remainder Hindus, Sikhs and other religion (National Statistic Office, 2010). Importantly, a religion organizes the collective experiences of a group of people into a system of beliefs and practices. Religion is a collection of cultural systems, belief systems, and worldviews that establishes symbols that relate humanity to spirituality and, sometimes, to moral values. Religiosity refers to the degree of participation in, or adherence to, the beliefs and practices of a religion. Many religions have narratives, symbols, traditions and sacred histories that are intended to give meaning to life or to explain the origin of life or the universe. They tend to derive morality, ethics, religious laws or a preferred lifestyle from their ideas about the cosmos and human nature.

Religious belief refers to mental state in which faith is placed in a creed related to the supernatural, sacred, or divine so it is difficult to separate the belief in supernatural or Supreme Being. Moreover, religious faith is a belief in a transcendent reality, a religious teacher, a set of teachings. Accordingly, these states may relate to the existence, characteristics and worship of a deity, divine intervention in the universe and human life, or values and practices centered on the teachings of a spiritual leader (Baider et al., 1999; Glover-Graf, Marini, Baker, & Buck, 2007). Faith was trust, hope and belief in the goodness, and trustworthiness or reliability of a person. Faith should be composed of the thing that person belief and practice activities that his/ her belief because faith represents more than just belief; it includes having a trusting relationship with God or a supreme being that provides a basis for meaning and hope in life. When person who have faith in something, he/ she should be practice what his/ her belief. Thus, practices those people do as the way of life

reflects an individual's faith.

This section represented believe and faith of each religion and practice that people do following by them faith.

**Buddhism:** Most of Buddhist participants believed in the law of karma, life after death, and Buddha teaching, and these beliefs shaped their thinking patterns and practices in daily life (Pincharoen & Congdon, 2003). Buddhists belief that good or bad actions are bound to bring about effects not only in the present life but also in future lives. Therefore, those two beliefs were the foundation of concern for the participants to proceed to the ultimate goal of life (Pincharoen & Congdon, 2003; Tongprateep, 2000). After they had realized the law of karma from those life experiences, they tried to develop meritorious actions follow the Buddha teaching such as doing no harm to others by words or by bodily actions and other making merit. The participants hoped that, if they accumulated meritorious acts in their lives, they would get good results both in this life and in the next life (Tongprateep, 2000).

**Law of karma/ Good or bad action and life after birth:** The majority of Buddhhists expressed a strong belief in the law of karma. Both negative and positive lived experiences of elder participants made them understand more about the law of karma. Generally, two Thai words, *boon and baab*, were expressed the belief in the law of karma by Buddhists. Boon refers to a good actions or a happy state of mind or feeling after one has done meritorious acts such as offering food, money, or necessaries to the monks or others. Baab refers to an apprehensiveness or suffering state of mind, or activities with which one broke the Buddhist moral precepts such as killing, lying, stealing, sexual misconduct, and consuming alcoholic drink or using drugs (Pincharoen & Congdon, 2003). Accordingly, Buddhists' are faith in the working of the law of karma, the consequences of actions, the individual ownership of actions, and the reality of the enlightenment of the Lord Buddha. Life after death/ rebirth refers to reincarnation or rebirth that is the result of one's own karma. Buddhists believe in the law of karma that good or evil actions are bound to bring about their effects. They wanted to do good actions and other kinds of meritorious acts because of these beliefs. They believed that human beings are not born only to this life so past actions, both good and bad, committed in previous lives influenced their present life. They thought that causes and effects in the past (last life) produced

results in the present (this life), and may be related to the future (next life).

In conclusion, the law of karma and belief in life after death are basic concepts of Buddhism. The ultimate goal of Buddhism is to attain Nirvara or to end the cycle of rebirth. Buddhists tried to avoid evil acts and cultivate good ones because they thought that it was fruitful to do good actions. They hope to be born in high positions with happiness or to come close to Nirvana in the next life.

**Religious doctrine:** Buddhists believed are based on the Buddhist doctrine. The concept is as stated in a Thai proverb "if you do good deed you will receive good; if you do evil you will receive evil". It means the result of karma which represents the evaluation of all life events that is you will receive the outcome of what you have already initiated. Due to their faith, Buddhists held on to religion as their guidance for living. The Buddha's teaching guided them to do good deeds. Once the participants believed in the law of karma and life after death, they tried to make merit in various ways. The Buddha prescribed the ways to act to bring about the desired effect or Nirvana. The main objective of merit making is to eliminate selfishness and greed. In order to get good results from Buddhist doctrine, people develop all kinds of meritorious acts and must practice the religion on their own. They based their religious practices on those of their ancestors, who taught them about Buddhist rites. Buddhists went to the temple (Wat) and practiced all kind of meritorious acts that were convenient for them, including arrangement of merit-making ceremonies, observance of moral precepts or self-restraint, and mind development or meditation. They offer food to the monks at the Wat, listen to special sermons and observe additional precepts.

After those activities, Buddhists may experience happiness and peace in mind. Thai laity observes five moral Buddhist precepts. They can develop other meritorious acts at their own home such as sharing merit, rejoicing in others' merit, or practicing meditation. Accordingly, making merit by any ways are the actions that reflected individual's faith for Buddhist participants.

**Islam:** Muslims believe that God is one and incomparable. Their faith is to affirm in Allah, His angels, His Books, His Messengers, and the Last Day, and to believe in the Divine Destiny whether it is good or bad. They believe in the Angels or belief in all the messengers sent by the Allah. According to the Quran, angels do not

possess free will, and worship God in total obedience. Angels' duties include communicating revelations from God, glorifying God, recording every person's actions, and taking a person's soul at the time of death. Thus, this belief, Muslims can do only what God orders them to do. In addition, they believe in the Prophets such as Abraham, Moses, and Jesus; Muslim participants believe that individuals were assigned a special mission by Allah to guide humanity. Muslims identify the prophets of Islam as those humans chosen by Allah to be his messengers. According to the Quran the descendants of Abraham were chosen by Allah to bring the "Will of God" to the people. They believe in the Books (kutub) sent by Allah including the Quran; All these books that Muslim belief is promulgated the code and laws of Islam. The Quran is the final Holy Scripture that Muslims believe was sent by Allah (Athar, Khan, Adi, Ahmed, & Syed, 2007).

**Christianity:** Catholics believe in God the father, Jesus Christ as the Son of God. The core Christian belief is that through belief in and acceptance of the death and resurrection of Jesus, sinful humans can be reconciled to God and thereby are offered salvation and the promise of eternal life. Their faith is an act of trust or reliance to God. Faith leads them to have an active life and guide the way to live in daily living. Moreover, faith makes them to see the mystery of God and his grace and seeks to know and become obedient to God (Ratzinger & Benedict, 2004)

**Belief in God's existence:** The Muslim and Catholic belief that God being in the world although they do not see him but he live in their mind every time, and everywhere.

**Confidence in God's power and providence:** Muslims and Catholics belief in power's o God because they known that God is the creator everything in the world and determine the destiny for all of thing in the word. For Islam and Christianity religions, Islamic participants have used the term Supreme Being to refer to Allah, an Arabic name for God and used to refer to god for Catholics also.
In addition, although mostly used specifically as a reference to God the Father, it can be used to refer to Christ or the Christian Trinity of Father, Son and Holy Spirit in Christianity religion. This belief is as the belief in the higher power. Everything of this power comes from the Divine or God only because He has granted man with physical and natural power who is able to provide some of his pious guardians with

higher power. It is one believes that the higher power stems from God's eternal Omnipotence, and this is God's gift to them, and God is as the sole source of all powers in the universe.

Muslims and Catholics believe that Allah/ God has measured out the span of every person's life, their lot of good or ill fortune, and the fruits of their efforts. Some participants believe that the divine destiny is when Allah/ God wrote down in the Preserved Tablet. Everything has happened and will happen, which will come to pass as written. According to this belief, Muslims and Catholics' practice must do follow by what is written in the Preserved Tablet because they believe that Allah/ God already knows all occurrences without the restrictions of time. They believe that Allah/ God knows what his creation will do, by virtue of his eternal knowledge, including their choices that will take place because Allah/ God has written everything that exists including the destiny of all creatures prior to creation. What Allah/ God wills happens and what he does not will does not happen. There is no movement in the heavens or on earth but it happens by his will. This does not mean that he forces things to happen the way they happen in the area of human beings' voluntary actions. It means that he knew what they will chose, wrote it and let it happen, and was, is and can always change it when he wants. Allah/God is the creator of all things, including the actions of his servants. They do their actions in a real sense, and Allah/ God is the creator of them and of their actions.

In accordance with Muslims and Catholics belief in predestination, or divine preordainment, Allah/ God has full knowledge and control over all that occurs. For Muslims and Catholics, everything in the world that occurs, good or evil, has been preordained and nothing can happen unless permitted by God. Accordingly, although events are pre-ordained, man possesses free will in that he has the faculty to choose between right and wrong, and is thus responsible for his actions. According to Islamic and Catholic tradition, all that has been decreed by God is written in the Preserved Tablet.

**Life after death**: Muslims believe in the "Day of Resurrection" or "Day of Judgment" or "the Last Hour" that is God's final assessment of humanity. They believe that the time is preordained by God but unknown to man. The sequence of events is the annihilation of all creatures, resurrection of the body, and the judgment

of all sentient creatures. The exact time when these events will occur is unknown. Belief in the Day of Judgment is one of the six articles of faith. The trials and tribulations associated with it are detailed in the Quran. Every Muslim is believed to be held accountable for their deeds and is believed to be judged by God. Furthermore, the Quran lists several sins that can condemn a person to hell, such as disbelief and dishonesty. Muslims view heaven as a place of joy and bliss with their God.

The death and resurrection of Jesus are usually considered the most important events in Catholics, partly because they demonstrate that Jesus has power over life and death and therefore has the authority and power to give people eternal life. The last judgment will occur after the resurrection of the dead and the reuniting of a person's soul with own physical body. The Catholic Church teaches that at the time of the last judgment Christ will come in his glory, and all the angels with him. Each person who has ever lived will be judged with perfect justice. Those already in heaven will remain in heaven; those already in hell will remain in hell; and those in purgatory will be released into heaven.

**Belief in supernatural power**

The supernatural power is anything of power that above and beyond what one holds to be natural or exists outside natural law and the observable universe. Supernatural powers are often associated with paranormal and occult ideas. Generally, religious miracles are typically perceived as supernatural claims, as are spells and curses, divination, and the afterlife. Concepts in the supernatural power are closely related to concepts in religious spirituality and occultism or spiritualism. Characteristics for phenomena claimed as supernatural are anomaly, uniqueness, and uncontrollability. Thus, phenomena about supernatural may not be examined by scientific method. Many Buddhists explain that it's believed about that past, present, and future complexities in their life and mysteries of the universe and cannot be explained solely by naturalistic means. For Buddhism religion, this belief related the worship of sacred object, ghost, unseen force or invisible things and people who have a mystery such as the fortune teller or magician, ghosts (phi) or guardian (chao thi). For this belief, Buddhists stated that they did not see these things but they believed that these things could affect their lives in good or bad ways. For example, one participant said that ghost of ancestor cause of her illness, but sacred religion can cue

her illness. Furthermore, worship refers to performance of activities that showed relation to a supernatural power.

**Practice/ action that reflect an individual's faith**

**Buddhism religion**

**Making merit** means doing good things as mentioned in religious doctrine. Thais' ways of life, since their birth until their death is so familiar with making merit. They strongly believe that they ought to regularly make and gain merit which would bring them happiness, peaceful life and other good things. Gaining merit will strengthen them to overcome any obstacles or misfortune they are suffering. They intend to gain more merit because they also believe their accumulated merit would help them to be in heaven or a peaceful place after their death. Even more merit they gained would help them to reach Nirvana (divine peace beyond this world).
A common rule in making merit is to prepare one's mind and thoughts. The mind has to purified and ready. Gaining merit however must not bring any trouble or worry to oneself or others. There are three ways of making and gaining merit that comprise to give alms, to maintain religious commandment, and to pray. Making merit by putting food in the bowl of monks that is tradition means putting food into the monks' bowl. Monks receive alms from people who believe they are gaining merit by giving. It is understood that this is an opportunity for people to gain merit. They felt comfortable describing meritorious acts that they have done for a long time.

Furthermore, making merit may include gratitude and caring in the family that is a basic virtue in the Thai tradition. Gratitude (bukhun or katunyu katavatee) refers to the acts of showing appreciation for a favor by one's parents or others who have helped one previously. Thai Buddhists believe that they can show gratitude for their decreased parents by merit making. Thai children have learned how to care for their parents with sincerer love, which is expressed through caring behaviors. Thus, gratitude is viewed as a sign of a good person in the Thai culture.

**Islam religion**

Religious practices of Islam are the five pillars, which are basic concepts and obligatory acts of worship, and following Islamic law, which touches on virtually every aspect of life and society, providing guidance on multifarious topics from banking, politics, and welfare, to warfare and the environment. The Quran presents

them as a framework for worship and a sign of commitment to the faith. There are the shahada (creed), daily prayers (salah/ salat), fasting during Ramadan (sawm), almsgiving (zakat), and the pilgrimage to Mecca (hajj) at least once in a lifetime. The Pillars of Islam are five basic acts in Islam, considered obligatory for all believers. The Shia and Sunni sects both agree on the essential details for the performance of these acts (Athar, et al., 2007).

**Shahadah** is a saying professing monotheism and accepting Muhammad as God's messenger and is a set of statement normally: "I profess that there is no god except God and I profess that Muhammad is the Messenger of God." Moreover, it should be said when dying in order to declaration of their faith. Accordingly, the Shahadah, which is the basic creed of Islam that must be recited under oath with the specific statement: "I testify that there is none worthy of worship except God and I testify that Muhammad is the Messenger of God." This testament is a foundation for all other beliefs and practices in Islam. Muslims must repeat the shahadah in prayer.

**Ritual Islamic prayers**, called Ṣalah or Salat, must be performed five times a day. Salah is intended to focus the mind on God, and is seen as a personal communication with him that expresses gratitude and worship. Salah is compulsory but flexibility in the specifics is allowed depending on circumstances. It consists of five daily prayers: Fajr, Dhuhr, Asr, Maghrib, and Isha'a. Fajr is performed at dawn, Zuhr is a noon prayer, Asr is performed in the afternoon, Maghrib is the sunset prayer, and Isha'a is the evening prayer. All of these prayers are recited while facing the Ka'bah in Mecca. Muslims must wash themselves before prayer ablution. The prayer is accompanied by a series of set positions including; bowing with hands on knees, standing, prostrating and sitting in a special position (not on the heels, nor on the buttocks, with the toes pointing away from Mecca), usually with one foot tucked under the body. A mosque or masjid is a place of worship for Muslims. Although the primary purpose of the mosque is to serve as a place of prayer, it is also important to the Muslim community as a place to meet and study.

**Fasting**, called "Sawm", from food and drink (among other things) must be performed from dawn to dusk during the month of Ramadhan. The fast is to encourage a feeling of nearness to God, and during it muslims should express their gratitude for and dependence on him, atone for their past sins, and think of the needy.

Sawm is not obligatory for several groups for whom it would constitute an undue burden. For others, flexibility is allowed depending on circumstances, but missed fasts usually must be made up quickly. During Ramadan, muslims are also expected to put more effort into following the teachings of Islam by refraining from violence, anger, envy, greed, lust, profane language, gossip and to try to get along with fellow muslims better. In addition, all obscene and irreligious sights and sounds are to be avoided. Three types of fasting (sawn) are recognized by the Quran: Ritual fasting, fasting as compensation for repentance, and ascetic fasting. Ritual fasting is an obligatory act during the month of Ramadan. muslims must abstain from food, drink, and sexual intercourse from dawn to dusk during this month, and are to be especially mindful of other sins. Fasting is necessary for every muslim over the age of 11. Fasting during Ramadan is obligatory, but is forbidden for several groups for whom it would be very dangerous and excessively problematic. These include pre-pubescent children, those with a medical condition such as diabetes, elderly people, and pregnant or breastfeeding women. Observing fasts is not permitted for menstruating women. Other individuals for whom it is considered acceptable not to fast are those who are ill or traveling. Missing fasts usually must be made up for soon afterward, although the exact requirements vary according to circumstance.

**Zakat** or alms-giving is the practice of charitable giving by Muslims based on accumulated wealth, and is obligatory for all who are able to do so. It is considered to be a personal responsibility for Muslims to ease economic hardship for others and eliminate inequality. Zakat consists of spending 2.5% of one's wealth for the benefit of the poor or needy, including slaves, debtors and travelers. A muslim may also donate more as an act of voluntary charity, rather than to achieve additional divine reward. There are two main types of Zakat. First, there is the kajj, which is a fixed amount based on the cost of food that is paid during the month of Ramadan by the head of a family for himself and his dependents. Second, there is the Zakat on wealth, which covers money made in business, savings, income, and so on. In current usage Zakat is treated as a 2.5% collection on most valuables and savings held for a full lunar year, as long as the total value is more than a basic minimum known as nisab. Nisab is approximately $3,275 or an equivalent amount in any other currency.

There are four principles that should be followed when giving the Zakat:

1. The giver must declare to God his intention to give the Zakat.

2. The Zakat must be paid on the day that it is due.

3. Payment must be in kind. This means if one is wealthy then he or she needs to pay 2.5% of their income. If a person does not have much money, then they should compensate for it in different ways, such as good deeds and good behavior toward others.

4. The Zakat must be distributed in the community from which it was taken.

It is giving a fixed portion of accumulated wealth by those who can afford it to help the poor or needy, and also to assist the spread of Islam. It is considered a religious obligation (as opposed to voluntary charity) that the well-off owe to the needy because their wealth is seen as a "trust from God's bounty". The Quran also suggest a Muslim give even more as an act of voluntary alms-giving.

**The Hajj** is a pilgrimage that occurs during the Islamic month of Dhu al-Hijjah to the holy city of Mecca, and derives from an ancient Arab practice. Every able-bodied muslim is obliged to make the pilgrimage to Mecca at least once in their lifetime if he or she can afford it. When the pilgrim is around 10 km (6.2 mi) from Mecca, he must dress in Ihram clothing, which consists of two white sheets. Both men and women are required to make the pilgrimage to Mecca. After a muslim makes the trip to Mecca, he/ she is known as a hajj/ hajja (one who made the pilgrimage to Mecca). The main rituals of the Hajj include walking seven times around the Kaaba, touching the Black Stone, traveling seven times between Mount Safa and Mount Marwah, and symbolically stoning the Devil in Mina.

**Christianity**

Religious activities of the Christianity religion are to chant hymns of praise to God three times a day, go to attend the ceremony in church every Sunday. Worship Christian's assembly for communal worship on Sunday as the day of the resurrection. The Morning Offering is an aspect of the league of the sacred heart of Jesus and can be renewed throughout the day with simple short prayers that called "aspirations".
A sacrament is a rite, instituted by Christ that mediates grace, constituting a sacred mystery. The Latin word sacramentum means "*a sign of the sacred.*" The seven sacraments are ceremonies that point to what is sacred, significant and important for

Christians. They are special occasions for experiencing God's saving presence. That's what theologians mean when they say that sacraments are at the same time signs and instruments of God's grace (Ratzinger, & Benedict, 2004)

The seven sacraments consist of Baptism, Confirmation, Holy Communion/ Eucharist, Confession, Marriage, Holy orders, and The anointing of the sick. There is the life of the Catholic Christianity. The first three sacraments (Baptism, Confirmation, and Holy Communion) are called the sacraments of initiation, because the rest of their life as a Christian depends on them. Furthermore, the Catholic sacrament of reconciliation (known as Penance, or Penance and Reconciliation) has three elements: conversion, confession and celebration. In it we find God's unconditional forgiveness; as a result they are called to forgive others

**The sacrament of Baptism** is the first step in a lifelong journey of commitment and discipleship. Whether they are baptized as infants or adults, Baptism is the Church's way of celebrating and enacting the embrace of God. It removes the guilt and effects of original sin and incorporates the baptized into the Church, the mystical body of Christ on earth.

**The sacrament of confirmation** is a Catholic Sacrament of mature Christian commitment and a deepening of baptismal gifts. It is most often associated with the gifts of the Holy Spirit. Confirmation perfects their baptism and brings them the graces of the Holy Spirit that were granted to the Apostles.

**The sacrament of the Holy communion or Eucharist:** Catholics believe the Eucharist, or Communion, is both a sacrifice and a meal. They believe in the real presence of Jesus, who died for our sins. As they receive Christ's Body and Blood, they also are nourished spiritually and brought closer to God.

**The sacrament of confession** is one of the least understood, and least utilized, sacraments in the Catholic Christianity. In reconciling us to God, it is a great source of grace, and Catholics are encouraged to take advantage of it often, even if they are not aware of having committed a mortal sin. That reconciling of man to God is the purpose of Confession. When we sin, we deprive ourselves of God's grace. And by doing so, we make it even easier to sin some more. The only way out of this downward cycle is to acknowledge our sins, to repent of them, and to ask God's forgiveness. Then, in the Sacrament of Confession, grace can be restored to our souls,

and we can once again resist sin.

**The sacrament of the Holy orders or Ordination** is the continuation of Christ's priesthood, which He bestowed upon His Apostles. There are three levels to this sacrament: the episcopate, the priesthood, and the diaconate. It is priest being ordained vows to lead other Catholics by bringing them the sacraments (especially the Eucharist), by proclaiming the Gospel, and by providing other means to holiness.

**The sacrament of marriage or the Holy Matrimony** is a public sign that one gives oneself totally to this other person. It is also a public statement about God: the loving union of husband and wife speaks of family values and also God's values.

**The sacrament of the anointing of the sick:** Traditionally referred to as Extreme Unction or Last Rites, is administered both to the dying and to those who are gravely ill or are about to undergo a serious operation, for the recovery of their health and for spiritual strength. It is a ritual of healing appropriate not only for physical but also for mental and spiritual sickness. Received in faith and in a state of grace, the Sacrament of the Anointing of the Sick provides the recipient with a number of graces, including the fortitude to resist temptation in the face of death, when he is weakest; a union with the Passion of Christ, which makes his suffering holy; and the grace to prepare for death, so that he may meet God in hope rather than in fear. If the recipient was not able to receive the Sacrament of Confession, Anointing also provides forgiveness of sins. If it will aid in the salvation of his soul, Anointing may restore the recipient's health.

Accordingly, religious belief affect to individual's practice in daily living. Therefore, even if all religions are based on different beliefs and this leads to practice on daily life are different, but the same thing is the goal of complying with their faith. There are happy in life. need to be a better life, need to be do good deed, or have no suffering both this life and next life. These things refer to individual's spiritual well-being so spiritual well-being is a goal that everyone need to be achieve even though difference from religious belief (Testerman, 1997).

## Synthesis of spiritual well-being assessment tool

There are five assessment tools that measure the concept of spiritual well-being, including the Spiritual Well-Being Scale: SWB (Paloutzian & Ellison, 1982), the JAREL Spiritual Well-being Scale (Hungelmann et al., 1985, 1996), the Spiritual Assessment Scale: SAS (O'Brien, 2008), the Spiritual Well-Being Questionnaire (Gomez & Fisher, 2003), and the FACT-Spiritual Well-Being (Cella et al., 1993).

1. **The Spiritual Well-Being Scale** (Paloutzian & Ellison, 1982)

The Spiritual Well-Being Scale (SWB) was developed by Paloutzian and Ellison (1982) as a result of a methodological study. The instrument has 10 items on each of the two subscales, using a 6-point Likert response scale, with high scores relating to high spiritual well-being (SWB). Ten items of the subscale relate to Religious Well-Being scale (RWB), or the vertical dimension measuring the individual's relationship to God. The other 10 items measure the Existential Well-Being scale (EWB), or the horizontal dimension, which are the individual's perspectives, including social relationships, a sense of personal life satisfaction, meaning and purpose to life. The overall SWB score, resulting from the addition of the two subscales, is considered a quality-of-life indicator. A factor analysis with varimax rotation of the final instrument was performed, using 206 students from three religiously affiliated universities and one state university. Test-retest reliability was .93 for SWB, .86 for RWB, and .96 for EWB. Internal consistency is .89 SWB, .89 RWB, and .78 EWB.

Application of the Spiritual Well-Being Scale Instrument: This instrument measures one's general state of spirituality, not specific religious beliefs religious beliefs, and it is used to examine spiritual well-being in various populations including healthy adults, adults with cancer, and caregivers. For example:

Paloutzian and Ellison (1982) used this tool to examine the relationship between loneliness and spiritual well-being. The findings indicated a negative correlation between loneliness and spiritual well-being in both ill and healthy adults. The ill groups had a higher total SWB and RWB than the healthy group.

In 1985, Miller used the SWB Scale and the Abbreviated Loneliness Scale (ABLS) to determine the relationship between spiritual well-being and loneliness in adults. A convenience sample consisted of 64 chronically ill clients with rheumatoid

arthritis and 64 healthy university non-nursing faculty. The age of the arthritics ranged from 23 to 65 years, and the faculty was age 24-62 years. Results found significantly higher scores on the SWB from the arthritic sample than from the healthy sample. The arthritic subjects also had significantly higher scores on the Religious Well-Being subscale, which pertained to the religious aspects of their lives, over the healthy group. Miller stated that this finding supported previous research in which chronically ill subjects cited spiritual strategies as a mode of coping with the ramifications of their disease.

Carson et al. (1988) reported on the relationship between hope and spiritual well-being in a convenience sample of junior-year baccalaureate nursing students. One hundred ninety-seven subjects ranged from 19 to 46 years, with a mean age of 21 years. The SWB scale and the State-Trait Hope Scale were used in this study as well. Results showed that those students reporting higher levels of hope tended to have higher mean levels on the total SWB Scale, including both religious well-being and existential well-being. The relationship between trait hope and existential well-being (social relationships and meaning and satisfaction in life) was significantly stronger, and there was a significant relationship between the trait of hope and religious well-being (relationship with God). Within this group of subjects, 91% consider themselves to be a member of a formalized religious group. Seventy three percent indicated that their religious beliefs influenced the way they lived. In conclusion, this finding supports the notion that both the perception of being religious and the influence of beliefs were related to hope and spiritual well-being.

Kirschling and Pittman (1989) conducted a methodological study designed to assess the reliability and validity of the SWB Scale in a group of family caregivers involved in five different hospice care-giving programs. This study explored the caregivers' physical, psychological and spiritual well-being related to the experience of caring for loved ones suffering from terminal illness. A convenience sample of 70 caregiving subjects ranged from age 27 to 84 years. This study centered primarily on determining internal consistency and construct validity of the SWB Scale. The Bradburn Affect Balance Scale was used to measure the construct validity of the SWB Scale. The results indicated a high degree of internal reliability, with alpha coefficients of .86 to .93. Construct validity was not supported when SWB scores

were correlated with the Bradburn Affect Balance Scale. This may be because not all of the questions were answered by the subjects because they did not believe in God and reported they were not religious. In conclusion, the results found the SWB to be lacking in construct validity, and the findings suggest that the SWB is not necessarily appropriate for an older caregiver, does not measure the variety of the religious belief system, and does not measure spiritual well-being of those persons who have no religious belief system. Furthermore, aspects of "belonging, transcendence creativity" are not measured through the use of the SWB.

Carson et al. (1990) performed a descriptive, correlational study to examine spiritual well-being and hope in 65 males (20-70 years of age) who tested positive for HIV. Fifty-eight percent of subjects had been hospitalized, and all understood that there was no known cure for this disease. The SWB Scale and the Beck Hopelessness Scale (BHS) were the instruments utilized in this study. Previous reliability of the total SWB was .94, SWB was .92, and EWB was .93. Results indicated that the subjects had high levels of hope or optimism and positive levels of spiritual well-being. This result supports the notion that those persons who had higher spiritual well-being tended to have higher hope. However, hope showed a significantly stronger relationship to EWB than to RWB.

Landis, in 1996 studied the relationships between uncertainty, spiritual well-being, and psychosocial adjustment to chronic illness in a nonprobability sample of 94 community-based persons who had type I or type II diabetes mellitus. Subjects ranged in age from 21 to 65 years of age. The investigators found that a significant negative relationship existed between uncertainty and spiritual well-being, meaning that as uncertainty decreased, spiritual well-being increased. The relationship between SWB and psychosocial adjustment (PAIS-SR tool) was negatively related, supporting the belief that as spiritual well-being increased, problems related to living with a chronic illness decreased. In conclusion, the aforementioned research strengthens the conclusion that spiritual well-being might reduce distress and positively affect overall adjustment.

Moberg (1984), in a methodological study, used a survey approach from previous studies to gather data to develop an 82-item questionnaire. Because he believed a number of indicators were evident in the social sciences and religious

bodies of literature, he developed a scale of spiritual well-being. Seven indexes of spiritual well-being were determined through the use of factor analysis and varimax rotation.

**2. The JAREL Spiritual Well-Being Scale** (Hungelmann, Kenkel-Rossi, Klassen, & Stollenwerk, 1985)

This instrument was developed by Hungelmann et al. (1985). These researchers use a qualitative study with a grounded theory and inductive approach; gathering data and using the constant comparative analysis method to develop emerging theoretical constructs. The purpose was to identify indicators of spiritual well-being in persons 65 years and older. In phase I, data was gathered and the constant comparative analysis method was used to develop emerging theoretical constructs. They interviewed 31 subjects who ranged in age from 65 to 85 years. The subjects came from a variety of settings, including private homes, apartments, and hospitals. The health status of the subjects was self-reported and ranged from good to terminally ill. A subgroup of atheists was included to add to the theoretical aspects of spiritual well-being. Fifteen clustered categories were coded. Finally, six core categories, with properties related to either time or relationships, were coded. Further refinement determined that the categories of spiritual well-being were related to either time "past", "present", and "future" or relationships "ultimate other", "other/ nature", and "self". The three categories related to time were defined as Past, Present, and Future. The three relationship categories were defined as Ultimate Other, Other/ nature, and self. Each category had five properties of spiritual well-being, except the Future category, which had four. Harmony and interconnectedness (final process) were the two major themes, and the basic social process of harmonious interconnectedness constituted the theoretical construct for all the categories.

Harmony and interconnection of relationships were supported by statements that expressed spiritual well-being, including a belief in a Supreme Being and practices related to a particular belief system. Statements of the relationships included family and friends as a critical factor to maintaining a sense of spiritual well-being. Statements of inner harmony and peace were characterized by self-acceptance and the acceptance of life situations. Harmony and interconnection of time were supported by statements that indicated spiritual well-being was a state that resulted from

experiences linked with the past, present, and future. These experiences included growth processes that evolved over the life span and that were often, but not always, connected with a particular religious faith. Most subjects referred to death as the ultimate future orientation.

In phase II, the researcher developed the JAREL Spiritual Well-Being Scale based on the data collected in phase I. A 21-item, 6-point Likert-type scale, was reported to reflect a broad dimension of spirituality and was not so focused on the dimension of religion. The scale can be self-administered, with responses ranging from strongly agree to strongly disagree. Scoring is based on the total JAREL score and the three factors scores, including the faith/ belief dimension, the life/ self-responsibility, and the life satisfaction/ self-actualization dimensions. Potential scores range from 1 to 144 on the JAREL scale and from 1 to 48 on each factor scale.

Application of the JAREL Spiritual Well-Being Scale Instrument: DeCrans, in 1990 used the JAREL Scale and the SWB to assess spiritual well-being in a convenience sample of 114 rural elderly. Ages of subjects ranged from 65 to 91 years, and most were women. The majority of subjects were married, economically comfortable, and perceived themselves to be in good health. Results showed a high level of reported spiritual well-being with both scales. The SWB scale was positively correlated with perceived health. The JAREL scale indicated a positive relationship between spiritual well-being and a person's perception of health. Either age or religion influenced spiritual well-being, according to this study.

Fulton (1992) used the JAREL to compare the spiritual well-being scores of 225 baccalaureate nursing students and 41 nursing faculty. This purposeful sample was selected from nursing schools in Pennsylvania. Students ranged in age from 19 to 30 years, with mean of 24 years, and most students were female. Faculty ranged in age from 46 to 61 years, with a mean of 47 years. The mean scores for the faith/ belief and life/ self-responsibility were significantly higher for faculty than for students. For open-ended questions, subjects described spiritual well-being identically and included a sense of peace, harmony, and contentment in life, a sense of connectedness with the self, God, a supreme/ higher being, or other persons, and meaning, as well as purpose, in life.

**3. The Spiritual Assessment Scale: SAS (O'Brien, 2008)**

This is a standardized instrument that is used to assess adults, measuring individual's cognitive awareness, spiritual beliefs and practices. Items contained in the instrument were derived from a content analysis of qualitative data generated in interviews with 126 chronically ill hemodialysis patients. It measures the construct of spiritual well-being, including the dimension of both spirituality and religiousness/ religiosity and consists of 21 items organized into three subscales: personal faith, religious practices and spiritual contentment. Each of the subscales contains 7 items, and lists Likert-type scales response categories: strongly agree, agree, uncertain, disagree, and strongly disagree. The sample groups that were used to establish instrument reliability consisted of 179 chronically ill persons, including 36 men, 143 women, who were Roman Catholic, Protestant, and Jewish. The findings showed that Cronbach's alpha coefficient for the overall SAS was .92, personal faith was .89, religious practice was .89, and spiritual contentment was .76.

This instrument has been applied in many nursing research studies, for example to examine the relationship between religious faith and adaptation to chronic renal failure and its treatment regimen of maintenance hemodialysis in 126 adult hemodialysis patients (O'Brien, 1982), examining the spirituality and religious beliefs related to health/ illness beliefs and practices of 125 adult migrant workers, examining spirituality/ spiritual perceptions, attitudes, behaviors, and needs of 71 alert and cognitively aware elderly persons in nursing home settings, and examining the coping responses and spiritual needs of 136 patients with HIV infection.

In conclusion, most spiritual well-being assessment tools have some limitations, because some tools were developed based on assumptions regarding religion (O'Brien, 2008), and measured some attributes of spiritual well-being; almost all of the instruments were constructed from the dominant conceptual framework in western culture, religion, and context, especially the Judeo-Christian tradition (Anandarajah & Hight, 2001; Cella et al., 1993; Hall & Edwards, 1996, 2002; Stoll, 1979; Underwood & Teresi, 2002).

. Another tool is JAREL, which is used for measuring spiritual well-being in the elderly population (Hungelman et al., 1985, 1996). However, in regards to the application of this tool, it is mostly used for assessing spiritual well-being in student

groups more so than for elderly groups, and it typically used only in western cultures and contexts.

The last tool is a standardized instrument that measures the construct of spiritual well-being. This tool is named the Spiritual Assessment Scale (SAS), and was developed by O'Brien (2008); it measures three sub-dimensions, including personal faith, religious practice and spiritual contentment. This construction is based on the middle range theory of spiritual well-being during illness. Thus, this tool was chosen to be used for the present study. However, content in this instrument emphasizes the Christian tradition, so it should be modified in order to be appropriate for use for every religion in the Thai culture. Accordingly, in order to accurately assess spiritual well-being in Thai elderly with chronic illnesses, it will be necessary to adapt the spiritual well-being instrument so that it provides a fit measurement of these people both in regards to both religion and culture.

## A middle-range theory of spiritual well-being in illness

This theory was derived from earlier conceptualizations in the area of spiritual well-being, as well as from the nursing model conceived by Joyce Travelbee (1971), in which a central focus of the framework is the concept of finding meaning in an illness experience. Moreover, this theory was inductively derived and concretized through a number of nursing studies exploring the importance of spiritual well-being in coping with illness and disability. A higher degree of personal faith, spiritual contentment and religious practices were associated with feeling positive about and satisfied with other aspects of their lives, and greater hopes for the future, despite sometimes painful and debilitating illnesses. The philosophical orientation and key concepts of this theory are grounded in the belief that the human person, as well as any being possessed of a physical and psychological nature, is a spiritual being capable of transcending and/ or accepting circumstances. Finding spiritual meaning in the experience of illness is the core component of this theory. The key concept of this theory is spiritual well-being itself.

This theory explains each of the core concepts as follows:

An ill individual is presented as having the ability to find spiritual meaning in the experience of illness, which can ultimately lead to an outcome of spiritual well-

being for the sick person. A sick or disabled individual's ability to find spiritual meaning in an experience of illness or suffering is perceived as being influenced by his or her spiritual and religious attitudes, beliefs, and practices, including those reflecting the concepts of personal faith, spiritual contentment, and religious practice. The capacity to find spiritual meaning in an occasion of illness or suffering is influenced by a number of factors. First and foremost, an individual's perception of the spiritual meaning of an illness experience is influenced by personal spiritual and religious attitudes and behaviors. These attitudes and behaviors include variables related to personal faith, spiritual contentment, and religious practice.

Personal faith: belief in God, peace in spiritual and religious beliefs, confidence in God's power, strength derived from personal faith beliefs, and trust in God's providence. An ill person's personal faith- not only whether or not he or she believes in the existence of God, but also his or her trust in the power and the goodness of Gods' care, sense of peacefulness about these beliefs, and courage and strength derived from them is critical to whether the individual will be able to identify and/ or accept an illness experience as having a spiritual dimension.

Spiritual contentment: satisfaction with faith, a feeling of closeness to God, lack of fear, reconciliation, security in God's love, and faithfulness. An ill person may indeed believe in God's existence, his power, his care for all of humankind, and yet not personally feel close to the Lord; his or her faith may be based on a relationship that incorporates fear of God's judgment rather than security in his love.

Religious practice: support of a faith community, affirmation in worship, encouragement of spiritual companions, consolation from prayer, and communication with God through religious practices. While religious practices may not be necessary for one to find a spiritual meaning in illness or disability, coping with illness can be greatly facilitated if a sick person has the support of devotions such as prayer or spiritual reading.

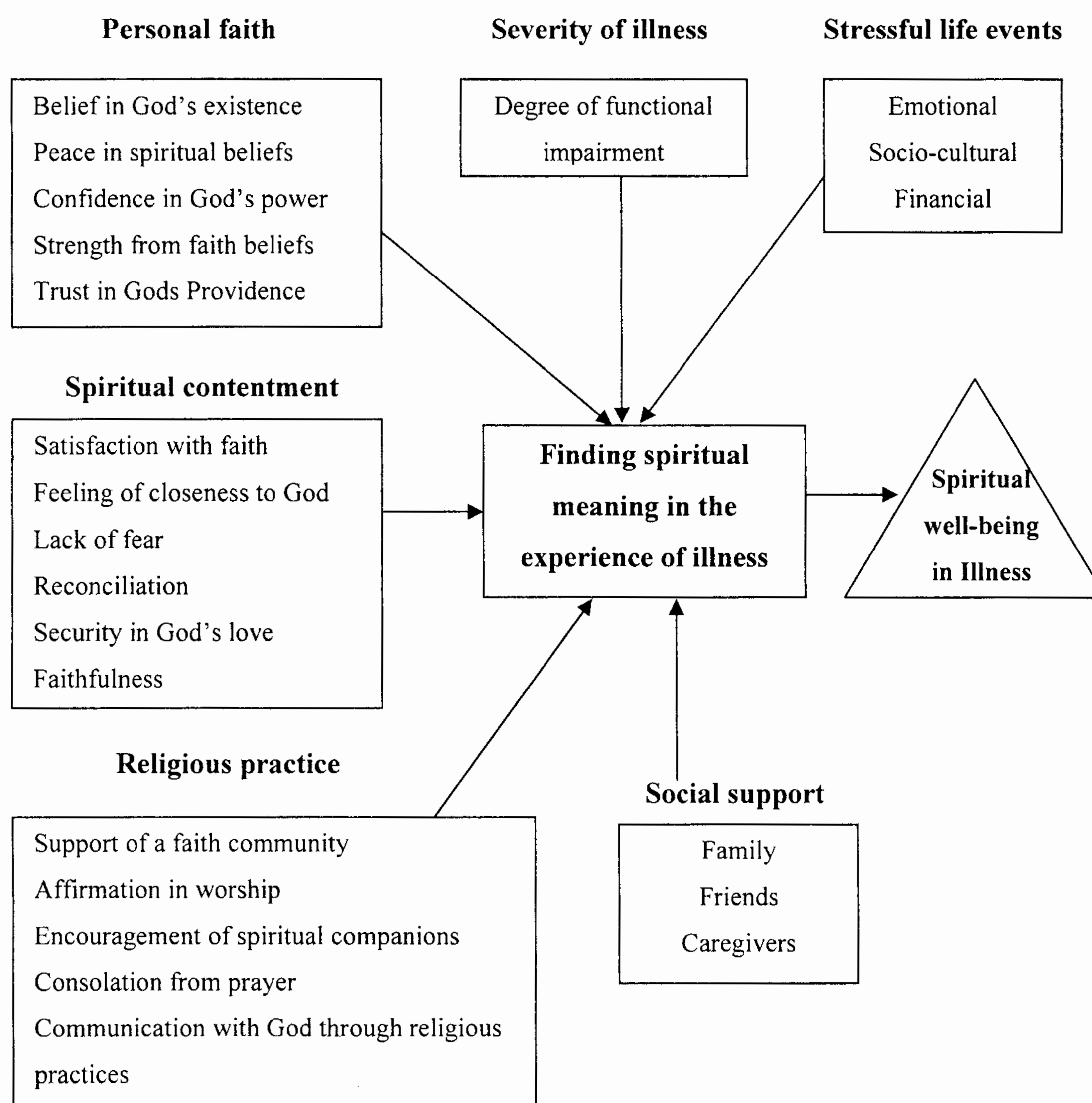



Figure 6 Diagram of the middle-range theory of spiritual well-being in illness (O'Brien, 2008)

The impact of these spiritual and religious attitudes and behaviors on one's finding spiritual meaning in illness may also be mediated by such potentially intervening variables as severity of illness, social support, and stressful life events. Severity of illness refers to the degree of functional impairment. Social support refers to support of family, friends, and/ or caregivers. Stressful life events refer to emotional, socio-cultural, and/ or financial stress factors. These factors are a number of potentially confounding variables that may interfere with a sick person's ability to achieve a sense of spiritual well-being in his or her illness. Finally, the concept of

spiritual well-being in this theory consists of two dimensions, including spirituality or one's personal relationship with God or the transcendent and religiosity or religiousness, reflecting on an individual's practice of his or her faith beliefs. Therefore, empirical referents of spiritual well-being are conceptualized in terms of personal faith and spiritual contentment (spirituality) and religious practice (religiosity or religiousness).

**Summary of the literature reviews**

According to a systematic review of the literature, the elderly are a group of people that are rapidly increasing in number everywhere in the world, including Thailand and they encounter complex problems in their lives, including physical and mental health problems, social problems, and financial problems. These problems of elderly people demonstrate a high volume, high risk, high variation, and high complexity, and health care professionals and policy makers should be concerned with and help in regards to achieving health or wellness, having an improved quality of life and achieving happiness in life. Spirituality is an essential dimension within human beings and brings unity and harmony to the individual. Importantly, spirituality functions as a connection within the bio-psycho-social-spirit dimension in human beings that leads toward wellness or improved health. Accordingly, spirituality plays an important role in helping elderly people face their problems. Elderly people's spirituality was used as an instrument for the development of coping mechanisms, motivating and enhancing mental strength and preparing to solve everyday life problems because the spiritual literature indicates that people who have a high level of spirituality or show spiritual well-being tend to exhibit better coping and are better able to face all of their life problems.

Therefore, enhancing the spiritual well-being of elderly people is an essential responsibility of health care professionals, especially nursing professionals. In addition, spiritual well-being assessment tools can help health care professionals create spiritual care interventions/programs and can provide suitable spiritual care to elderly people, including those receiving hospice care or palliative care setting in both clinical and community settings. However, spiritual well-being is an abstract concept and cannot be directly measured, so it is necessary to develop an assessment tool for measurement. Although spiritual well-being assessment tools presently exist in great

number, they are not appropriate for use with Thai elderly people. Because of religious and cultural differences, the spiritual well-being assessment tool was developed for accurate assessment of Thai elderly people with chronic illnesses. This instrument development will be constructed based on the middle range theory of spiritual well-being during illness, because the literature demonstrates that, regardless of religion, spiritual well-being is a core part of every person. Moreover, spiritual well-being consists of the same core concepts, including personal beliefs, spiritual contentment, and religious practices that are the same part of this theory.

# CHAPTER 3
# RESEARCH METHODOLOGY

This chapter presented the research design and methods organized for the development of the spiritual well-being assessment tool. This study consisted of qualitative and quantitative phases.

## Research design

The interesting phenomenon was the spiritual well-being in Thai elderly with chronic illness. Researchers believe that this phenomenon exists in the world and can be proved, described, explained, and predicted by scientific process. Although, this truth of phenomenon exists in the real world, it is impossible for humans to truly perceive it with their imperfect sensory and intellectual capabilities (Guba, 1990). From literature review, spiritual well-being phenomenon is a humanistic phenomenon as an individual's perceived, diverse views, dynamic process, and developed through aging life experience and is perceived by elderly person who relevant to beliefs system, faith, culture, and environment context (Burkhardt, 1989, 1994; Chiu et al., 2004; Meraviglia, 1999; Dyson et al., 1997; Tanyi, 2002). This phenomenon is both multidimensional and complex. Accordingly, the philosophical of post-positivists was used to explain this phenomenon because this philosophy believe that human phenomena can best be explained in terms of causal relationships, but this causality was assumed to be complex, multiplistic, and interactive. For post-positivist though, the inquiry aims to "approximate the ultimately unknowable truth through the use of processes that critically triangulate from a variety of perspectives on what is worth knowing and what is known" (Cook, 1985 cited in Greene, 1990). Although one can never be sure that ultimate truth has been uncovered, there can be no doubt that reality is "out there." Therefore, in regard to human sensory and intellective mechanisms cannot be relied upon, it is essential that the "finding" of an inquiry be based on as many sources of data, investigators, theories, and methods (Guba, 1990) including both sensory experiences and the perception of those experiences. Accordingly, post-positivist approach accepts the use of both quantitative and qualitative data to

understanding this phenomenon.

Spiritual phenomenon is both multidimensional and complex so this phenomenon requires in-depth study from a variety of prospective approaches intended to capture the reality (Burns & Grove, 2005). Accordingly, only traditional quantitative methods that focus only on a relatively small portion of the human experience and do not fully capture the reality of human experiences do not sufficiently approach the reality of this phenomenon. Conversely, qualitative methods are an essential way to approach the reality of the spiritual well-being phenomenon that is added to the study because the qualitative study is concerned with understanding a human phenomenon that is both complex and dynamic (Burns & Grove, 2005; Lincoln & Guba, 1985). Therefore, the method of this study integrates qualitative and a quantitative methods to conduct this research.

This study integrated qualitative and quantitative methods. The reason that the researcher uses this methodological approach for this study due to the state of the problem in regards to the spiritual well-being phenomenon is not clearly defined in the Thai culture and context and this method suitable to develop new instrument. Qualitative approach can provide insight into the multiple aspects of reality regarding this phenomenon and can capture the knowledge of the full complexity and dimensionality of human experiences, so this method is essential for developing an instrument. Therefore, the purpose of the qualitative phase is to clarify and confirm concept of spiritual well-being that is based on the Thai culture, for elderly persons experiencing chronic illness. Then, the concept of spiritual well-being was constructed from this phase. Next, the quantitative approach is essential for developing a measurement, because this approach can evaluate the effectiveness of the instrument. An effective instrument refers to the ability to index the concepts with precision, accuracy, and sensitivity by reducing measurement error. Accordingly, the concept of spiritual well-being that was clarified, confirmed and constructed from the qualitative phase. Then, the concept of spiritual well-being was led to develop items and to examine the reliability and validity of the instrument in the quantitative phase.

Consequently, the blending of qualitative and quantitative data into a single analysis can lead to insights regarding the multiple aspects of reality or the truth about the phenomenon in question, and can maximize the usefulness of the research

findings. In conclusion, in order to develop an effective assessment tool for measuring spiritual well-being among Thai elderly with chronic illnesses, the development of the instrument and scales in this study was divided into two phases, including the qualitative and the quantitative phases. Total procedures of two phases include concept clarification, theoretical definitions, operationalization, measurement assumptions, developing items, item construction, response categories, scaling, pre-testing, item analysis or reliability and validity (Mishel, 1998). The overall steps of spiritual well-being instrument development in two phases were summarized in figure 7. However, before started qualitative phase, the synthesis of literature reviews of variety research such as integrative reviews, concept analysis, qualitative research, quantitative research, etc were conducted to find the clarifying concept, definition, empirical indicator, and initial model/ conceptual framework of spiritual well-being. Finally, Thai spiritual well-being interview guide (TSWBIG) was developed as an instrument for the qualitative study (Figure 7).

## The synthesis of literature reviews

Before started qualitative study, researcher constructed TSWBIG that is an interview guideline instrument used for collecting data through focus groups and in-depth interviews. The synthesis of the empirical literature on spirituality and spiritual well-being from western and eastern perspectives that consisted of definition of spirituality, spiritual health and spiritual well-being, themes/ concepts of spiritual well-being, and instrument of spirituality and spiritual well-being. Journal articles published between January 1970 and December 2010 were reviewed for synthesis of spiritual well-being literatures. There were 48 articles of literature reviews that were consisted 18 articles related to definition (ranged from 1975 to 2010), 19 articles related to themes/domains (ranged from 1988 to 2006), and 11 articles related to instrument of spirituality and spiritual well-being (ranged from 1979 to 2010). The design of 48 literature reviews of qualitative and quantitative research consisted of concept analysis, integrative review, critical analysis of the literature review, grounded theory, phenomenology, ethnography, descriptive, and correlation study (Appendix C1).

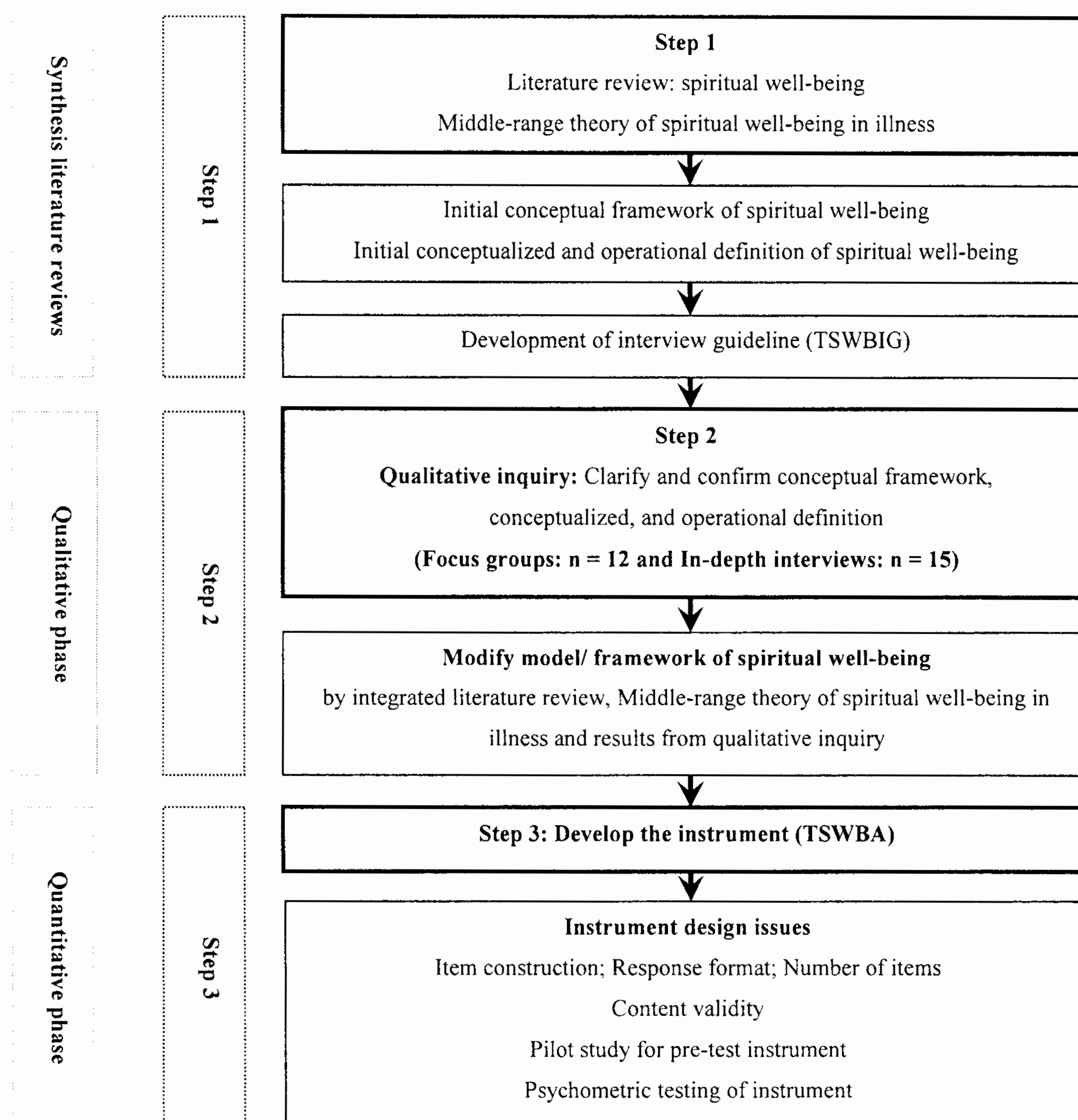



Figure 7 All steps of an instrument development

The first step of this research is the synthesis of the literature reviews process. This step was conducted before started qualitative study, which consisted of the defining or clarifying of the concept in the middle range theory of spiritual well-being in illness and identifying empirical indicators of spiritual well-being. There were several procedures to this step and several methods through which these empirical indicators can be identified. These procedures include conceptualizing the concept, and initial conceptual framework was established and developed interview guideline.

**Conceptualizing and operationalizing the construct**

After synthesis of the literature review, the next step in the development of an instrument is developing the initial theoretical and operational definition, conceptual framework of spiritual well-being in illness and then specifying the variables derived from that definition and conceptual framework (Mishel, 1998). The purpose of this step is to clarify and confirm the concept to be measured, that is the middle-range theory of spiritual well-being in illness based on Thai culture. Summarized by this procedure, the researcher can develop guideline for interviewing in the step of qualitative inquiry.

**Theoretical/ conceptual definition**

This step is to state the initial of theoretical definition and specific dimensions of the concept that can identify by reviewing literature. Then, the generation of relation statements from the literature or inductive work follows in order to provide explanations for the concept and embed it into a theoretical or conceptual framework. The relational statements indicate the associations between the concepts that can then provide a method for testing the construct validity of the instrument. Thus, the initial conceptual definition should emerge from this step, and the method of measurement should clearly reflect conceptual and operational definitions.

**Operationalization**

This step is a movement from the theoretical/ conceptual definition of the concept (abstract) to the development of the measure (concrete). It is a process of determining and defining how the concept will be measured. There are three steps to develop operational definitions, including specifying variables derived from the theoretical definition, identifying observable indicators, and developing a means for measuring the indicators.

After that, the findings of the synthesis of literature review were compared for similarities and differences based on a middle-range theory of spiritual well-being in illness (O'Brien, 2008) about the definition, themes/ concepts. Therefore, the initial conceptual framework (Figure 2) and conceptual and operational definition of spiritual well-being in this study were constructed and defined.

Finally, the TSWBIG was developed based on initial conceptual framework that had 5 core concepts: personal faith, religious practices, spiritual contentment,

finding spiritual meaning in experience of illness, and spiritual well-being. Furthermore, other factors including severity of illness, stressful life events, and social supports will be investigated via a demographic data form. There are six steps to develop the interview guide (Waltz, Strickland, & Lenz, 2005) as follow: 1) Determine the information to be sought or need from respondents. 2) Develop the questions by drafting the actual questions to be asked and the potential responses. 3) Determine the sequence of the questions in order to make sense to the respondent in a logical and realistic fashion. 4) Draft the interview schedule including the questions to be asked and any introductory statement, explicit instructions for the respondents. 5) Pilot-test the interview includes sending the interview guide to review by measurement experts and experts in content area. After revise follow the suggestion of expertise, the interview guide is to try out with respondent. 6) Collect data in setting for the interview. The interview guide is named Thai Spiritual Well-Being Interview Guide (TSWBIG), see Appendix B2.

## Research phases

This study composed of qualitative and quantitative phases. Each phase comprised of the following processes:

1. Research method
2. Research procedure
3. Research setting and study participants
4. Protection of human subjects
5. Research instruments
6. Data collection
7. Data analysis

### Phase I: Qualitative phase

#### 1. Research method

Methodological design was used to support the validity and reliability of the instrument to measure constructs under investigation. Attention to instrumentation procedures can aid in ensuring that all possible steps were implemented to minimize error, as well as to develop reliable and valid measures. Accordingly, in the qualitative phase of this study is important phase that to support the validity and

reliability of the instrument development. The objective of qualitative inquiry is to focus on concept clarification and confirmation, theoretical definitions, and operationalization. To especially enhance external and internal validity, content and construct validity of an instrument in the quantitative phase, the researcher uses concept synthesis that based upon the exploration of the phenomenon by using qualitative methodologies. Data is gathered from participant interviews and observations, and synthesized data from a systematic literature review focused on concept analysis and empirical data from research. After that, data is examined for similarities and differences. Concept synthesis is a useful means for developing or clarifying a concept in the field (Mishel, 1998).

According to measurement theory (Nunnally & Bernstein, 1994), developing measurement begins by clarifying the characteristics, or elements to be measured. The purpose of instrumentation is to produce trustworthy evidence that can be used in evaluating the outcomes or findings of the research. Thus, the reducing of the measurement error, including random error and systematic error (Burns & Grove, 2005; Michel, 1998; Nunally & Bernstein, 1994), is necessarily used to develop instruments in order to increase the ability of them to index concepts with precision, accuracy, and sensitivity of measurement (Michel, 1998). Accordingly, this method used to generate, clarify and confirm the concept in the middle range theory of spiritual well-being during illness, so that the qualitative approach can be better used to explore spiritual well-being as perceived by Thai elderly persons with chronic illnesses.

**2. Research procedure**

Research procedure included conducting qualitative inquiry, undertaking a directed content analysis of the concept, and conducting an integrated of the literature reviews and results from qualitative inquiry. When finished the last step, the conceptual framework of this study was established (Figure 8). After the initial conceptual framework, conceptual and operational definition of spiritual well-being concept and TSWBIG was developed. These were the framework and instrument that used to conduct qualitative study. Next step was undertaking a content analysis; it is the method that can be used to determine the concept and empirical indicators from qualitative data that collect by using interviewing guideline. The detail of method is

described in data analysis part. After conducting content analysis, the conceptual and operational definition, and conceptual framework or model of spiritual well-being in illness from qualitative inquiry were emerged. The last was conducting an integrated review of the literature and qualitative inquiry. According the formerly step, researcher can derive the conceptual and operational definition, conceptual framework via inductive qualitative study and synthetic literature reviews. Then, the comparing of both definition and initial conceptual framework emerged from synthesis of literature reviews and qualitative inquiry in order to summarizing and developing the conceptual framework of spiritual well-being in elderly with chronic illness that was relevant Thai culture and contest.

**3. Research setting and study participants**

3.1 Population

The population in question consists of Thai elderly with chronic illnesses. Participants were included those aged 60 years and over who live in communities throughout all regions of Thailand. These areas consist of the north, northeast, central and Bangkok, east, west, and south regions. Each of these six regions varies by demographic status and religious affiliation. In term of chronic illness, elderly people with chronic illness must be diagnosis by medicine including diabetes mellitus, hypertension, coronary artery disease, cerebral vascular disease, chronic renal failure, etc.

3.2 Sample and setting

The participants, or key informants, were individuals with chronic illnesses aged 60 years and older, representing who report a religious affiliation including Buddhism, Islam, and Christianity, who have lived in communities in these six regions of Thailand.

3.3 Sample selection

For sample selection, the development of the new instrument is concerned with generalization, so participants should have heterogeneous characteristics in order to apply this instrument to a target population. The heterogeneous characteristics of participants are dependent on the factors that influence their level of spiritual well-being. These factors are age (Koenig et al., 2004), sex (Burkhardt, 1994), health status (Lowry & Conco, 2002; Tate & Forchheimer, 2002) and strength and weakness of

relation to religious practices and beliefs (Koenig, 2004; Koenig et al., 2004). Thus, purposive sampling with inclusion criteria used for selecting the key informants in the initial phase of the clarifying concept of spiritual well-being, because, in the qualitative study, purposive sampling has particular features or characteristics which is enable detailed exploration and understanding of the central themes and issues which the researcher wishes to study.

The key informants consist of elderly persons who exhibit a variety of perceived factors of spiritual well-being, such as age, sex, health status, religious observance. In conclusion, the criteria for the selection of participants are 1) 60 years of age or older, chronically ill and dwelling in the community 2) able to respond to questions appropriately 3) without obvious symptoms of mental infirmity 4) willing to participate and to share their experiences 5) to observe a religion of Buddhism Islam, and Christian. Therefore, the characteristic of selected participants as follow:

Threes focus groups as 12 participants who were older adults with chronic illness that were conducted at their home. The first group was 4 older adults who respect Buddhism religion. The participants were equally divided in terms of their faith preference as 4 Buddhists, 4 Islam and 4 Christianity. Four older adults in each group consisted of 2 male and 2 female (Appendix C2). For in-depth interviews, the 15 participants were conducted. The participants were equally divided in terms of their faith preference as 5 Buddhists, 5 Islam, and 5 Christianity (Appendix C2). The characteristics of participants presented in the total number of 27. The mean age of 27 participants was 70.22 years old (SD = 4.74), with their age ranging from 61 to 78 years old. Fourteen of them (51.58%) were middle older adults who age was 70-79 years old. The participants were equally divided in terms of their faith preference Buddhists (n = 9, 33.33%), Muslim (n = 9, 33.33%), and 9 Catholic (n = 9, 33.33%). Twelve participants (44.44%) were married and ten participants were widowed (37.04%). Around thirty seven percent of participants (37.04%) had primary education and 25.93% had secondary education. About 33.33% previously worked as farming and 22.22% previously worked as Government Officer & Employee. Furthermore, three participants (11.11%) were priest and Islamic header (Imam). Almost hometowns of participants were central region (55.56%). The most of them lived with spouse and their child (44.44%) and only their child (40.74%).

Hypertension was the major type of chronic illness that was (55.55%), while duration of illness ranges from 1 to 20 years. The median of duration of illness was 5.00 years (range = 19). Fifteen of participants had duration of illness range from 1-5 years (55.55%), see Appendix C3.

3.4 Sample size

The purpose of this phase is to clarify and confirm the definition and conceptual framework of spiritual well-being by using a qualitative research approach. Saturation of conceptual information was determined the number of participants, estimated to be 15-20 persons. Consequently, in this phase, the sample size is determined by the data generated and the thematic analysis of content. Finally, there were 12 participants for focus group and 15 participants for in-depth interview, totally 27 participants for qualitative study.

**4. Protection of human subjects**

Prior to data collection, the study proposal, interview guideline, and consent forms were approved the committee on human rights related to human experimentation, Burapha University (Appendix A1). A consent form consist as follow: 1) provided the details of the background and professional experiences of the researcher; 2) outlined the purpose of the research; 3) provided assurance of participants' anonymity; 4) confirmed that participation in this research is voluntary; 5) confirmed participants' freedom to withdraw from the research at any time; 6) outlined the potential benefit and application of the research; and 7) provided the major advisor and researcher's contact address and telephone number (Appendix A2). To protect the subjects, participants were given a verbal explanation of the purpose, goals and methods of the study, the potential risks to participants, asked for permission to be interviewed and recorded before the interview, and asked to sign a formal consent before the data collection process started.

5. Research instruments

The instruments used in this portion of the study included a demographic data recoding form, an interview guide, and the field notes. In order to ensure credibility of data, researcher prepared myself for this study in regards to all phases, and review the literature on spiritual well-being before commencing the study and interviewing participants in order to further develop the interview guide.

The Thai Spiritual Well-Being Interview Guide (TSWBIG) contains open-ended questions, developed by the researcher via a systematic literature review of research on spiritual well-being; for example:

1. Do you know about spirituality?
   If you know, please tell me about its meaning ............................
   If you don't know, when you hear the word of "spirituality,"
   what do you think? ................
2. In your opinion, what is the meaning of spiritual health? ..............
3. The person who has spiritual health as well, what has the feature that you think? ........... How there elements are important to produce an effect to your spiritual health? .....................
4. How do you do when you suffer from your chronic illness?...........
5. In your opinion, what is the meaning of spiritual well-being? .........
6. In your opinion, what represented your spiritual well-being? ............

**6. Data collection**

The data collection was conducted by the researcher and used TSWBIG for interviewing individuals (Appendix B2). In order to explore the latent meanings of spirituality, spiritual health and spiritual well-being among Thai elderly people, researcher used focus groups and in-depth interviews for data collection. The researcher told the criteria of subjects to the nurses working at primary care units of each part of Thailand. Then the nurses selected subjects who met those criteria and sent subjects' name and their phone number to the researchers. The researcher called those subjects to make sure that they reached the criteria, told them about the study, and then made the appointment with them; four each from the northern, southern, northeastern, eastern and western regions, and seven from the central/ Bangkok region.

The process of data collection was performed via accepted steps used in qualitative methods, including the building of a relationship or familiarity, explaining of the purpose, goals and methods of the study, the potential risks to participants, asking for permission about interviewing and audio tape recording between interviews by verbalization and signing of a consent form. The researcher asked participants to complete a demographic data form and begin recording and interviewing, started by

using open-ended questions using any types of information that aided the researcher in his or her understanding of the contextual and personal experiences of the elderly individuals' spirituality, spiritual health, and spiritual well-being summarizing the interview content and confirming these summaries with the participants. These processes can increase credibility.

The duration of the interviews ranged from 45 to 90 minutes and had average 45 minutes. Two participants who were provided time for them and supported them after they felt sad and cried when they talked about their suffering events. As a result, the duration of interviewing was differently. Furthermore, the interview problem was some participant cannot understand the questions that are very much abstract. Thus, researcher tried to explained and used the easily question replacing an abstract question, for example; *"In your opinion, what is the meaning of spiritual well-being?"* May be changed *"If talk about the happiness of your mind, what do you think?", "How do you do when you face the problems or suffering?,"* etc.

Throughout the interviewing process, the researcher take field notes to record what she had observed and heard during the interview and the comments on the environment of the interview place, and recorded her thoughts and feelings about the interview or issues related to the study. After each interview, each audio tape recording is transcribed verbatim by the researcher along with the field notes and observations that were made by the researcher during and after the interview. The researcher carefully listens to each tape, transcribes it, and then read it several times. After that, the directed content analysis was conducted.

**7. Data analysis**

Qualitative content analysis is a method for subjective interpretation of the content of text data through the systematic classification process of coding and identifying themes or patterns (Hsieh & Shannon, 2005, p. 1278). It is one of numerous research methods used to analyze test data and focuses on the characteristics of language as communication with attention to the content or contextual meaning of the text. Text data might be in verbal and might have been obtained from narrative responses, open-ended survey questions, interviews, focus groups, or observation (Kondracki & Wellman, 2002). The content analysis have variety approaches to perform content analysis based on the degree of involvement of

inductive reasoning such as conventional content analysis, directed content analysis, or summative content analysis (Hsieh & Shannon, 2005).

For existing theory or prior research exists about a phenomenon that is incomplete or would benefit from further description as this study, the researcher choose to use a directed approach to perform content analysis. The goal of a directed approach to content analysis is to validate or extend conceptually a theoretical framework or theory. Existing theory or research can help focus the research question. It can provide predictions about the variables of interest or about the relationships among variables thus helping to determine the initial coding scheme or relationships between codes (Hsieh & Shannon, 2005). Accordingly, this approach of content analysis uses existing theory or prior research so the researcher begin by identifying key concepts or variables as initial coding categories. Next, operational definitions for each category are determined using the theory and prior research literatures (Potter & Levine-Donnerstein, 1999; Mayring, 2000). Therefore, this study used directed content analysis, where initial coding starts with a theory or relevant research findings. Moreover, the researcher used existing theory or prior research to develop the initial coding scheme prior to beginning to analyze the data. As analysis proceeds, additional codes were developed, and the initial coding scheme was revised and refined. Samples usually consist of purposively selected cases that reflect the research questions being investigated. Moreover, it pays attention to unique themes that illustrate the range of the meanings of the phenomenon, rather than mere statistical significance.

Therefore, data was analyzed by using directed content analysis (Mayring, 2000) that was used to determine the presence of certain words or concepts within texts or sets of texts. These study processes can be divided into the following steps:

**Step 1: Arranging data for qualitative content analysis**: The data needs to be transformed from interview transcripts into written text format. All audiotapes of interviews were transcribed verbatim. Each line of the transcription was numbered, and field notes were added to the right margins at the appropriate places. Each transcript was readied carefully to maximize the understanding of all of the data from the interview and highlight all text that on first impression appeared to represent spirituality, spiritual health and spiritual well-being phenomena. This type of data can

reveal or model information related to people's behaviors and thoughts.

**Step 2: Developing categories and coding schemes.** The next step in analysis was to code highlighted passages using the predetermined codes. Any text that could not be categorized with the initial coding scheme would be given a new code. Categories and coding schemes can be derived from three sources, including the data itself, previous related studies, and theories that can be developed both inductively and deductively. Furthermore, an initial list of coding categories can be generated from the model or theory and the model or theory may be modified within the course of inductive analysis as new categories emerge (Miles & Huberman, 1994). However, it still applies that the categories should be defined in a way that they are internally as homogeneous as possible, and externally as heterogeneous as possible (Lincoln & Guba, 1985).

**Step 3: Test coding on sample text.** The best test for clarity and consistency of category definitions is to code a data sample. After the sample was coded, the coding consistency needs to be checked by inter-coder agreement. If the level of consistency is low, the coding rules must be revised. Doubts and problems regarding the definitions of categories, coding rules, or categorization of specific cases need to be discussed and resolved within the research team (Schilling, 2006). Coding sample text, checking coding consistency, and revising coding rules is an iterative process and continue until sufficient coding consistency is achieved (Weber, 1990).

**Step 4: Drawing conclusions from the coded data.** This is a process of making sense of the generated categories. At this stage, researchers make inferences and present their reconstructions of meanings. Data that cannot be coded are identified and analyzed later to determine if they represent a new category or a sub-category of an existing code. The choice of which of these approaches to use depends on the data and the study's goals. However, the findings from a directed content analysis offer supporting and non-supporting evidence for a theory. This evidence can be presented by showing codes with exemplars and by offering descriptive evidence.

**8. Trustworthiness**

For the evaluation of the quality of research, Lincoln and Guba (1985) proposed four criteria to evaluate naturalist research work, including credibility, transferability, dependability, and confirmability. These criteria are equivalent to internal validity, external validity, reliability, and objectivity in quantitative study.

**8.1 Credibility** refers to the "adequate representation of the constructions of the social world under study" (Bradley, 1993, p.436). Lincoln and Guba (1985) recommended a set of activities that help improve the credibility of research results: prolonged engagement in the field, persistent observation, triangulation, checking interpretations against raw data, peer debriefing, and member check. To improve the credibility of qualitative content analysis, researchers not only need to design data collection strategies that are able to adequately solicit the representations, but must also design transparent coding and conclusion drawing processes that are able to make credible inferences from the raw data. The coders' knowledge and experience has a significant impact on the credibility of research results. It is necessary to provide coders with precise coding definitions and clear coding procedures. It is also helpful to prepare coders via a comprehensive training program (Weber, 1990).

**8.2 Transferability** refers to the extent to which the researchers' working hypothesis can be applied to another context. It is not the researchers' task to provide an index of transferability; rather, they are responsible for providing data sets and enough descriptions to make the judgment of transferability possible on the part of other researchers. Therefore, researcher explained characteristics of elderly participants of this study that are variously including home town that included six areas of Thailand, religion that included Buddhism, Islam, and Christianity, occupation, type of chronic illness.

**8.3 Dependability** refers to "the coherence of the internal process and the way the researcher accounts for changing conditions in the phenomena" (Bradley, 1993, p. 437). Dependability is determined by checking the consistency of the study processes so the researcher described and provided enough information and the changes that occur in the setting and how these changes affected the way the research approached in the study.

**8.4 Confirmability** refers to "the extent to which the characteristics of the data, as posited by the researcher, can be confirmed by others who read or reviews the research results" (Bradley, 1993, p. 437). The major technique for establishing dependability and confirmability is the audit. The difference is that dependability is determined by checking the consistency of the process of the study, while confirmability is determined by checking internal coherence of the research product, namely, data, findings, interpretations, and recommendations. The materials that researcher used for auditing include raw data, field notes, theoretical notes, the coding book, process notes and so on. The audit process has five stages: pre-entry, determinations of auditability, formal agreement, determination of trustworthiness (dependability and confirmability), and closure.

## The result from directed content analysis

The process of data analysis for this study used directed content analysis (Mayring, 2000) and analysis began after the first interview. The researcher listened to the audiotapes and transcribed them verbatim. Then the researcher read the transcripts to understanding the hidden meaning in the text and reexamined the text with a back and forth movement between the whole text and parts of the text to gain deeper comprehension of the emerging themes. Thus, this part presented the finding after conducted directed content analysis including the definition of spiritual well-being; the conceptual framework of spiritual well-being in illness reflected from Thai elderly and Thai culture.

**1. Definition of spiritual well-being:** Spiritual well-being is a good indicators o spiritual health. Participants provided the meaning of spiritual well-being is an expression of personal feeling and behavior that related to strengthen spirit or spiritual dimension. Therefore, the spiritual well-being can observe from the expression of joy and happiness, peaceful mind, feeling in adequate, having hopefulness, having a purpose in life, and having a strong mind to living. These the example of feeling and behaviors arise from the presence of spiritual well-being.

*"Spiritual well-being is the happiness when I done any good deed, achieved the successful in my job, and saw other people had happiness such as after I made merit and virtue by supporting or helping other people who had trouble or suffering,*

*I felt glad, happy, and comfort. Moreover, although I'm poor, I satisfied in my life in the present so I felt happiness." (ID2)*

*"I believe that my life destine by my action in the past life so I must accept its results such as my illness in this life. When I though like that, I felt comfort, happy and relaxed, and not agitated mind or anxiety. (ID3)*

*"After I made merit and virtue by offering food to the monks' bowl in every morning, giving alms, pouring water for merit-making and consigning merit to pass away of my ancestors, praying every night, I felt comfort, happy, joyful mind, delightful mind, peaceful mind, energetic mind and body, and good sleeping through night." (ID4)*

*"Person who had spiritual well-being may be the person who has the mind that knows what is good or bad. Someone with a good spirit is person who has the mind that is aimed to good deed with good hearts. The mind was raised to a higher level and is pure. A peaceful mind is what they leave any suffering to behind them because they know that is a bad thing for them. Then, I hope that the God will help me to get well soon."(ID6)*

*"My spiritual can express by lifestyle consistent with my beliefs, faith and past experiences. My life style that related to spiritual dimension is pray to God and practice follows by the teaching from God. Thus, when I have suffering, my mind doesn't think a distraction and has calmed down and peaceful mind in the end. In order to long living with my children and lover person, I must be practice to think like that" (ID7)*

**2. The conceptual framework of spiritual well-being of Thai elderly with chronic illness**

This conceptual framework emerged from integration of result of qualitative study and synthesis of literature review and middle-range theory of spiritual well-being in illness. Therefore, this part is described following each themes and category that emerged in conceptual framework. According to conceptual framework, spiritual well-being is a dynamic process that depends on individual's experience including lived experiences and personal background. A dynamic process of spiritual well-being can describe that person had cumulative lived experiences either good or bad since birth to old age. Furthermore, there were many things to bring at birth, such as

nationality, race, age, and sex, including family nurture, education, socio-cultural tradition of the homeland or habitats that create the human spirit or spirituality. Next, the spirituality is developed based on the age-old and experience gained. Moreover, the things that were said above instruct people to have believed and faith and used them on guidelines in their lives. Therefore, someone with a good spiritual health should have a feeling that life is in harmony with nature or environment in which they live, have a selfless sacrifice, and try to find meaning of life. This study focuses on the study in the Thai elderly who were chronically ill so the life experiences that their face were suffering from the chronic illness and finding the meaning of life while they faced with chronic illness. Finally, spiritual well-being was an indicator that measures the level of spiritual health.

The result of the directed content analysis found three themes included individual's experiences, spiritual health, and spiritual well-being. However, this study focused on measuring only spiritual well-being so other themes/ concepts not measured in this study (Figure 8).

**Spiritual well-being**

For in-depth interviews, the most of participants perceived that people who have spiritual well-being or have the happiness of the soul were people who expressed as follows: people who have a good heart and doing well, have a kind of heart, have a pleasure or glad to see others happy, give a love with all creature, likes to help others without expecting a return, unselfish, not encroach others, have a satisfied with the existing one, have a satisfied with what is available at that time. Moreover, people who have spiritual well-being should have other characteristics that expressed to feeling and capability to living with harmony and happiness. Participants talk about the way of their live by using the principle of religious teaching, faith with something, and respect with something or someone. These things teach them to live consciously, is to not cause any trouble that bring peace and happiness in their life. They can live smoothly with fewer problems and obstacles. They are indefatigable with problems and obstacles in their life. They try to do good deed with perseverance, patience and self-development, always. Although there are more and more problems or have any changes, they can live with balanced and happy because they can bring wisdom, and knowledge exists to utilize and implemented correctly to practice in

daily living. In addition, they view the world as fact, not self-obsessed, and no sense of self-centered and can live harmoniously with nature that make them to understand the realities of life so they have ability to adapt to live in this world with peaceful and happiness.

A sense of happiness refers to the feeling of absolute contentment all of things in life at the present time caused by having life satisfaction, peaceful mind (sa-ngob), mindfulness (sa-ti), loving kindness (metta) and compassion (karuna) and mental strength. All participants stated that happiness was raised when they practice the religious activities such as offer food the monks' bowl, pray and meditation, feel of satisfaction in their life in this time, help/ support the other persons and see the happiness of other persons. Peaceful mind refers to a quite state of mind that comes from the practice of meditation, a happy state of mind after performing the meritorious acts, and the ability to feel satisfaction in life. In addition, letting go of conflicts, problems, anger, and worries reflected the participants' need to find and maintain a peaceful mind. Satisfaction in life, regardless of what the participants had faced, was the result of past actions. Most of the participants stated that their religious beliefs and practices helped them to understand the reality that life is processed under the law of karma. This understanding also helped them to remain calm in the face of difficulty or suffering in life. Meritorious acts and other religious practices served as a means to release them of fear, anxiety, and disappointment in life.

Accordingly, this theme can be grouped in to 5 categories that consisted of life equilibrium, a purpose in life, happiness in life, an effective way of coping, and passion for life. These five categories may be representing the characteristics of spiritual well-being that indicate the level of spiritual health.

**Category 1: Life equilibrium**

*"When I have a strong spirit, I can live a normal life and feel happy although everything around me changes to bad or good. I must live in all conditions whether what will happen."(ID3)*

*"Even if I was sick, I can do everything as other people. If I do not think that I'm ill and I think that I'm the same as others. I'm a one healthy person. I believe that my health is depending on my mind. If I have a strong mind and do not be afraid to change anything, then, I must adapt myself to live with the changes so I can*

*survive. If I do not adapt, I must die." (ID 5)*

**Category 2: A purpose in life**

*"Today, I live for my children. I need to raise them until they were able to survive on their own. Otherwise, I would die with concerned. Moreover, I want to see success in their lives." (ID2)*

*"Today, I'm alive to perform of my responsibility to reward the good, to be beneficial to local communities and society. In addition, I hope that my next life will be healthy, more comfortable than in this life when I do like that" (ID3)*

*"What I want most in my life is to live with Allah and to be close to God. There is no suffering. If I'm not good deed, I would not meet God. No one can help me. I must help myself so I must gather good deed in the present life in order to have eternal life with my God in the next life." (ID 6)*

*"I lived these days for serving Allah's commanded me to do things written in the Quran. I need to make everything that he commanded. When I do like that, I feel good and happy before I died." (ID7)*

*"While I'm alive, I will pray for blessings from God to my children, everyone is happy. There are walks of life in a way that is a right way and not corrupt. For one day ahead, they will have to live with God as well." (ID11)*

**Category 3: Happiness in life**

*"I believe that the un-greed mind, good-hearted, kind-hearted, delighted, and calm lead to the comfortable and firm of body." (ID1)*

*"I believe that mind related to the body so the delighted, joyful, and peaceful mind leads to the healthy body for me. Moreover, the vigorous mind leads to the firm body." (ID3)*

*"The mind knows how to live with a truly happiness that had spiritual well-being." "I worship, and pray homage to a Buddha image everyday because my mind has the Buddha as depends on it. When I face life problems or suffering I will think the Buddha or Buddha's teaching. After that, I feel happy, pleasant, peaceful mind, and calm down. (ID5)*

**Category 4: An effective way of coping**

*"If I have spiritual well-being, I can take my life in a way that was accurate and good. When I faced a problem, I can solve problems in a way that it should be*

*because it gives me a power and encourage to do something to reach the success that I set without feeling the obstacles that discourage it." (ID 6)*

*"When I had the pleasure of the soul, my mind has not a distraction, but has a peace. When I face any life problems, I have an intelligence to figure out a solution that is accurate and appropriate." (ID11)*

**Category 5: Passion for life**

*"I think that persons who have spiritual well-being must have a strong adhesion to something that they believe. I believe that it makes me to have the strong mind and receive encouragement to combat the any problems in my lives. In addition, it makes me to know that I'm valuable and know that my lives have meaning." (ID5)*

*"If I have spiritual well-being, I can take my life in a way that was accurate and good although I have any problems or suffering. I can solve problems in a way that it should be and I can live with suffering from my illness as a normal life. I can do like that because spiritual well-being gives me a power and encourage me to do something to reach the success that I'm set without feeling obstacles and discourage." (ID 6)*

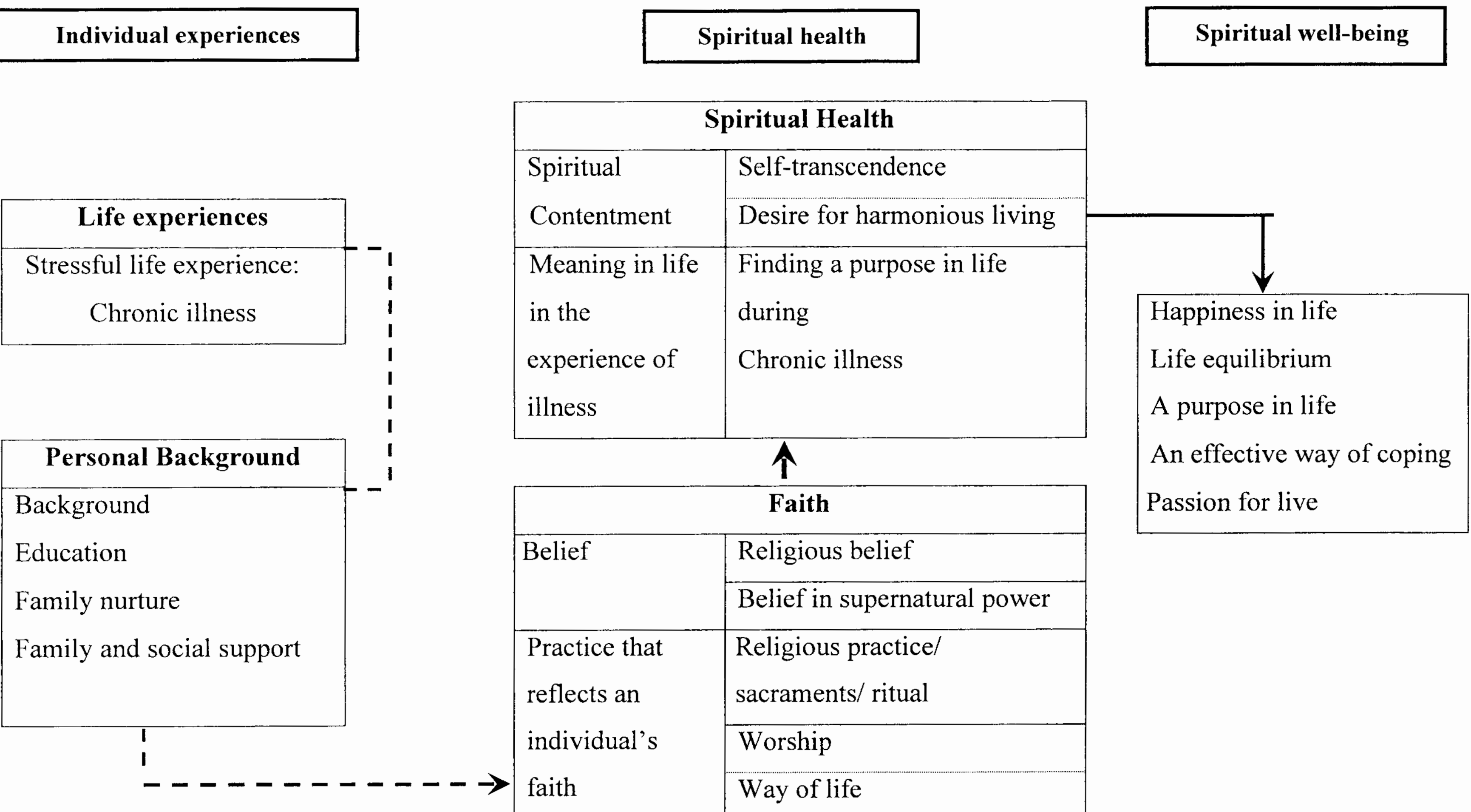



Figure 8 Conceptual framework of spiritual well-being

*** The dashed line indicates concepts not measured in this study

**Phase II: Quantitative phase**

This phase started by developing items pool from themes and categories that emerged from qualitative study and described the processes to develop the elderly Thai spiritual well-being assessment tool (TSWBA).

**1. Research method**

According to measurement theory (Nunnally & Bernstein, 1994), developing measurement of this study begins by clarifying the characteristics, or elements to be measured in the qualitative study. This method can reduce the measurement error, including random error and systematic error (Burns & Grove, 2005; Michel, 1998; Nunally & Bernstein, 1994), that is necessarily used to develop instruments in order to increase the ability of them to index concepts with precision, accuracy, and sensitivity of measurement (Michel, 1998). Next step, the quantitative method used to examine psychometric properties including content and construct validity and internal consistency reliability of instrumental construction.

**2. Research procedure**

After constructed conceptual framework of spiritual well-being and 5 categories of spiritual well-being theme, these categories were used to develop. The TSWBA in the quantitative phase. This processes consisted of developing items, designing the items and scales, quantifying content validity, conducting preliminary item try-outs, performing a field test, conducting item analysis, selecting items to retain, conducting validity studies, and repeating or evaluating the reliability (Michel, 1998; Nunally & Bernstein, 1994). Those steps in two phases show in figure 9.

2.1 Developing items: This step includes instrument format, printed layout, instructions to the subjects, wording and structuring of the items, response format and numbers of items. The purpose of this step is to develop a valid scale to assess spiritual well-being in older adults with chronic illnesses. There are many methods for generation of items. For this study, the combination of literature reviews, target population interviews and qualitative investigation of the concept by using content analysis all is employed. When concepts emerge, data bits are categorized according to similar themes, so themes become the dimensions of the scale and the data bits are grouped into items. For this process, the researcher considers the scale as an attitudinal or personality measure.

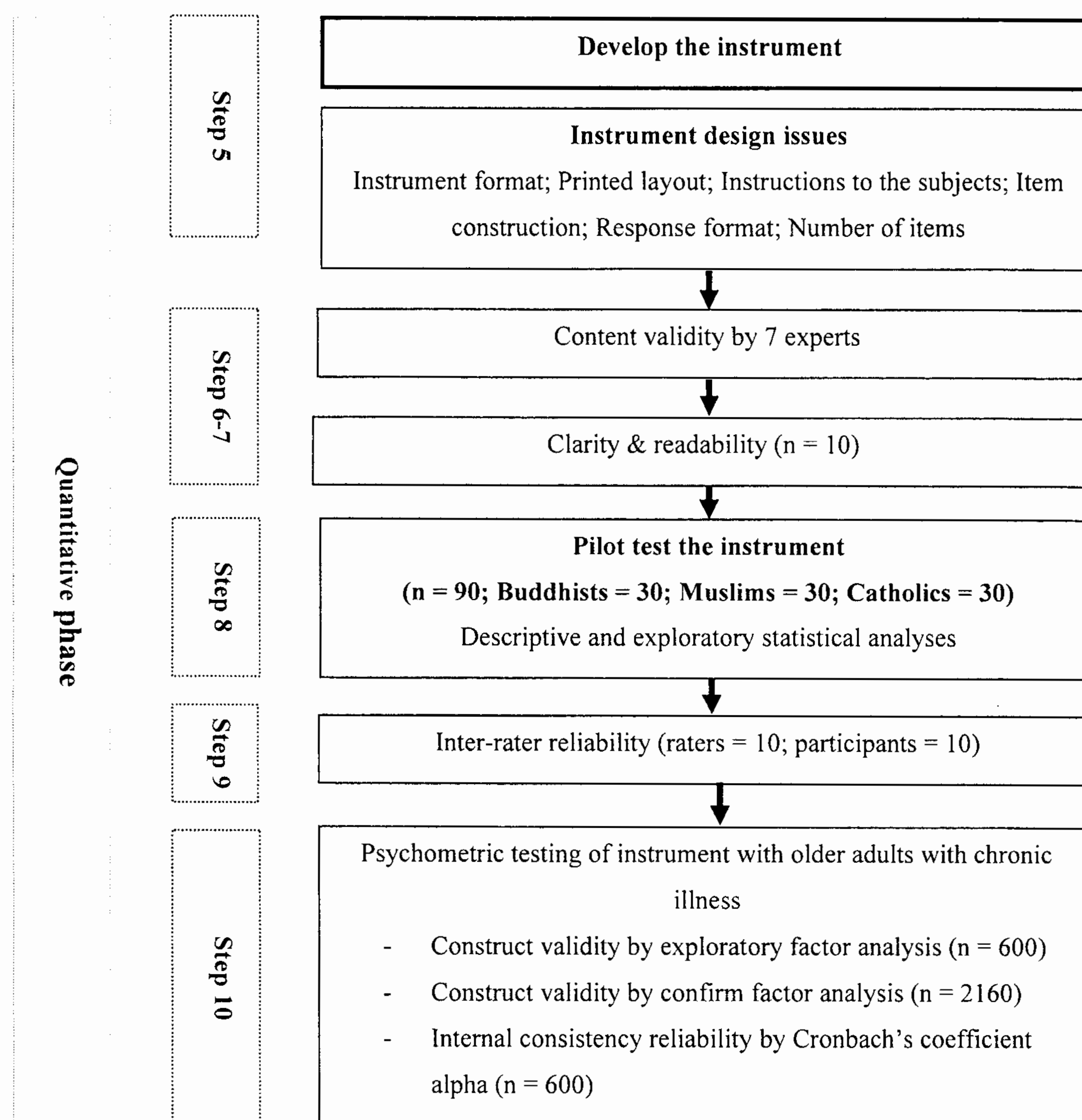



Figure 9 Process and steps of an instrument development, especially quantitative phase

2.1.1 Instrument format: A rating type scale is selected to use for developing the present research instrument, which is appropriate for measuring an interesting concept because this scale is subject centered having as its purpose the scaling of respondents, and items can reflect divergent position on the dimension. Furthermore, the sum of scores of the individual's responses to all items can interpret as the subject's position relative to the measured dimension.

2.1.2 Printed format: Key criteria for determine a suitable print format that used for the instrument should be ease of handling and reading, clarity, and an

organizational style that is easy to follow. The respondents of this study are elderly people who hardly to read and answer the instrument by themselves so the interviewer is necessary to use for data collection.

2.1.3 Instructions to the subjects: The instructions of questionnaire have two goals that are to give the participants/ interviewers in the study directions for using the scale and to give the participants/ interviewers a common frame of reference in regard to a specific construct.

2.1.4 Wording and structuring of the items: This step is to determine how the items will be worded and structured when they are placed in the instrument. It is not easy task. There are problems that can occur when wording items that can contribute to measurement error. To help decrease measurement error, items need to be stated as clearly and as unambiguously as possible. The researcher also wants to avoid items that are redundant, meaningless, or confusing.

2.1.5 Response format: These response options are dichotomous or continuous scale. This study selected 5-point scale response format that ranged from 0 = strongly disagree to 4 = strongly agree. A sufficient range of responses is important in item development because without it, inter-item correlations are restricted and weak. In conclusion, after the pool of items was completed, a five-point rating scale was utilized to measure the level of spiritual well-being for each item. The description of rating scale responses ranged from 0 to 4, with 0 = "Strongly disagree"; 1 = "Disagree"; 2 = "Sometime agree"; 3 = "Agree" and, 4 = "Strongly agree." The sum of the individual item scores was an individual's total score was interpreted as the existing level of spiritual well-being for that participant. Higher scores suggested a higher level of spiritual well-being.

2.1.6 Numbers of items: The number of items should suitable because instruments that contain many items and have several response scales can be a burden for these subjects. However, too few items cannot capture the construct so the researcher constructed the items that cover the concept. It is the best to have a large pool of initial items. Finally, the exactly number of items were determined by item analysis that needs to obtain an acceptable level to reliability especially, internal consistency reliability.

Finally, a total 57 items on five domains was generated for TSWBA: 12 items related to happiness in life, 5 items related to life equilibrium, 5 items related to a purpose in life, 15 items related to an effective way of coping, and 20 items related to passion for life.

2.2 Quantifying content validity: As items and scales were constructed, the next step were consisted of assessing the content validity by selecting experts who have specific expertise for deciding upon the relevance of the content to the concept to evaluate the content validity of each item and of the total scale. The purpose of this step is to clarify that the content of the instrument can be representative of the concept within the theory, so that the completeness of items covers the important areas of the domain they are attempting to represent. After that, the researcher revised items according to the expert's recommendation.

Content validity measures the comprehensiveness and representativeness of the content of a scale. Burns and Grove (2005) stated that content validity is obtained from three sources: literature, representatives of the relevant populations, and experts. Content validity could also be established in two stages: development and judgment state. The first step of instrument development is to identify 'what domains are construct' should be measured. This can be determined through literature reviews, in-depth interview and focus groups by using qualitative method. However, content validity in the judgment state is based on quantitative method. To examine the content validity in this stage, professional subjective judgment is required to determine the extent to which the scale was designed to measure a trait of interest (Nunnally & Bernstein, 1994). Content validity is a subjective judgment of experts about the degree of relevant construct in an assessment instrument. However, inclusion of at least five experts in that fields (Burns & Grove, 2005) or five to ten experts (Waltz et al., 2005) would be useful to judge the content domains of a scale through use of rating scales.

The content validity index (CVI) developed by Waltz and Bausell (1983) was used. The experts were then asked to rate each item based on relevant, clarity, simplicity and ambiguity on the four-point scale (Appendix 3). The formula of CVI as follow:

$$\text{CVI} = \frac{\text{The number of items given a rating of quite – very relevant by both raters}}{\text{Total number of items}}$$

However, this study have more than two experts rate the items on measure so each of pair raters was calculated for each item, domain and the whole questionnaire. Items with a CVI score of at least .80 or greater establishes content validity (Waltz et al., 2005). Items that have lower CVI scores were revised and resubmitted to the experts until they reached .80. Items which were unclear or difficult to understand were modified as suggested by ten participants.

As a result, to test items clarity and content validity, these items (First version of TSWBA) were submitted to examination for content validity by seven experts in Buddhism, Islam, and Christianity (Appendix B1). These experts were knowledgeable about spirituality, comparative religion, spirituality in nursing, and spiritual development. Based upon the experts' suggestions, 10 items were reworded for clarity, yielding a total of 57 items. Next, the content validity index (CVI) of the 57 items (Second version of TSWBA) was calculated based on an analysis by seven experts that provided CVI scores of relevance .87, clarity .85, simplicity .88 and lack of ambiguity .87 (Appendix C4, C5). Next, the second version of the TSWBA was revised again for clarity and readability by interviewing 10 available elderly subjects using qualitative processes. After finished this step, the third draft of assessment was established, so the third draft of assessment was to pretest in the pilot study phase.

2.3 Pilot test the instrument: This step is to conduct preliminary item tryouts. Items that are constructed in the previous steps were tested on 15 to 30 subjects who are representative of the target population. The subjects are asked to give feedback about the items in the scale in terms of appropriateness and clarity of item wording. After testing, a debriefing session was held during which respondents invited to comment on items and offered suggestions for improvement. Descriptive and exploratory statistical analyses such as mean, standard deviation, response distributions, correlation coefficients and outlier analysis were performed on the data from these tryouts. Then, the researcher revised items again on the basis of this analysis and comments from respondents.

As a result, ninety elderly samples were selected to participate in a pilot study that was performed to determine which items needed to be retained, revised, or eliminated by the use of mean, standard deviation, response distributions, correlation coefficients. Nunally and Bernstein (1994) identified inter-item correlations that were either too highly correlated ($r \geq .80$) or not correlated sufficiently ($r < .30$) with one another, and those that should be dropped. Thus, only items that had correlation coefficients ranging from .30 to .80 were retained. After considered these analyses, in the end, there 57 items were retained.

2.4 Testing the psychometric properties of instrument

2.4.1 Performing a field test, conducting item analyses, and selecting items to retain: For this step, the final items draft of the instrument were performed to test via a large number of subjects representative of the target population by using stratification with disproportionate sampling in order to reduce threats to external validity for estimating the reliability and construct validity. The instrument is the assessment tool that constructed in the qualitative phase. For item analysis, Cronbach's alpha coefficient used to assess internal consistency reliability, which focuses on multiple indicators of a concept measured at a similar point in time because internal consistency reliability implies that all the items measure the same concept. Thus, item analyses were used to perform item-item correlations and item-total correlations, since the coefficient is most useful in evaluating items for retention in the scale (Burns & Grove, 2005).

2.4.2 Conducting validity studies, and repeating or evaluating the reliability: To assess the construct validity of the scales, exploratory and confirmatory factor analysis is used. The present study employs a sample of 20 cases per item. After that, the researcher repeatedly analyzes internal consistency reliability after selection of factors and items from the factor analysis. In addition, random error can occur in this step as a consequence of fluctuation in memory or mood and environmental conditions that affect the object measured. Thus, the elderly persons who answer the assessment questionnaire should be given sufficient time.

**3. Research setting and study participants**

3.1 Population: The population group consists of Thai elder people with chronic illnesses. They are at least 60 years old and reside in one of the six regions in

Thailand. These six regions include the North, Northeast, Central and Bangkok, East, West, and Southern regions, with a variety of demographic characteristics and variations in religious status.

3.2 Sample and setting: The participants are elderly persons with a chronic illness, aged 60 years and older, representing three religious including Buddhism, Islam, and Christianity; people who live in communities in the six regions of Thailand.

3.3 Sample selection: This study used probability sampling; that was a stratified random sampling with proportionality. The sample list contained elderly people with chronic illness in the six region of Thailand. In each of these regions, researcher began by investigating provinces that cover three religions, including Buddhism, Islam, and Christianity. Then, these provinces were selected by simple random sampling. After that, the samples were selected by disproportionate sampling; however the population of elderly persons in each religion in each province was likely to be of unequal proportion. The researcher used disproportionate sampling because the result of developing instrument needs the essential theme of spiritual well-being for each religion.

There were four steps in stratified random sampling to select the participants and the number of participants in psychometric properties testing, as shown in table 1 and figure 10.

1. Simple random sampling of six provinces from six regions of Thailand. However, the province that included for selection must cover three religions including Buddhism, Islam, and Christianity.

2. After six provinces were selected from six regions, a simple random sampling of one district for each religion and each province was conducted.

3. After six districts for each religion and each province be selected, a simple random sampling of one sub-district for each religion and each sub-district was conducted.

4. From the selected sub-districts, the people 60 year and older with chronic illness were randomly selected from name lists of primary care unit.

3.4 Sample size: The purpose of the study in this phase was to develop an assessment tool and use exploratory and confirmatory factor analysis. Hair, Anderson,

Tatham, and Black (1995) suggested that a sample size fewer than 50 observations is not adequate analyzed by factor analysis, and a sample size that is larger than 100 is preferable for use of factor analysis. As a general rule, the minimum number is to have at least five times as many observations as there are variables to be analyzed, and the more acceptable range would be a ten-to-one ratio. However, the highest case-per-variable ratios will better minimize the risk of over-fitting the data and maximizing the generalizability. Therefore, this study used 10 cases per variable for exploratory factor analysis on 57 items of instrument, and used 20 cases per variable for confirmatory factor analysis. Therefore, there were 600 persons for exploring number of factor by using exploratory factor analysis and 2160 persons for confirm model of spiritual well-being by using confirmatory factor analysis.

**4. Protection of human subjects**

Prior to data collection, the study proposal, instrument, and consent forms were approved the committee on human rights related to human experimentation, Burapha University (Appendix A1). In terms of the protection of human subjects, participants were given a verbal explanation of the purpose, goals and methods of the study, the potential risks to participants, and were asked for permission before answered the questionnaires. Following this discussion of the study, participants were asked to sign a formal consent form (Appendix A2) before started process of data collection.

**5. Research instrument**

The instrument in this phase was The Elderly Thai Spiritual Well-Being Assessment Tool (TSWBA), see appendix B3. This tool was derived from the qualitative phase. The tool comprised of 5 components of spiritual well-being that were happiness in life, life equilibrium, a purpose of life, an effective of coping, and passion for life.

Table 1 Number and setting of participants that selected by stratified random sampling (n = 2,160)

| Region | Province | Religion | District | Sub-district | Number |
|---|---|---|---|---|---|
| Central | Phra Nakhon Si Ayutthaya | Buddhism | Phra Nakhon Si Ayutthaya | Pratu Chai | 120 |
| | | Islam | Wang Noi | Bo Ta Lo | 120 |
| | | Christianity | Bang Sai | Mai Tra | 120 |
| North | Phitsanulok | Buddhism | Mueng Phitsanulok | Ban Khlong | 120 |
| | | Islam | Mueng Phitsanulok | Nai Mueng | 120 |
| | | Christianity | Mueng Phitsanulok | Ban Krang | 120 |
| North-East | Nakhon Ratchasima | Buddhism | Pak Thong Chai | Thong Chai Nuea | 120 |
| | | Islam | Pak Chong | Wang Sai | 120 |
| | | Christianity | Mueng | Nai Mueng | 120 |
| East | Rayong | Buddhism | Klaeng | Pak Nam Krasae | 120 |
| | | Islam | Mueng Rayong | Map Ta Phut | 120 |
| | | Christianity | Mueng Rayong | Tha Pradu | 120 |
| West | Ratchaburi | Buddhism | Mueng Ratchabiri | Ban Rai | 120 |
| | | Islam | Ban Pong | Ban Pong | 120 |
| | | Christianity | Suan Phueng | Suan Phueng | 120 |
| South | Pattani | Buddhism | Mueng Pattani | Paka Harang | 120 |
| | | Islam | Sai Buri | Taluban | 120 |
| | | Christianity | Mueng Pattani | Rusa Milae | 120 |
| | | | Total | | 2,160 |

**6. Data collection**

This study used several raters to collect data so inter-rater reliability was assessed. Inter-rater reliability determined the extent to which two or more raters/ interviewers obtain the same results when using the same instrument to measure a concept. This study had ten raters who used the instrument to measure a spiritual well-being concept so inter-rater reliability was assessed. The process of inter-rater reliability as follow:

6.1 Appointment the ten raters who used the instrument to collect data in the step of testing psychometric properties in order to explain and make understanding the manual and content in an instrument.

6.2 Ten raters used the instrument to measure the same ten older adults (4 Buddhist, 3 Islamic and 3 Catholic). Accordingly, one participant was measured by ten raters as a one day. Each of participants can be rest around one hour before measured by another rater. In order to decrease stress and boring of older adults, the research provided activity about health care to them such as physical examination and music entertainment

6.3 After collect data already, inter-rater reliability was assessed by using Cronbach's alpha coefficient. Landis and Koch (1977) interpret scale of inter-rater reliability as follow: .40 to .59 is moderate inter-rater reliability, .60 to .79 substantial, and .80 outstanding. However, score that over .70 is considered acceptable inter-rater reliability.

The method of selection and training the data collecting trainer

6.3.1 Ten data collecting trainer who were nurse that working in local community and respect Buddhism, Islam, and Christianity religion in order to understand the content in questionnaire while they interview research participants who respect those religions.

6.3.2 The researcher clarified the purpose of study and what I want to study the explained the detail of questionnaire, especially, the meaning of each items in questionnaire in order to understand in the same.

6.3.3 The researcher told about the example of various answers that expected to happen while interview and make to confuse.

6.3.4 The researcher gave to chance to ask questions and shared idea about the anything that related the questionnaire.

6.3.5 Let the raters tried to collect the data from elderly with chronic illness person by using the TSWBA.

6.3.6 After tried to collecting data, every raters and researcher attended to group meeting to analyze the problems and difficult issues of data collection, then proposed agreement on data collecting.

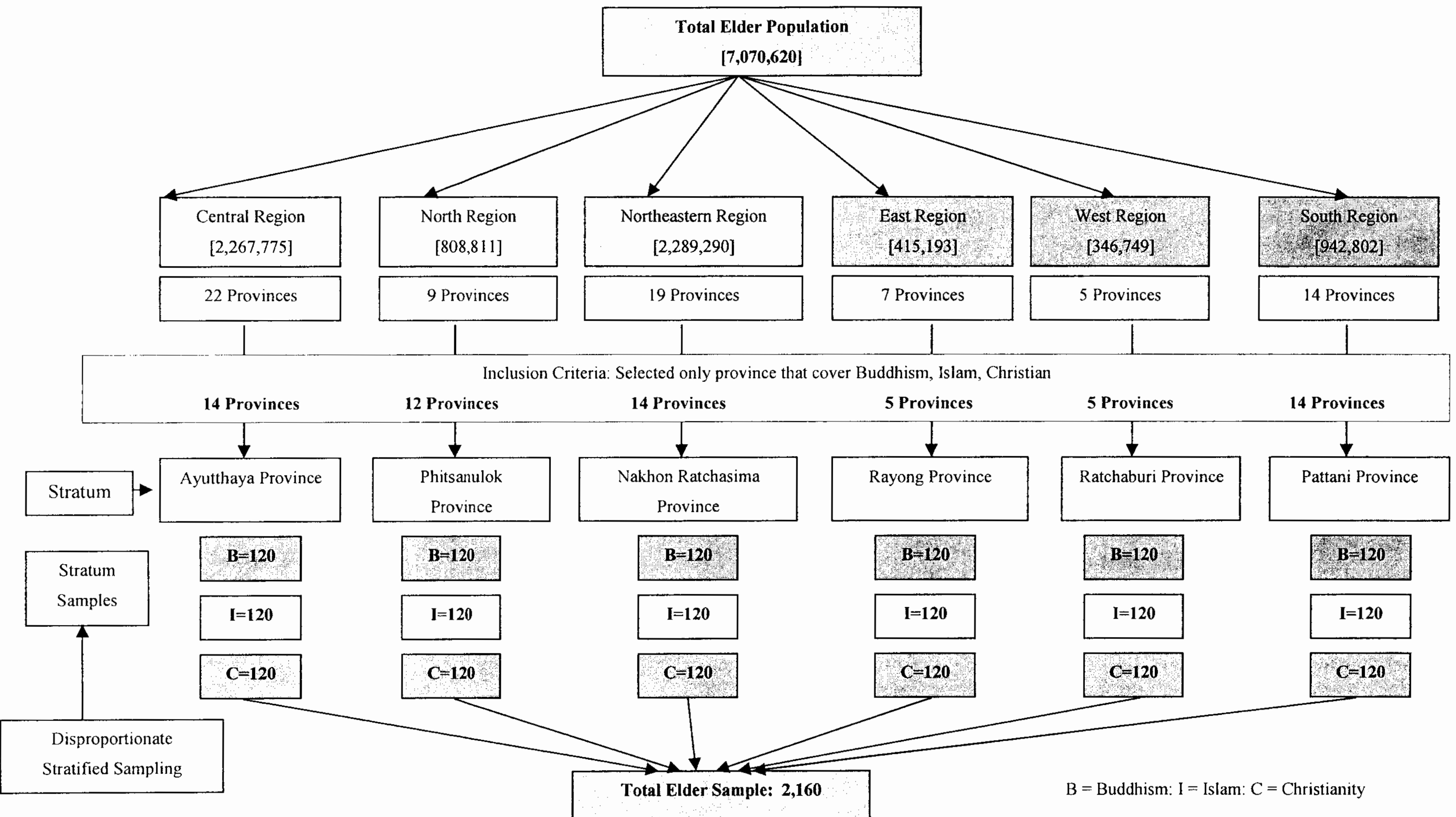



Figure 10 Sampling selection: Stratified random with disproportionate sampling

**Inter-rater reliability:** Inter-rater reliability, which measures homogeneity, is administering the same instrument to the same people by two or more raters/ interviewers so as to establish the extent of consensus on use of the instrument by those who administer it. After collect data already, inter-rater reliability was assessed by using Cronbach's alpha coefficient. As results, ten raters can using the same instrument to measure the concept are good because every items, domains, and total questionnaire have Cronbach's alpha coefficient were .94 to .99, .98 to .99, and .98 to .99, respectively.

**7. Data analysis**

The purpose of this phase is to develop a valid scale and to examine psychometric properties of the spiritual well-being assessment tool. Thus, reliability, content validity, and construct validity were employed to evaluate the quality of the instrument. Item analysis was used to analyze reliability, principal component analysis and confirmatory factor analysis done to analyze construct validity of the instrument. After items construction, the pilot study concerning tool development performed by using 30 subjects per religion, also the total of subjects were 90, then analyzing and revising the items for improvement. Then, the third version of TSWBA was developed. The next step is collection the data from 2160 subjects by using revised TSWBA. However, six hundred subjects of total 2160 were separated to analyze principal component analysis in order to explore the initial number of component before confirmed these factors by using confirmatory factor analysis.

7.1 Item analysis/ reliability: The third version of TSWBA was performed item analyses in order to identifying the internal consistency reliability of the instrument. The purpose of this step is to select or delete items from the instrument. Reliability refers to the degree of consistency and repeatability of the scores on an instrument that means the correlation of an item, scale, or instrument with a hypothetical one that truly measures. The type of reliability consists of test-retest, equivalence, and internal consistency. The instrument in this study was estimated for its reliability by evaluating internal consistency. This method used Cronbach's coefficient alpha to identify internal consistency reliability in order to selected and eliminated items. These procedures of item analysis consist of:

7.1.1 Examination of response distributions of the individual items: It is important to identify and eliminate items that exhibit a highly skewed and unbalanced distribution. Because these items are likely to correlate weakly with other items in the pool and can produce highly unstable correlational results, such items were eliminated. However, before excluding an item, it is essential to examine data from diverse samples representing the entire range of the scales target population. Thus, it may be desirable to retain items that assess important construct-relevant information in one type of sample.

7.1.2 Internal consistency reliability implies that all items measure the same concept: Item analyses were used to perform item-item correlations and item-total correlations; therefore the coefficient is most useful in evaluating items for retention in the scale. Coefficient alpha and other indices of internal consistency convey important information regarding the proportion of error variance contained in the scale, and it is always desirable to demonstrate that a scale possesses an adequate level of reliability. Cronbach's alpha varies from 0 to 1. The criterion level for the alpha coefficient value should be at least .70 to indicate sufficient internal consistency in a new tool (Burns & Grove, 2005, p.413). Therefore, items with the highest coefficients were retained, but items with less than .80 of coefficients were deleted (Nunnally & Bernstein, 1994). Moreover, inter-item correlations should average between .30 and .80. Correlations above .80 imply redundancy, and items at that point were deleted (Gordon, 1968).

7.2 Construct validity: Factor analysis can be used for theory and instrument development and assessing the construct validity of an established instrument. It is an important statistical tool for providing validity evidence concerning the structure of instruments and it can be used to determine the relationship between the dimensions or the internal structure of this set of items (Mishel, 1998; Nunnally & Bernstein, 1994). Therefore, in order to conduct the evaluation of the construct validity of the scales, the principal component analysis and confirmatory factor analysis was used to perform.

7.2.1 Principal component analysis

Principal component analysis was used when one needs to know how many components are necessary to explain the interrelationships between a set of

characteristics, indicators, or items (Gorsuch, 1983; Pedhazur & Schmelkin, 1991; Pett, Lackey & Sullivan, 2003). This process generally involved 2 stages, including the defining of the number of initial subsets or components, and rotating the component to improve interpretation.

7.2.1.1 Defining the number of components: There are two methods that can be employed to determine the number of components, including the component extraction method, and the Scree Plot. The extraction process provided and determined the number of initial subsets or factors that appeared to represent the dimensions of the construct being measured. Eigenvalues represent the amount of variance in all of the items and have values that are both negative and positive. All Eigenvalues must be greater than 0 because they represent the amount of explained variance in items. The criteria that were used to determine when to selecting components were as follows:

Selecting only those components for which the Eigenvalues were greater than 1.00.

In term of cumulative percentage of variance extracted, component extraction should be continued until all extracted components account for at least 90% of the explained variance.

A Scree Plot is a plot of the extracted components against their Eigenvalues in descending order of magnitude that was used to identify distinct breaks in the slope of the plot. Cattell (1966) criteria identified distinct breaks between the steep slope of the larger Eigenvalues and the trailing off of the smaller ones. The point where the factors curve above the straight line was drawn through the smaller Eigenvalues and identified the number of factors (Cattell & Jaspars, 1967; Gorsuch, 1983).

7.2.1.2 Rotating the components: The rotation of components can improve the meaningfulness and interpretation of the generated components. In this study, the researcher used an oblique rotation type because, according to the literature, components that related to spiritual well-being demonstrated associations with themselves. The factor pattern matrix in an oblique rotation was used to determine the items of each factor. It contained factor loading that represents the unique relationship of each item. Factor loading refers to the extent to which each item correlates with every other item on the component. It ranges from -1 to +1. Thus, items that load

heavily on a component was retained, and items with weak loadings on the component was deleted (Mishel, 1998).

7.2.2 Confirmatory factor analysis (CFA)

Confirmatory factor analysis was used during the process of scale development to examine the latent structure of a test instrument. It enabled us to assess three issues in instrument development as follows:

7.2.2.1 It provided a theory-driven method for addressing construct validity. Construct validity assigned the item in an instrument to its' respective factor, according to theoretical expectations.

7.2.2.2 It enabled us to evaluate the internal consistency reliability, or test-retest the reliability of instruments.

7.2.2.3 It was used to compare factor structures across groups to see whether an instrument works differently in different groups of subjects.

Thus, confirmatory factor analysis was used to verify the number of underlying dimensions of the instrument (factors) and the pattern of item-factor relationships (factor loadings). In addition, it was used to assess the extent to which the hypothesized organization of a set of identified factors fits the data (Nunnally & Bernstein, 1994; Pedhazur & Schmelkin, 1991). It was used when the researcher had some knowledge about the underlying structure of the construct under investigation, or was used to test the utility of the underlying dimensions of a construct identified through exploratory factor analysis. Additionally, factor analysis could be help compare factor structures across studies, and to test hypotheses concerning the linear structural relationships among a set of factors associated with a specific theory or model.

In conclusion, through the processes of research design, the researcher can help to assure that the integration of qualitative and quantitative methodology was appropriate for developing knowledge in this study and all steps of conducting research by trying to reduce threats of internal and external validity as much as was possible.

# CHAPTER 4
# RESULTS

This chapter presented the results of testing the psychometric properties of a Thai elderly spiritual well-being assessment instrument (TSWBA). The results consisted of content and construct validity, and internal consistency reliability of TSWBA.

**Characteristic of participants**

Samples were selected by stratified random sampling; with disproportionate sampling (Figure 9, p.117). Accordingly, this sample of 2,160 was randomly selected from six regions of Thailand. The six provinces included Ayutthaya from central region, Phitsanulok from north region, Nakhorn Rachasima from northeast region, Rayong from east region, Ratchaburi from west region, and Pattani from south region. Then, districts and sub-districts of each province were randomly selected

Table 3 showed the characteristics of subjects that were recruited for the study. The average age of 2,160 subjects was 69.85 years old (SD = 7.87), with their ages ranging from 60 to 110 years old. Nearly sixty percent (54.72%) of the subjects aged 60-69 years old. Half of them (55.80%) were female. Most subjects were married (66.62%), had a primary school education (71.48%), and were retired (65.60%). Half previously worked as farmers (51.94%). However, approximate forty percent (34.40%) were still working, of which half were farmers (53.70%).

Almost all of them (90.69%) owned their homes. Nearly half of them (43.10%) were living with their spouses and children. Only 3.57 percent revealed that they lived alone. Half of them (50.28%) had incomes from pensions. Nearly sixty percent (58.97%) had income from their children. For types of chronic disease, the result found that half of the subjects (54.58%) had one type of chronic disease. Hypertension was the major type of chronic illness that most participants had (70.40%). The duration of the illness ranged from 1 to 79 years, see Table 2.

Table 2 Characteristics of the subjects (n = 2,160)

| Characteristics | Number | Percent |
|---|---|---|
| **Age (years)** | | |
| (M = 69.85 SD = 7.87 Min-Max = 60-110) | | |
| Early older adults 60-69 years | 1,182 | 54.72 |
| Middle older adults 70-79 years | 706 | 32.69 |
| Oldest older adults over 80 years | 272 | 12.59 |
| **Sex** | | |
| Female | 1,205 | 55.80 |
| Male | 955 | 44.20 |
| **Religion** | | |
| Buddhism | 720 | 33.33 |
| Islam | 720 | 33.33 |
| Christianity | 720 | 33.33 |
| **Marital Status** | | |
| Single | 93 | 4.31 |
| Married | 1,439 | 66.62 |
| Widowed | 589 | 27.27 |
| Divorced/ Separated | 39 | 1.80 |
| **Education** | | |
| No formal education | 461 | 21.35 |
| Primary school education | 1,544 | 71.48 |
| Junior Secondary education | 61 | 2.82 |
| Senior Secondary education | 54 | 2.50 |
| Diploma | 14 | 0.65 |
| Bachelor education | 23 | 1.06 |
| Higher bachelor education | 3 | 0.14 |
| **Occupation status** | | |
| No work/ retirement | 1,417 | 65.60 |
| Still working | 743 | 34.40 |

Table 2 (Cont.)

| Characteristics | Number | Percent |
|---|---|---|
| **Previously occupation (n = 1,417)** | | |
| Farming | 736 | 51.94 |
| Labor | 420 | 29.43 |
| Merchant | 123 | 8.68 |
| Government officer | 67 | 4.73 |
| Fisher | 46 | 3.25 |
| Other | 25 | 1.76 |
| **Currently occupation (n = 743)** | | |
| Farming | 399 | 53.70 |
| Labor | 207 | 27.86 |
| Merchant | 119 | 16.02 |
| Fisher | 14 | 1.88 |
| Government officer | 4 | 0.54 |
| **Home Characteristics** | | |
| Owner | 1,959 | 90.69 |
| Child's home | 131 | 6.06 |
| Relative's home | 55 | 2.55 |
| Rental home | 12 | 0.56 |
| Other | 3 | 0.14 |
| **Living Status** | | |
| Child | 684 | 31.67 |
| Spouse | 245 | 11.34 |
| Relative | 46 | 2.13 |
| Parents | 10 | 0.46 |
| Spouse and child | 931 | 43.10 |
| Child and relative | 67 | 3.10 |
| Greater than 2 persons | 100 | 4.63 |
| Lived alone | 77 | 3.57 |

Table 2 (Cont.)

| Characteristics | Number | Percent |
|---|---|---|
| **Income resources** | | |
| By self | 881 | 40.79 |
| Elderly pension | 443 | 50.28 |
| Working | 185 | 21.00 |
| Government pension | 29 | 3.29 |
| Saving money | 5 | 0.57 |
| Rental fee | 3 | 0.34 |
| more than 2 sources of income | 216 | 24.52 |
| By other | 234 | 10.83 |
| Child | 138 | 58.97 |
| Spouse | 49 | 20.94 |
| Spouse and child | 47 | 20.09 |
| By self and other | 1045 | 48.38 |
| **Number of chronic illness** | | |
| One | 1,179 | 54.58 |
| Two | 739 | 34.22 |
| Three | 183 | 8.47 |
| Four | 38 | 1.76 |
| Five | 14 | 0.65 |
| Six | 7 | 0.32 |
| **Type of chronic disease** | | |
| Hypertension | 1,520 | 70.40 |
| Diabetes mellitus | 620 | 28.70 |
| Rheumatoid arthritis | 590 | 27.30 |
| Asthma | 148 | 6.90 |
| Coronary artery disease | 146 | 6.80 |
| Celebrovascular accident/ paralysis | 17 | 3.60 |

**Principal component analysis (PCA)**

The third version of the Thai spiritual well-being assessment instrument (TSWBA-V3) was evaluated for construct validity and internal consistency reliability. The first version of TSWBA that was developed from the conceptual framework contained 5 domains and 57 items. Before conducting the confirmatory factor analysis, six hundred subjects were recruited to conduct principal component analysis (PCA). The PCA consisted of three steps: 1) assessing the adequacy of the correlation matrix, 2) extracting the initial factors and rotating the factors, and 3) interpreting the findings. Therefore, the final components and items of this analysis were used to confirm the proposed model by confirmatory factor analysis in the next process.

**1. Assessing the adequacy of the correlation matrix**

The evaluation of the correlation matrix of spiritual well-being found the Pearson's correlation coefficient (r) between items 1 and 2 was highly correlated (r = .85) indicating that these items were measuring the same thing. Only one item should be selected, so the researcher dropped item 1 and retained item 2. Moreover, items 8, 47 and 56 were not correlated sufficiently, so these items were also dropped. All other items correlated sufficiently and were retained (Appendix C6). Therefore, the TSWBA-V3 retained 53 items.

**2. Extracting the initial components and rotating the components**

Before analyzing the PCA, assumptions were evaluated. Bartlett's test of sphericity and the Kaiser-Meyer-Olkin (KMO) were used to measure sampling adequacy. These methods were used to evaluate the strength of the linear association among items of each domain. There were 5 domains and 53 items on the TSWBA-V3. As a result, Bartlett's test of sphericity was significant ($\chi^2$ = 86642.00, $p < .001$) and the KMO statistic was .96. Therefore, the value of the KMO statistics and Bartlett's test of sphericity indicated that the correlation matrix of the variables were not identity indicating that the sample size was sufficient to perform a satisfactory PCA, relative to the number of items in these scales.

After evaluating assumptions using principal component analysis, the extraction and rotation of components were performed. The statistics that determined the number of components were eigenvalues, percent of variance extracted, a scree

plot, and statistical significance.

After extraction and rotation of the components, eight components were achieved. In the end, thirteen items were eliminated (item 1, 12, 19, 26, 29, 34, 36, 40, 42, 46, 49, 50, and 52) because factor loading less than .40 and not correlated with another component (Table 3). Therefore, the final number of items on the TSWBA-V3 was 41.

Table 3 Eliminated or revised items of TSWBA-V3

| **Domain** / **Statement** | | **Eliminated** |
|---|---|---|
| Thai version | English version | |
| ท่านรู้สึกเสียใจที่ต้องกลายเป็นคนที่เจ็บป่วย | You feel sad that you have a chronic illness | Item 1 |
| ท่านพร้อมที่จะรับรู้การเจ็บป่วยจากแพทย์ไม่ว่าจะในทางที่ดี หรือไม่ดีก็ตาม | You feel ready to know about the symptoms of your chronic illness regardless if it is good or bad | Item 8 |
| ท่านต้องการช่วยเหลือและให้กำลังใจผู้อื่นที่อยู่รอบตัวท่าน | You need to help to give courage to other people around you | Item 12 |
| ท่านยอมรับการเปลี่ยนแปลงต่าง ๆ ที่เกิดขึ้นในชีวิต (ทั้งเรื่องดีและร้าย) ของท่านได้ | You can accept all changes in your life | Item 19 |
| ท่านเข้าใจถึงความทุกข์ของคนที่เจ็บป่วย | You understand and appreciate the sufferings of other people with illnesses | Item 26 |
| ในความเจ็บป่วยที่มีความทุกข์ทรมานความเจ็บปวดก็ยังมีสิ่งที่ดี ๆ ซ่อนอยู่ | The suffering caused by chronic illness may be a blessing | Item 29 |

Table 3 (Cont.)

| Domain / Statement | | Eliminated |
|---|---|---|
| Thai version | English version | |
| ท่านตั้งใจที่จะดูแล ทะนุถนอมร่างกายของท่านที่เจ็บป่วยอยู่เป็นอย่างดี แม้ผลจะเป็นอย่างไรก็ตาม | You intend to care for your body even if you have chronic illness and don't care the about result | Item 34 |
| ท่านไม่รู้สึกท้อแท้กับความเจ็บป่วยที่ท่านเป็นอยู่ | You never feel despondent with your illness | Item 36 |
| ท่านตั้งใจกระทำสิ่งที่ดีให้แก่คนอื่นให้มากที่สุดเท่าที่จะเลือกทำได้ตามสภาพของความเจ็บป่วย | You intend to good deeds with other people as long as you able to do | Item 40 |
| ท่านพอใจกับสภาพร่างกายที่เป็นอยู่ของท่านในขณะนี้ | You are satisfied with your body | Item 42 |
| ท่านยินดีทำทุกสิ่งทุกอย่างเพื่อคนที่ท่านรักแม้ว่าท่านจะเจ็บป่วย | Even if you are have chronic illness, you are willing to do everything for your loved ones | Item 46 |
| ท่านไม่พอใจกับสิ่งแวดล้อมที่อยู่รอบตัวท่าน เช่น คน สิ่งของ การกระทำของคนเป็นต้น | You are not satisfied with everything around you, including other people actions | Item 47 |
| ท่านสามารดำรงชีวิตในวัยชราที่ป่วยด้วยโรคเรื้อรังต่าง ๆ ได้อย่างมีความสุข | You feel happy about life in the past | Item 49 |
| ท่านพึงพอใจกับความสามารถในทุก ๆ ด้านของท่าน | You are satisfied with all areas of your capability | Item 50 |
| ท่านมีความสุขที่ได้ช่วยเหลือผู้อื่นทุกครั้งเมื่อมีโอกาส | You are happy when you help other people | Item 52 |

Table 3 (Cont.)

| Domain / Statement | | Eliminated |
|---|---|---|
| Thai version | English version | |
| มีชีวิตอยู่ไปวัน ๆ ไม่รู้จะทำอะไร | You feel there is no purpose to your life. | Item 56 |

**3. Interpret the finding**

Fifty three items were analyzed by PCA. An oblique rotation using the Promax method was the rotation factor procedure. As a result 8 components and 41 items were retained. The eight components consisted of Component 1 "Happiness in life", Component 2 "Acceptance of chronic illness", Component 3 "Life equilibrium", Component 4 "Passion for life", Component 5 "Self-transcendence", Component 6 "Optimistic personality", Component 7 "A purpose in life", and Component 8 "Willingness to forgive". The eight components accounted for 81.90 percent of the total variance (Table 4).

As result of extraction and rotation of the factors, eight components and 41 items represented the eigenvalue, factor loading, and explained variance of each component. In addition, internal consistency reliability was represented by Cronbach's alpha coefficient.

**Component 1: "Happiness in life"** consisted of 7 items including items 37, 41, 43, 44, 45, 48 and 51. Factor loading of these items ranged from .48 to .71 and communality ($h^2$) ranged from .51 to .64. This component accounted for 41.86 percent of the explained variance and had eigenvalues of 15.27. The corrected item-total correlation ranged from .62 to .72. Cronbach's alpha coefficient was .92 (Table 4).

**Component 2: "Acceptance of chronic illness"** consisted of 6 items including items 2 to 7. Factor loading of these items ranged from .86 to .89 and communality ($h^2$) ranged from .77 to .83. This component accounted for 17.32 percent of the explained variance and had eigenvalues of 10.10. The corrected item-total correlation ranged from .81 to .86. Cronbach's alpha coefficient was .94 (Table 4).

**Component 3: "Life equilibrium"** consisted of 5 items including items 15, 16, 17, 18 and 20. Factor loading of these items ranged from .54 to .83 and communality ($h^2$) ranged from .63 to .77. This component accounted for 6.61 percent of the explained variance and had eigenvalues of 9.00. The corrected item-total correlation ranged from .68 to .82. Cronbach's alpha coefficient was .92 (Table 4).

**Component 4: "Passion for life"** consisted of 5 items including item 21, 22, 24, 35, and 38. Factor loading of these items ranged from .58 to .79 and communality ($h^2$) ranged from .63 to .73. This component accounted for 4.82 percent of the explained variance and had eigenvalues of 7.66. The corrected item-total correlation ranged from .69 to .74. Cronbach's alpha coefficient was .91 (Table 4).

**Component 5: "Self-transcendence"** consisted of 5 items including items 9, 10, 11, 13, and 14. Factor loading of these items ranged from .49 to .88 and communality ($h^2$) ranged from .61 to .77. This component accounted for 3.88 percent of the explained variance and had eigenvalues of 7.25. The corrected item-total correlation ranged from .67 to .79. Cronbach's alpha coefficient was .90 (Table 4).

**Component 6**: **"Optimistic personality"** consisted of 5 items including item 23, 25, 25, 28, and 33. Factor loading of these items ranged from .63 to .76 and communality ($h^2$) ranged from .59 to .73. This component accounted for 2.79 percent of the explained variance and had eigenvalues of 6.98. The corrected item-total correlation ranged from .62 to .77. Cronbach's alpha coefficient was .89 (Table 4).

**Component 7: "A purpose in life"** consisted of 4 items including items 53, 54, 55 and 57. Factor loading of these items ranged from .69 to .87 and communality ($h^2$) ranged from .54 to .75. This component accounted for 2.44 percent of the explained variance and had eigenvalues of 6.8.1. The corrected item-total correlation ranged from .53 to .72. Cronbach's alpha coefficient was .81 (Table 4).

**Component 8: "Willing to forgive"** consisted of 3 items including items 30 to 32. Factor loading of these items ranged from .70 to .78 and communality ($h^2$) ranged from .73 to .80. This factor accounted for 2.18 percent of the explained variance and had eigenvalues of 6.65. The corrected item-total correlation ranged from .76 to .83. Cronbach's alpha coefficient of this factor was .89 (Table 4).

Accordingly, the results indicated that all of the items in the eight factors had good validity and good internal consistency reliability.

Table 4 Principal components analysis and Cronbach's alpha coefficient of TSWBA-V3 separated by components (n = 600)

| Component | Number of items | Factor loading | Eigenvalues | Explained variance (%) | Cronbach's alpha coefficient |
|---|---|---|---|---|---|
| 1: Happiness in life | 7 | | 15.27 | 41.86% | .92 |
| Item 37: You never suffer with your chronic illness. | | .63 | | | |
| Item 41: You are satisfied with your body | | .63 | | | |
| Item 43: Although you are suffering from chronic illness, you feel happy | | .71 | | | |
| Item 44: You don't feel disappointed with your past | | .60 | | | |
| Item 45: Even if you have chronic illness, you can live a normal live | | .48 | | | |
| Item 48: You can cope with chronic illness in old age and be happy | | .64 | | | |
| Item 51: You are satisfied with all areas of your capability | | .63 | | | |
| 2: Acceptance of chronic illness | 6 | | 10.10 | 17.32% | .94 |
| Item 2: You hate that it is your who has a chronic illness. | | .88 | | | |
| Item 3: You feel angry when you suffer the symptoms and effects of the chronic illness | | .89 | | | |
| Item 4: Anxiety about the chronic illness causes you lack of sleep. | | .86 | | | |
| Item 5: You worry that the symptoms of chronic illness may be irreversible. | | .87 | | | |
| Item 6: You always believed that chronic illness not come to you. | | .89 | | | |

Table 4 (Cont.)

| Component | Number of items | Factor loading | Eigenvalues | Explained variance (%) | Cronbach's alpha coefficient |
|---|---|---|---|---|---|
| Item 7: You feel angry that you have a chronic illness and it cannot be cured. | | .89 | | | |
| 3: Life equilibrium | 5 | | 9.00 | 6.61% | .92 |
| Item 15: You are certainly to confront of serious life problem | | .70 | | | |
| Item 16: You can live among the conflict | | .83 | | | |
| Item 17: You can change the way of life every time | | .83 | | | |
| Item 18: You can change your life follow the change of situation | | .79 | | | |
| Item 20: You satisfy with your state even if everything around you changing | | .54 | | | |
| 4: Passion for life | 6 | | 7.66 | 4.82% | .91 |
| Item 21: Life is valuable, you are keep even though you had suffering from illness | | .79 | | | |
| Item 22: The suffering don't destroy courage to good deed | | .66 | | | |
| Item 24: Even if you ill, you can do the good things | | .65 | | | |
| Item 35: You have courage/ power to living | | .71 | | | |
| Item 38: You can live with chronic illness as other person who normal | | .58 | | | |
| Item 39: You have courage to self care of your chronic illness | | .61 | | | |

Table 4 (Cont.)

| Component | Number of items | Factor loading | Eigenvalues | Explained variance (%) | Cronbach's alpha coefficient |
|---|---|---|---|---|---|
| 5: Self-transcendence | 5 | | 7.25 | 3.88% | .90 |
| Item 9: You can give love and goodness to other. | | .59 | | | |
| Item 10: You like to help the person who is live in poverty | | .84 | | | |
| Item 11: You like dole anything for the sufferer/ beggar | | .88 | | | |
| Item 13: You need to help other to accept the illness | | .64 | | | |
| Item 14: You are ready to know about your illness both bad and good signs | | .49 | | | |
| 6: Optimistic personality | 5 | | 6.98 | 2.79% | .89 |
| Item 23: The chronic illness can give the good things to your life | | .64 | | | |
| Item 25: The chronic illness make you understand the truth/ nature of life | | .76 | | | |
| Item 27: The chronic illness make you adapt/ change to better behavior | | .74 | | | |
| Item 28: The chronic illness that you are give valuable idea to you and other person | | .68 | | | |
| Item 33: The chronic illness is a good experiences | | .63 | | | |

Table 4 (Cont.)

| Component | Number of items | Factor loading | Eigenvalues | Explained variance (%) | Cronbach's alpha coefficient |
|---|---|---|---|---|---|
| 7: A purpose in life | 4 | | 6.81 | 2.44% | .81 |
| Currently, what do you have to live for?: | | | | | |
| Item 53: Looking forward to seeing children and grandchildren grow up | | .69 | | | |
| Item 54: Doing more good things | | .87 | | | |
| Item 55: Practice the Dharma more | | .82 | | | |
| Item 57: Become a benefit to your community and society | | .69 | | | |
| 8: Willingness to forgive | 3 | | 6.65 | 2.18% | .89 |
| Item 30: The chronic illness makes you know how to forgive | | .71 | | | |
| Item 31: The chronic illness makes you forgive yourself for your mistakes | | .78 | | | |
| Item 32: You wish to give these benefits to others | | .70 | | | |
| **Total** | **41** | | | **81.90%** | **.97** |

**Confirmatory factor analysis (CFA)**

The TSWBA-V3 consisted of 8 factors and 41 items constructed from PCA which was used to perform confirmatory factor analysis.

The first CFA found the data were not fit with the model. Therefore, the model was modified based on modification indices until the fit indices indicating the proposed model fits with the data. Table 7 represents the results of the second-order confirmatory factor analysis. The proposed model provides an adequate fit ($\chi^2$ = 821.09, df = 747). The overall goodness-of-fit of the model, measured by the ratio of $\chi^2$/ df, is 1.10, suggests that the proposed model fits the data reasonably well. The other fit indices (GFI = .96, NFI = .96, AGFI = .96, RMSEA = .03, SRMR = .07) also confirmed that the hypothesized model fits well. The parameter estimates indicated that all the 8 factors and 41 indicators contribute significantly to the measurement of spiritual well-being.

The individual item reliability estimated latent variables factor loadings to measure variables. Factor loading should be greater than .60 and also statistically significant. The first-factor confirmatory factor loadings, representing the relationships between the dimensions and their indicators, vary in quite a wide range. All of standardized factor loading of individual item reliability were greater than .60.

**Factor 1: "Happiness in life"** had a factor loading of .80 and factor loadings of items ranged from .61 to .89. The multiple $R^2$ between this factor and spiritual well-being was .68. The multiple $R^2$ between each item and "Happiness in life" factor ranged from .42 to .69 (Table 5). Alpha coefficient of this factor was .93

**Factor 2: "Acceptance of chronic illness"** had a factor loading of .62 and factor loadings of items ranged from .70 to .85. The multiple $R^2$ between this factor and spiritual well-being was .48. The multiple $R^2$ between each item and "Acceptance of chronic illness" factor ranged from .73 to .94 (Table 5). Alpha coefficient of this factor was .95

**Factor 3: "Life equilibrium"** had a factor loading of .90 and factor loadings of items ranged from .57 to .66. The multiple $R^2$ between this factor and spiritual well-being was .81. The multiple $R^2$ between each item and "Life equilibrium" factor ranged from .68 to .83 (Table 5). Alpha coefficient of this factor was .92.

**Factor 4: "Passion for life"** had a factor loading of .85 and factor loadings of items ranged from .62 to 1.02. The multiple $R^2$ between this factor and spiritual well-being was .76. The multiple $R^2$ between each item and "Passion for life" factor ranged from .37 to .98 (Table 5). Alpha coefficient of this factor was .92.

**Factor 5: "Self-transcendence"** had a factor loading of .98 and factor loadings of items ranged from .55 to 1.06. The multiple $R^2$ between this factor and spiritual well-being was .94. The multiple $R^2$ between each item and "Self-transcendence" factor ranged from .69 to .92 (Table 5). Alpha coefficient of this factor was .91

**Factor 6**: **"Optimistic personality"** had a factor loading of .98 and factor loadings of items ranged from .65 to 1.41. The multiple $R^2$ between this factor and spiritual well-being was .95. The multiple $R^2$ between each item and "Optimistic personality" factor ranged from .71 to .91 (Table 5). Alpha coefficient of this factor was .89

**Factor 7: "A purpose in life"** had a factor loading of .88 and factor loadings of items ranged from .61 to .87. The multiple $R^2$ between this factor and spiritual well-being was .77. The multiple $R^2$ between each item and "A purpose in life" factor ranged from .44 to .86 (Table 5). Alpha coefficient of this factor was .89 Alpha coefficient of this factor was .84

**Factor 8: "Willingness to forgive"** had a factor loading of .97 and factor loadings of items ranged from .63 to 1.52. The multiple $R^2$ between this factor and spiritual well-being was .93. The multiple $R^2$ between each item and factor of "Happiness in life" ranged from .72 to .98 (Table 5). Alpha coefficient of this factor was .88

After conducting confirmatory factor analysis, the internal consistency reliability of TSWBA-V3 which consisted of 8 factors and 41 items were evaluated. As a result, the Cronbach's Alpha coefficient of each factor ranged from .90 to .94 and 8 factors of the TSWBA-V3 was .98.

Table 5 Confirmatory factor analysis of TSWBA-V3 (n = 2,160)

| Latent Variable: Spiritual well-being | Factor loading *b (se)* | SE | Determinant coefficient ($R^2$) | Residual variance |
|---|---|---|---|---|
| **1. Happiness in life** | .80 | .02 | .68 | .32 |
| Item 37: You never suffer with your chronic illness. | .89 | .01 | .51 | .16 |
| Item 42: Your life is perfect and you don't need anything else. | .83 | .01 | .69 | .12 |
| Item 43: Even if you are suffering from chronic illness, you feel happy. | .82 | .01 | .66 | .10 |
| Item 44: You don't feel disappointed with your past. | .83 | .01 | .52 | .16 |
| Item 45: Even if you have chronic illness, you can live a normal live. | .85 | .01 | .63 | .11 |
| Item 48: You can cope with chronic illness in old age and be happy. | .68 | .01 | .42 | .16 |
| Item 50: You are satisfied with all areas of your capability. | .61 | .01 | .45 | .15 |
| **2. Acceptance of chronic illness** | .62 | .03 | .48 | .22 |
| Item 2: You hate that it is your who has a chronic illness. | .70 | .00 | .73 | .32 |
| Item 3: You feel angry when you suffer the symptoms and effects of the chronic. | .85 | .02 | .94 | .08 |
| Item 4: Anxiety about the chronic illness causes you lack of sleep. | .75 | .02 | .76 | .30 |
| Item 5: You worry that the symptoms of chronic illness may be irreversible. | .81 | .02 | .86 | .29 |
| Item 6: You always believed that chronic illness not come to you. | .84 | .02 | .92 | .00 |
| Item 7: You feel angry that you have a chronic illness and it cannot be cured. | .83 | .04 | .98 | .16 |

Table 5 (Cont.)

| Latent Variable: Spiritual well-being | Factor loading *b (se)* | SE | Determinant coefficient ($R^2$) | Residual variance |
|---|---|---|---|---|
| **3. Life equilibrium** | .90 | .02 | .81 | .19 |
| Item 15: You are certainly to confront of serious life problem. | .66 | .01 | .82 | .10 |
| Item 16: You can live among the conflict. | .62 | .01 | .75 | .13 |
| Item 17: You can change the way of life every time. | .64 | .01 | .83 | .08 |
| Item 18: You can change your life follow the change of situation. | .63 | .01 | .78 | .11 |
| Item 20: You satisfy with your state even if everything around you changing. | .57 | .01 | .68 | .15 |
| **4. Passion for life** | .85 | .03 | .76 | .24 |
| Item 21: Life is valuable, you are keep even though you had suffering from illness. | .65 | .01 | .43 | .21 |
| Item 22: The suffering don't destroy courage to good deed. | 1.02 | .03 | .98 | .03 |
| Item 24: Even if you ill, you can do the good things. | .62 | .01 | .43 | .15 |
| Item 35: You have courage/ power to living. | .75 | .02 | .91 | .06 |
| Item 38: You can live with chronic illness as other person who normal. | .66 | .01 | .37 | .25 |
| Item 39: You have courage to self care of your chronic illness. | .67 | .01 | .39 | .22 |
| **5. Self-transcendence** | .98 | .02 | .94 | .06 |
| Item 9: You can give love and goodness to other. | .63 | .01 | .78 | .11 |
| Item 10: You like to help the person who is live in poverty. | .61 | .01 | .74 | .13 |

Table 5 (Cont.)

| Latent Variable: Spiritual well-being | Factor loading *b (se)* | SE | Determinant coefficient ($R^2$) | Residual variance |
|---|---|---|---|---|
| Item 11: You like dole anything for the sufferer/ beggar. | .55 | .01 | .66 | .15 |
| Item 13: You need to help other to accept the illness. | 1.06 | .01 | .92 | .10 |
| Item 14: You are ready to know about your illness both bad and good signs. | .62 | .01 | .69 | .17 |
| **6. Optimistic personality** | .98 | .02 | .95 | .05 |
| Item 23: The chronic illness can give the good things to your life. | 1.00 | .01 | .87 | .15 |
| Item 25: The chronic illness make you understand the truth/ nature of life. | .65 | .01 | .71 | .17 |
| Item 27: The chronic illness make you adapt/ change to better behavior. | 1.02 | .01 | .89 | .13 |
| Item 28: The chronic illness that you are give valuable idea to you and other person. | 1.05 | .01 | .91 | .11 |
| Item 33: The chronic illness is a good experiences. | 1.41 | .02 | .91 | .21 |
| **7. A purpose in life** | .88 | .03 | .77 | .24 |
| Currently, why do you need to be alive: | | | | |
| Item 53: Look forward to successful of child and grandchild. | .61 | .02 | .44 | .19 |
| Item 54: More and more making merit. | .71 | .02 | .80 | .13 |
| Item 55: More and more practice the Dharma. | .76 | .03 | .86 | .09 |
| Item 57: Make benefit to community and social. | .87 | .03 | .75 | .25 |

Table 5 (Cont.)

| **Latent Variable: Spiritual well-being** | **Factor loading *b (se)*** | **SE** | **Determinant coefficient ($R^2$)** | **Residual variance** |
|---|---|---|---|---|
| **8. Willingness to forgive** | .97 | .02 | .93 | .07 |
| Item 30: The chronic illness make you know to forgive. | 1.52 | .01 | .96 | .08 |
| Item 31: The chronic illness make you can forgive to your mistake. | 1.57 | .01 | .98 | .04 |
| Item 32: You wish to give the benefit to other. | .63 | .01 | .72 | .15 |

Fit indices for measurement model of spiritual well-being assessment tool

| | $\chi^2$ | df | $\chi^2$/ df | CFI | NFI | GFI | AGFI | SRMR | RMSEA |
|---|---|---|---|---|---|---|---|---|---|
| | 821.09 | 747 | 1.10 | .96 | .96 | .96 | .96 | .07 | .03 |
| **The suggested values** | | | | **≥ .90** | **≥ .90** | **≥ .95** | **≥ .95** | **< .08** | **< .06** |

# CHAPTER 5
# CONCLUSION AND DISSCUSSION

This part presents conclusions, discussion, implications, limitation and ideas for further research.

## Conclusion

The purpose of this study was to develop, and test the psychometric properties of a spiritual well-being assessment tool for Thai elderly with chronic illness. This assessment tool was developed in 2 phases: the qualitative phase, and psychometric properties testing in the quantitative phase. Items were developed from synthesis of research reviews, content analysis from focus groups (n = 12) and in-depth interviews (n = 15). Content validity was examined by 7 experts. Clarity and readability of items were tested by 10 older adults. Construct validity and reliability were examined with a sample of 2160 older adults who respect Buddhism, Islam, and Christianity, from six areas of Thailand. Exploratory and confirmatory factor analyses were used to examine construct validity, item analysis and Cronbach's alpha coefficient were used to examine internal consistency reliability.

Findings of this study indicate that the Thai spiritual well-being assessment tool (TSWBA) is suitable for Thai culture and context and accurately assesses the spiritual well-being of Thai elderly with chronic illness. The TSWBA of elderly people with chronic illness consists of 41 items grouped into 8 domains: Acceptance to illness (6 items), Happiness in life (7 items), Life equilibrium (5 items), Self-transcendence (5 items), Optimistic personality (5 items), Passion for life (6 items), A purpose in life (4 items), and Willingness to forgive (3 items). According to the testing of psychometric properties, findings indicate that this instrument has good content validity (CVI score .80 to 1.00), a good construct validity (the fit indices: $\chi^2$ = 821.09, df = 747, $\chi^2$/ df = 1.10, GFI = .96, RMSEA = .03, SRMR = .07; and the model explained 81.90% of the variance), and a good internal consistency reliability (ranged from .90 to .94).

## Discussion

According to the findings, TSWBA had a good validity and reliability. Therefore, the researcher would like to discuss about the research process that enhance valid and reliable of TSWBA.

The fact the assessment tool was found to be valid and reliable was supported by the use of both qualitative and quantitative methods (Burns & Grove, 2005) that were used during: clarification of the definition of spiritual well-being; development and selection of instrument items; and, examination of the instrument's psychometric properties. According to spiritual well-being phenomenon is an abstract and cannot directly measure, the qualitative study is essential process to this phenomenon is clear, more concrete, and easier to measure. The researcher is confident that research processes employed for developing the TSWBA accurately assess the spiritual well-being of Thai elderly with chronic illness. The results from focus groups, in-depth interviews, and synthesis of the literature reviews found the consistence with other researches (Meraviglia, 1999; Pilaikiat et al., 2003), especially, happiness in life that is an importance indicator of spiritual well-being in most research. In conclusion, developing the instrument began by using data obtained from qualitative inquiries as the basis for generating questions for quantitative instruments which were subsequently subjected to rigorous quantitative assessment (Burns & Grove, 2005; Mishel, 1998).

The findings suggest the TSWBA had good content and construct validity. The instruments were those used for the qualitative study, included demographic data recoding forms, a tape recorder, and field notes. In order to assure credibility of the data, the researcher reviewed knowledge about spirituality, spiritual well-being, and the beliefs of Buddhism, Islam, and Christianity in order to develop interview guideline. The interview guideline was comprised of open-ended questions, which were developed from the literature reviews about spiritual well-being. This procedure enhances validity by reducing systematic error. Systematic error occurs when an instrument includes items that measures knowledge skills or abilities irrelevant to the concept being examined, which can distort the scale scores and influence measurement procedures.

The data collection was conducted by the researcher using the open-ended interview guideline. In order to explore the latent meanings of spirituality among Thai elders, the researcher used in-depth interviews and focus groups. The process of data collection was performed using qualitative method including; building a relationship and familiarity, explaining the purpose, goals and methods of the study, explaining the potential risks to participants and asking permission to interview and record data. Participants were asked to sign a consent form and complete a demographic data recording form. The researcher started the interviews with open-ended questions, using all means that might aid in understanding the contextual and personal experiences that explained the elders' ideas about spirituality. The researcher then summarized the interview content and confirmed the summaries by sharing them with the participants. This process worked to increase credibility of data collection. The duration of the interviews ranged from 45 to 90 minutes. Throughout the interview process, the researcher took field notes to record what she heard during the interview and observed in the environment, and recorded her thoughts and feeling about the interview or issues related to the study. After each interview, each audiotape was transcribed verbatim by the researcher along with the field notes and observations that were made during and after the interview. The researcher carefully listened to each tape, transcribed it, and then read it several times. Accordingly, the collection of data in the qualitative study enhanced validity and reliability.

The data collection procedures used in the quantitative phase also enhanced validity and reliability. The selection of people to collect data and the method of training raters enhanced the internal validity of the instrument. The 10 data collectors were selected by the researcher. Validity was enhanced by choosing individuals who are qualified as nurses or other health providers in the community where the samples lived, and they respected the religion followed by the samples. Due to this respect they could more easily understand the answers of samples during interviews or when using instruments. Moreover, since data was collected in the samples' homes, more time to answer questions was available. Most samples in this study were older adults so they had free time to work with the data collector. The steps followed in training the data collectors make the researcher confident that trainers would uniformly and accurately collect data. In addition, inter-rater reliability indicated that they could

accurately collect data. Accordingly, this process of the study encouraged internal validity and reliability of the instrument.

In conclusion, validity of the tool was enhanced by the use of the ten research assistants, who were nurses or other health care providers in the communities where the subjects resided. In addition, these research assistants were trained, by the PI, to assure consistence among their research activities, and were knowledgeable about the religious preferences and practices of the subjects within their respective communities. These attributes proved helpful in understanding the subjects' responses during both phases of the study. The fact of data was collected, throughout the study, in the home of the subjects also was a contributing fact to the validity of the instrument. This practice allowed for privacy and sufficient time for the subjects' responses.

The results indicate the TSWBA has good internal consistency reliability. Instrument reliability plays an important role, in research, because reliable instruments enhance the power of a study to detect significant differences or relationships actually occurring in the population under study (Burns & Grove, 2005; Mishel, 1998; Nunnally & Bernstein, 1994). Reliability of the TWSBA was enhanced by reducing random error caused by fluctuation in memory/mood and environmental conditions that influence the effect of the object being measured. This study reduced random error by giving the subjects a reasonable amount of time to respond to the items on the assessment scale , as well as them to provide data within a familiar setting (their home). Finally, the thorough training of the RAs (inter-rater reliability ranged from 0.90-0.96) also helped to enhance the internal consistency reliability of instrument.

The final version of the TSWBA consisted of 41-items within eight domains (happiness in life, acceptance of chronic illness, life equilibrium, passion for life, self-transcendence, optimistic personality, a purpose in life and willingness to forgive). Several of the domains, in this study, were similar to those noted in prior research and the literature. For example, the domains of "happiness in life," "life equilibrium (i.e. "harmonious interconnected")", "purpose in life," "optimistic personality," "self-transcendence" and "willingness to forgive" were found to appear in other studies, conceptual analyses or spiritual well-being instruments (Burkhardt,

1989; Cella et al., 1993; Gomez & Fisher, 2003; Hungelmann et al., 1996; Meraviglia, 1999; O'Brien, 2008; Paloutzian & Ellison, 1982; Pilaikiat et al., 2003). Although labeled differently in prior research, the essence of the domain, "passion for life," in this study, was found to be similar to prior research, in that it focused on one's power to continue living, regardless of adversity (Chiu et al., 2004; Fehring et al., 1997; Fetzer, 1999; Meraviglia, 1999). Since the TSWBA was specifically developed for elders with chronic illnesses, the domain, "acceptance of chronic illness," was found to be unique when compared to other instruments (Cella et al., 1993; Gomez & Fisher, 2003; Paloutzian & Ellison, 1982). Finally, the TSWBA was developed using chronically ill elders who were Buddhist, Islamic or Christian. Thus, the instrument, compared to other spiritual well-being instruments, and did not focus only on subjects who practiced a Judeo-Christian religion (Cella et al., 1993; Gomez & Fisher, 2003; Hungelmann et al., 1996; Meraviglia, 1999; O'Brien, 2008; Paloutzian & Ellison, 1982).

## Implication

The process used in the development of the TSWBA increases our understanding of spiritual growth and what it means to have spiritual well-being within Thai culture and context, and provides a knowledge base concerning the spiritual well-being of Thai elderly with chronic illness. This assessment will be useful for assessing the level of spiritual well-being for chronically ill elderly persons in Thailand. Moreover, health professional can use it to provide or enhance appropriate holistic care, especially, spiritual care to patients. Accordingly, the findings of this study may provide benefits for both the discipline of nursing and elderly people with chronic illness. Specific instructions must be adhered to, to accurately use this instrument to assess the spiritual well-being of a person,

1. Users of the TSWBA should be mindful that this instrument should only be used to assess the spiritual well-being of elderly people with chronic illness who respect Buddhism, Islam, and Christianity, but it is may not be suitable for persons who identify themselves as non-religious. Perceptions of personal spiritual well-being, especially among elderly people, depend on beliefs; so people who have religious beliefs and those who do not practice a religion, may have differing

perceptions of spiritual well-being. The TSWBA was constructed targeting people who have religious beliefs, so the assessment may not be accurate if used to measure the spiritual well-being of people who are not religious.

2. If the users are person who understand or have respect for the targeted religions, it can enhance the accuracy of the assessment.

3. Users should employ the interview approach for collecting data and provide time (around 20 minute per case) in order to obtain accurate data, because most Thai elderly people have problems reading the questions and may require an explanation for some of them. Although this assessment is a questionnaire, since the subjects are elderly people, they have difficulty reading and understanding the items because most of them have eyesight problems and are illiterate. Therefore, they could not complete the rating scale by themselves. However, there were some who could read and therefore completed the questionnaire by themselves.

4. This study explores the spiritual well-being of Thai elderly with chronic illness who respect Buddhism, Islam, or Christianity. Findings of the qualitative study indicate that, believers of all three religions perceive the meaning of spiritual well-being in the same way, although the methods of achieving spiritual well-being differed. Accordingly, the user should be mindful that personal beliefs, especially, religious beliefs affect an individual's spiritual well-being.

5. The interpreting the TSWBA scale the overall possible score is 164 and the lowest score possible is 41. A high score indicates a high level of spiritual well-being.

## Recommendations

### Recommendations for the nursing profession

In terms of the nursing profession, caring is an essential human need and the central unifying characteristic of nursing is providing the means through which the nurse interacts with the whole person. Quality care must include consideration of the spirit and must enable holistic integration of the patient's inner resources, so nursing requires a knowledge base of spiritual well-being. The findings of the proposed research, especially the qualitative phase, provide fundamental information and guidelines for nurses and other health care professionals to understand a person's

spiritual well-being and are likely to help to improve the quality and effectiveness of holistic care. It is critical that professionals develop some understanding of patients' basic worldviews in order to provide effective, patient-centered services. Accordingly, a spiritual well-being assessment tool may be used to increase the quality of nursing care, especially spiritual care and palliative care in elderly persons with chronic illness, because nurses can use the instrument to assess the level of spiritual well-being which indicates the status of the spiritual health of chronically ill patients and will allow health care professionals to tailor specific interventions for individual patients.

Moreover, the instrument can be used to assess the effectiveness or quality of holistic care, because assessing spiritual well-being can heighten nurses' respect for patients, if he/ she understands what their beliefs and values are. After the assessment, nurses can plan, implement and evaluate nursing care in relation to the level of spiritual well-being for an individual patient. Additionally, health professionals should recognize the strength that exists in faith-based cultures, should demonstrate competence and sensitivity in their service provision, and should feel ethically compelled to obtain education about religious diversity and the various forms of religious.

Finally, a spiritual well-being assessment can give indications about suitable interventions to treat problems. A spiritual assessment tool can help elderly persons to care for their health on their own, which encourages the promotion, protection, maintenance, and improvement of their health. Furthermore, elderly people will receive improved care from health practitioners and nurses. The spiritual well-being assessment can indicate problems with the spiritual health of elderly with chronic illness so they can receive suitable care or interventions in order to enhance spiritual well-being. As a result, such a measure and the resulting interventions will likely promote improved health outcomes for this group.

More importantly, spiritual well-being affects the prognosis of an illness, so a valid and reliable assessment tool should help to predict how older persons will cope with illness. Due to the fact that spiritual well-being is an important part of an older person' life experiences, they will need to work through the impact of their illness using their belief systems, to discover meaning. In addition, research indicates

that spiritual well-being is often a significant strength, and it becomes more prominent during difficult times. In order to enhance patients' strengths, professionals must have an understanding of the strengths that animate their patients' lives. Thus, conducting a spiritual well-being assessment provides a framework for eliciting patients' spiritual strengths. Furthermore, spiritual functioning is dynamic, so monitoring spiritual reflections by using this instrument indicates how older persons are progressing and adjusting to their illness.

**Recommendations for research**

For nursing research, construction of a valid and reliable spiritual well-being assessment tools can provide new knowledge about the meaning, definition, concept, and framework of spiritual well-being. Importantly, the proposed tool will be the first assessment tool that can be used for measuring spiritual well-being among Thai elderly with chronic illnesses. However, it is likely that this tool will require several revisions. Such a tool will certainly aid in the conduct of nursing research in the future. In addition, this assessment tool will educate nurses and others in regards to the spiritual needs, spiritual problems, and the spiritual care of Thai elderly with chronic illnesses. A further outcome of the proposed research is that such a study can provide suggestions for further research concerning the development of interventions or spiritual care programs to enhance the spiritual well-being of elderly with chronic illnesses. It is hoped that this study will serve as a springboard to further the understanding of spiritual well-being with other groups in other settings.

**Recommendations for education**

For nursing education, the nursing student needs to be educated on how to deal with spiritual dimensions and should recognize patient beliefs, culture, and behaviors. This ability is dependent on an understanding of a person's spirituality, and therefore nurses should develop an understanding of human values and embrace a personal philosophy that provides a foundation for their personal and professional life. These findings, especially the qualitative study, can be initial guidelines used to formally integrate undergraduate, graduate and advanced practice nursing curriculum programs both theoretically and practically in order to ensure competent performance of professionals and adequately prepare nurse generalists and advanced practice nurses to perform this role competently.

In conclusion, the TSWBA should prove helpful to health care providers in assessing the sense of spiritual well-being among Thai elders with chronic illnesses. Having information about the spiritual well-being of an individual can assist in development of interventions that promote appropriate and quality health care. However, the uniqueness of the TSWBA, compared to other spiritual well-being instruments, is that it was developed within the context of the Thai culture, with a specific focus on chronically ill elders.

## Limitations and further research

All research instruments have limitations and the TSWBA is no exception. The tool is to be used only in assessing spiritual well-being among Thais who are elderly, chronically ill and Buddhist, Islamic or Christian. Therefore, it would not be inappropriate for use with other groups of individuals. Secondly, the tool does not indicate specific degrees of spiritual well-being or non-spiritual well-being. This is because of the lack of a cut-off point between spiritual well-being and non-spiritual well-being. Therefore, degrees of spiritual well-being cannot be assessed by way of the TSWBA. In addition, since many elderly Thais have difficulty reading instrument questions, due to visual problems or lack of education, the instrument needs to be administered by way of interview rather than via self-report. Mailing the instrument to subjects for self-report may not provide reliable data.

Based upon the results, future research needs to focus on the use and psychometric assessment of the TSWBA. In addition, further research should be undertaken regarding the use of spiritual well-being assessment tools with elderly Thais who have chronic illnesses, especially in regards to the significance of their religious faith/ spiritual belief to their spiritual well-being.

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# APPENDICES

# APPENDIX A

Documents about research study

## แบบรายงานผลการพิจารณาจริยธรรมการวิจัย

## มหาวิทยาลัยบูรพา

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1. **ชื่อวิทยานิพนธ์**
   **ชื่อเรื่องวิทยานิพนธ์ (ภาษาอังกฤษ)** THE DEVELOPMENT OF AN INSTRUMENT TO MEASURE SPIRITUAL WELL-BEING OF THAI ELDERLY WITH CHRONIC ILLNESS
2. **ชื่อนิสิต (นาย,นาง,นางสาว):** MISS PENNAPA UNSANIT
   **หลักสูตร** DOCTOR OF PHILOSOPHY **สาขาวิชา** NURSING
   ☑ ภาคปกติ ☐ ภาคพิเศษ
   **รหัสประจำตัว** 48810397 **คณะ/วิทยาลัย** FACULTY OF NURSING
3. **หน่วยงานที่สังกัด:** ..........................................................................................
4. **ผลการพิจารณาของคณะกรรมการจริยธรรมการวิจัย:**

   คณะกรรมการจริยธรรมการวิจัย ได้พิจารณารายละเอียดวิทยานิพนธ์ เรื่องดังกล่าวข้างต้นแล้ว ในประเด็นที่เกี่ยวกับ

   1) การเคารพในศักดิ์ศรี และสิทธิของมนุษย์ที่ใช้เป็นตัวอย่างการวิจัย
   2) วิธีการอย่างเหมาะสมในการได้รับความยินยอมจากกลุ่มตัวอย่างก่อนเข้าร่วมโครงการวิจัย (Informed consent) รวมทั้งการปกป้องสิทธิประโยชน์และรักษาความลับของกลุ่มตัวอย่างในการวิจัย
   3) การดำเนินการวิจัยอย่างเหมาะสม เพื่อไม่ก่อความเสียหายต่อสิ่งที่ศึกษาวิจัย ไม่ว่าจะเป็นสิ่งที่มีชีวิต หรือไม่มีชีวิต

   คณะกรรมการจริยธรรมการวิจัย มีมติเห็นชอบ ดังนี้

   ( ✓ ) รับรองโครงการวิจัย
   (   ) ไม่รับรอง

5. **วันที่ที่ให้การรับรอง:**..............10.......**เดือน** **ตุลาคม** **พ.ศ. 2551**

ลงนาม ..............................................
(ศาสตราจารย์ ดร.สมศักดิ์ พันธุวัฒนา)
ประธานคณะกรรมการพิจารณาจริยธรรมการวิจัย

ลงนาม ..............................................
(รองศาสตราจารย์ ดร.ประทุม ม่วงมี)
รองอธิการบดีฝ่ายบัณฑิตศึกษา

## PARTICIPANT'S CONSENT FORM

Dear All Participants

I am a Doctoral degree student (Philosophy of Nursing) in Faculty of Nursing, Burapha University, Thailand. My study entitled, "The Development of an Instrument to Measure Spiritual Well-Being of Thai Elderly with Chronic Illness". The main objective is to develop an assessment tool measure spiritual well-being in Thai elderly persons with chronic illness. The specific objective is to examine the psychometric properties of the instrument.

This study will be integrate qualitative and quantitative methods or call methodological design. Qualitative phase, If you agree to participate in this study, you will be in-depth interviewed about your perception and understanding of spiritual well-being. Quantitative phase, you will be answer the questionnaire. Participation will be simple random sampling. However, the participant is willing to participate. You have the right to end your participation in this study at any time without any penalty. You may refuse to answer any specific questions, remain silent, or leave this study at any time. Any information received from this study, including your identity, will be kept confidential. A coding number will be assigned to you and your name will not used. You will receive a complete explanation of the nature of the study upon its completion, if you wish.

The research will be conducted by Pennapa Unsanit. If you have any questions, please contact me at 0814504190 or by email: pennapa_unsanit@yahoo.com. Your cooperation is greatly appreciated.

Please sign your name below to indicate your consent to participate in this study. You will be given a copy of this consent form to keep.

| Signature of Subject | Date |
|---|---|
| Signature of Witness | Signature of Investigator |

**PARTICIPANT'S CONSENT FORM**

**AGREEMENT STATEMENT AS PARTICIPANT**

Title: "**The Development of an Instrument to Measure Spiritual Well-Being of Thai Elderly with Chronic Illness.**"

Dear All Participants

I would like to be invited you as a participants in my research. The title of my study is "The development of an instrument to measure spiritual well-being of Thai elderly with chronic illness." Before you agree to be as a participant of this study, I would like to explain about the significance of this study.

You are the important person in this study because you have a period of older person who has many experiences in your life. These experiences include the face to happiness, suffering, illness, disability and death. The experiences make you to be clear of positive and negative spirituality than other persons group. The purpose of everyone is achieve to spiritual well-being due to effect to person well-being including physical mental and social. Consequently, the promotion older person to achieve the spiritual well-being is importance because it helps to improve physical health, enhance the inner strength to face of life problem, recover the illness, and have a life satisfaction and quality of life. However, at this time, no have an instrument to assess the spiritual well-being in Thailand so the objective of this study is to develop this instrument. This instrument is important to assess spiritual well-being and seek to help model for older person with chronic illness in order to achieve well-being. Accordingly, you are the important person to give the best information to develop this instrument.

If you agree to be as a participant of this study, you may have cooperated procedure as follow:

1. I request you to answer the questionnaire and take time around 15-20 minute and 45-90 minute interviewing.

2. Your information that you give me not any effect to you and your family both directly and indirectly.

3. Not any expense for this study.

You have the right to end your participation in this study at any time without any penalty. You may refuse to answer any specific questions, remain silent, or leave this study at any time and not any effect to you.

The important information

Any information from you will only be used for purpose of this research study and conclude the result in overall not individual. Moreover, any information received from this study, including your identity, will be kept confidential. A coding number will be assigned to you and your name will not used. It will be kept only in my computer. You have confidence in me that your information not reveals in public.

The research will be conducted by Pennapa Unsanit. If you have any questions, please contact me at 0814504190 or by email: pennapa_unsanit@yahoo.com.

Major advisor: Associate Professor Dr.Rachanee Sunsern, Faculty of Nursing, Burapha University. If you have any questions, you can contact her at 038-102826 ext. 2826 or 081-08142093 or by email: r_sunsern@hotmail.com

Your cooperation is greatly appreciated.

Miss Pennapa Unsanit
Candidate Ph.D. Student
Faculty of Nursing, Burapha University

## AGREEMENT STATEMENT AS PARTICIPANT

**Title:** "The Development of an Instrument to Measure Spiritual Well-Being of Thai Elderly with Chronic Illness."

Date of collection data .........Month ................Years............

Before I give signature in below, I already get explanation from Miss. Pennapa Unsanit about purposes, method, procedures, and benefits of this study, and I understood all of that explanation. I agree to be as a participant of this study.

I am Pennapa Unsanit as a researcher had explained all of explanation about purposes, method, procedures, and benefits of this study to the participant with honestly; then, all of data/ information of the participants will only be used for purpose of this research study.

Signature.......................................Participant
(....................................)

Signature.......................................Participant
(....................................)

Signature.......................................Researcher
(Miss Pennapa Unsanit)

**ข้อมูลสำหรับผู้เข้าร่วมวิจัย**

**การศึกษาเรื่อง:** การพัฒนาเครื่องมือประเมินความผาสุกทางจิตวิญญาณของผู้สูงอายุที่ป่วยด้วยโรคเรื้อรัง

**เรียน** ผู้เข้าร่วมวิจัยทุกท่าน

ท่านเป็นผู้ที่ได้รับเชิญให้เข้าร่วมการศึกษาวิจัยเรื่อง "การพัฒนาเครื่องมือประเมินความผาสุกทางจิตวิญญาณของผู้สูงอายุที่ป่วยด้วยโรคเรื้อรัง" ก่อนที่ท่านตกลงเข้าร่วมการศึกษาดังกล่าว ขอเรียนให้ท่านทราบถึงเหตุผลและรายละเอียดของการศึกษาวิจัย ในครั้งนี้

ท่านเป็นบุคคลที่มีความสำคัญมาก เนื่องจากท่านเป็นผู้ที่อยู่ในช่วงวัยที่มีประสบการณ์ต่างๆมากมายหลากหลายในชีวิตที่ผ่านมา รวมทั้งความสุข ความทุกข์ การเผชิญกับความเจ็บป่วย ทุพลภาพ และการเผชิญกับความตาย ทำให้ท่านเป็นผู้ที่มีความชัดเจนในมิติด้านจิตวิญญาณมากกว่ากลุ่มอายุอื่น ๆ ทั้งด้านบวกและด้านลบ เป้าหมายสูงสุดของบุคคล คือ ความผาสุกทางด้านจิตวิญญาณ เพราะจะส่งผลให้สุขภาพดีทั้งทางร่างกาย จิตใจ และสังคม ดังนั้นการสร้างเสริมให้บุคคลมีความผาสุกทางจิตวิญญาณ จึงเป็นการช่วยเสริมสร้างสุขภาพ ทำให้มีร่างกายแข็งแรง มีความเข้มแข็งทางด้านจิตใจในการเผชิญปัญหาต่าง ๆ ฟื้นหายจากการเจ็บป่วย มีความพึงพอใจในชีวิต และมีคุณภาพชีวิตที่ดีในวัยสูงอายุของท่านได้ในที่สุด นอกจากนี้ ปัจจุบันยังไม่มีเครื่องมือที่จะประเมินความผาสุกทางด้านจิตวิญญาณ การวิจัยครั้งนี้จึงมุ่งที่จะพัฒนาเครื่องมือดังกล่าว เพื่อประเมินและหาแนวทางช่วยเหลือผู้สูงอายุที่เจ็บป่วยให้มีความผาสุก จากที่กล่าวมานี้ ท่านจึงเป็นบุคคลที่สำคัญและให้ข้อมูลได้ดีที่สุด ในการสร้างและพัฒนาเครื่องมือในครั้งนี้

**หากท่านตกลงที่จะเข้าร่วมการศึกษาวิจัยนี้ จะมีข้อปฏิบัติร่วมดังต่อไปนี้**

1. ขอความกรุณาท่านให้ข้อมูลตอแบบสอบถาม ประมาณ 10-15 นาที
2. การให้ข้อมูลของท่านไม่มีผลใด ๆ กับตัวท่าน และครอบครัวทั้งทางตรงและทางอ้อม
3. ท่านไม่ต้องเสียค่าใช้จ่ายใด ๆ เกี่ยวกับการวิจัยในครั้งนี้

การเข้าร่วมการศึกษานี้ เป็นไปโดยสมัครใจ ท่านอาจจะปฏิเสธที่จะเข้าร่วม หรือถอนตัวจากการศึกษานี้ได้ทุกเมื่อโดยไม่กระทบใด ๆ ต่อตัวท่าน

**ประการสำคัญที่ท่านควรทราบถือ**

ข้อมูลที่ได้จากแบบประเมินจะสรุปผลในภาพรวม และผลของการศึกษานี้ ผู้วิจัยรับรองว่าจะใช้สำหรับวัตถุประสงค์ทางวิชาการเท่านั้น โดยข้อมูลต่าง ๆ จะถูกเก็บเป็นความลับไว้ในคอมพิวเตอร์ และไม่มีการแพร่งพรายสู่สาธารณชน ขอรับรองว่าจะไม่มีการเปิดเผยชื่อของท่านตามกฎหมาย

หากท่านมีปัญหา หรือข้อสงสัยประการใด กรุณาติดต่อ นางสาวเพ็ญนภา อุ่นสนิท หน่วยงาน ภาควิชาพยาบาลศาสตร์ คณะแพทยศาสตร์โรงพยาบาลรามาธิบดี มหาวิทยาลัยมหิดล โทร 02-2011601 หรือ 02-1525563 หรือ 081-4504190 อาจารย์ที่ปรึกษาโครงการวิจัย รองศาสตรจารย์ ดร.รัชนี สรรเสริญ หน่วยงาน คณะพยาบาลศาสตร์ มหาวิทยาลัยบูรพา โทร 038-102826 ต่อ 2826 หรือ 081-08142093 ซึ่งยินดีให้คำตอบแก่ท่านทุกเมื่อ

ขอขอบพระคุณในความร่วมมือในการตอบแบบประเมินของท่านมา ณ ที่นี้

นางสาวเพ็ญนภา อุ่นสนิท<br>
นิสิตปริญญาเอก<br>
คณะพยาบาลศาสตร์ มหาวิทยาลัยบูรพา

## ใบยินยอมเข้าร่วมการวิจัย

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**หัวข้อวิทยานิพนธ์** เรื่อง การพัฒนาเครื่องมือประเมินความผาสุกทางจิตวิญญาณของผู้สูงอายุที่ป่วยด้วยโรคเรื้อรัง

วันให้คำยินยอม วันที่......เดือน........................พ.ศ..............

ก่อนที่จะลงนามในใบยินยอมเข้าร่วมการวิจัยนี้ ข้าพเจ้าได้รับการอธิบายจากผู้วิจัยถึงวัตถุประสงค์ของการวิจัย วิธีการวิจัย ประโยชน์ที่จะเกิดขึ้นจากการวิจัยอย่างละเอียดและมีความเข้าใจดีแล้ว ข้าพเจ้ายินดีเข้าร่วมโครงการวิจัยนี้ด้วยความสมัครใจ และข้าพเจ้ามีสิทธิที่จะบอกเลิกการเข้าร่วมในโครงการวิจัยนี้เมื่อใดก็ได้ และการบอกเลิกการเข้าร่วมการวิจัยนี้ จะไม่มีผลกระทบใด ๆ ต่อข้าพเจ้า

ผู้วิจัยรับรองว่าจะตอบคำถามต่าง ๆ ที่ข้าพเจ้าสงสัยด้วยความเต็มใจ ไม่ปิดบัง ซ่อนเร้นจนข้าพเจ้าพอใจ ข้อมูลเฉพาะเกี่ยวกับตัวข้าพเจ้าจะถูกเก็บเป็นความลับและจะเปิดเผยในภาพรวมที่เป็นการสรุปผลการวิจัย

ข้าพเจ้าได้อ่านข้อความข้างต้นแล้ว และมีความเข้าใจดีทุกประการ และได้ลงนามในใบยินยอมนี้ด้วยความเต็มใจ

ลงนาม..................................................................ผู้ยินยอม

(..................................................................)

ลงนาม..................................................................พยาน

(..................................................................)

ลงนาม..................................................................ผู้ทำวิจัย

(..................................................................)

ข้าพเจ้าไม่สามารถอ่านหนังสือได้ แต่ผู้วิจัยได้อ่านข้อความในใบยินยอมนี้ให้ข้าพเจ้าฟังจนข้าพเจ้าเข้าใจดีแล้ว ข้าพเจ้าจึงลงนามหรือประทับลายนิ้วหัวแม่มือของข้าพเจ้าในใบยินยอมนี้ด้วยความเต็มใจ

ลงนาม..............................................................ผู้ยินยอม

(..................................................................)

ลงนาม..............................................................พยาน

(..................................................................)

ลงนาม..............................................................พยาน

(..................................................................)

ลงนาม..............................................................ผู้ทำวิจัย

(..................................................................)

ในกรณีที่ผู้ถูกทดลองยังไม่บรรลุนิติภาวะ จะต้องได้รับการยินยอมจากผู้ปกครองหรือผู้แทนโดยชอบด้วยกฎหมาย

ลงนาม........................................................ผู้ปกครอง/ ผู้แทนโดยชอบด้วยกฎหมาย

(............................................................)

ลงนาม........................................................พยาน

(............................................................)

ลงนาม........................................................ผู้ทำวิจัย

(............................................................)

## APPENDIX B

Instrument in qualitative and quantitative study

# LIST OF EXPERTS

1. Associate Professor Dr.Tassanee Tongprateep

    Kuakarun Collage of Nursing, Expertise in nursing spirituality, especially, Buddhism spirituality.

2. Associate Professor Dr.Jiraporn Kespichayawattana

    Faculty of Nursing, Chulalongkorn University, Expertise in gerontology nursing.

3. Associate Professor Pichet Kalamkasait

    Faculty of Social Sciences and Humanities, Mahidol University, Expertise in spirituality for every religion, especially, Islam religion

4. Assistant Professor Dr. Kanokknuch Chunlestskul

    Faculty of Nursing, Burapha University, Expertise in nursing spirituality

5. Phra Pisal Visalo

    Abbot of Pah-Sukato Forest Monastery, Chaiya Pume Province, Expertise in Buddhism spirituality

6. Rev. Cherdchai Lertjitlekha

    Saengtham College, Nakhon Prathom, Province, Expertise in Christianity spirituality

7. Rev. Joseph Vitaya Ladloi

    Abbot of St. Arkara-Tavada-Raphael, Samut Prahran Province, Expertise in Christianity spirituality

8. Mr. Banyog Lawang.

    The Islamic headman or Imam, Expertise in Islam spirituality

9. Mr. Preeda Reungvichatorn

    Semsikkha, Sathirakoses-Nagapradeepa Foundation (SNF), Expertise in spiritual development

10. Miss Wanna Jarusomboon

    Semsikkha, Sathirakoses-Nagapradeepa Foundation (SNF), Expertise in spiritual development

# INTERVIEW GUIDELINE

## The Elderly Thai Spiritual Well-Being Interview Guide (TSWBIG)

**Personal Data**

First Name ................................Surname ........................................

Age ......... Date of Birthday Date .......... Month ............... Year ...............

Sex ❒ Male ❒ Female

Marriage Status ❒ Spouse ❒ Single ❒ Widow ❒ Divorce/ Separate

Religion ❒ Buddhism ❒ Christianity ❒ Islam ❒ No Religion

Level of education ........................................................................

Hometown ..............................Duration of Live ....................Year/ Month

Address ....................................................................................

Duration of Live ..........................................................................

Occupation ❒ No Work Identify your occupation before retires ....................

❒ Farming ❒ Employee ❒ Merchant

❒ Government Officer ❒ Other Identify ..................

Resource of Income (Answer more than 1)

❒ Oneself ❒ Spouse

❒ Child ❒ Other Identify ....................................

Sufficient Income ❒ Not enough ❒ Enough ❒ More than enough

Living (Answer more than 1)

❒ Child ❒ Spouse ❒ Alone ❒ Other Identify ...............

Type of Chronic Illness (Answer more than 1)

❒ Diabetes Mellitus ❒ Coronary Artery Disease ❒ CVA

❒ Rheumatism ❒ Osteoporosis ❒ Hypertension

❒ Cancer Identify ..........................................................

Duration of Illness ...................................................... Year

Severity of Chronic Illness

❒ Can control ❒ Often to follow up ❒ Sometime to follow up

The ability to activity daily living

❒ Can do it by yourself

❒ Need to help from someone; Identify activity ...................................

❒ Can't do it by yourself

**The Initial Main Question about Spiritual Well-Being**

1. Do you know about spirituality?

If you know, please tell me about its meaning. ...........................................

If you don't know, when you hear the word of "spirituality," what do you think?

Is Religion, God, or Devine important to your life? ..................................

How are they important to your life? ..................................................

2. Do you think that spiritual dimension occur since your born? ............................

If you answer "No", when the spiritual dimension happen in span of your life?.......... or happen in which your experience/ event? ............ and each time that spirituality happen, is it difference or same in your understanding......................

How is difference or same? ..........................................................

3. Are the illness and severity of illness affect your spiritual dimension? ................

How are affect to you? ..............................................................

Are aging and confront of the death in the future affect to your spiritual dimension?..........................................................................................

How are affect to you? ..............................................................

4. Do you think that personal spirituality has same or difference? ..........................

If it has difference, please tell the thing that difference. ..........................

Which the factor that cause to different of personal spirituality? ..............

5. In your opinion, what the meaning of spiritual health? ....................................

6. The person who has spiritual health as well, what has the feature that you think? ...

How there elements are important to produce an effect to your spiritual health? ...........................................................................................

7. Do you think that person who has spiritual health as well, they should be performed? ...........................................................................................

8. In your opinion, what the meaning of spiritual well-being? .................................

What are the characteristics of person who has spiritual well-being? .......................

**Belief and Faiths**

1. Do you have beliefs and faiths? ..... What do you beliefs and faiths in ................
2. Are beliefs and faiths important in your life? ................................................
3. How the beliefs and faiths that you respect are important to you? .......................
4. How are the effects that you do follow your beliefs and faiths? ...........................
5. How religion, God, or Divine is important to your life? .......................................
6. How has your illness influenced your beliefs and faiths? .....................................
7. Does faith play a role in regaining your health? ..................................................
8. Are the beliefs and faiths that you respect can help your life? ............................
9. What are situations that your beliefs and faiths can help? ...................................
10. How God, Divine, or beliefs is influenced to your illness? .................................

**Spiritual Contentment**

1. What brings you joy and peace in your life? .....................................................
2. What is the meaning of mindfulness? ................ How about it? ......................
3. Do you have situations that do you feel the most mindfulness? .........................

What the situations can do you to feel the most mindfulness? ..............................

Why the situation can do you to feel mindfulness? ..............................................

4. Who are the significant people in your life? ......................................................

How this person is significant in your life? ...........................................................

How the relationship in your family? .....................................................................

Beside the member in your family, do you have someone or something that significant in your life? ...........................................................................................

5. What is valuable thing for your mind?............ How this thing is valuable for your mind? ..........................................................................................................
6. What is the thing that do you have inner strength? ..............................................
7. What is the meaning of good life of valuable life? ...............................................
8. When you have problem such as loss of something or someone that you love, suffer from illness, what do you do?...........How do you confront of this problem? .........................Do you have someone to help you? ..........................
9. For the way of your life, what do you approach? ..................................................
10. What is the thing that do you feel fear? ...........................................................
11. How can you live with your chronic illness without suffering? ............................

12. What is the meaning of happiness that you understand? ...............................
13. What is the proud in your life? ...............................................................
14. What is the happiness in your life? ...........................................................
15. Which the things that can you feel hopes and power to live life? .......................
16. What can you do to feel alive and full of spirit? ...........................................
17. What can you do to feel inner strength and hopefulness? ...............................
18. How the hopefulness is important to you? .....................................................

**Religious Practice**

1. Do you think that spirituality and religion is the same or difference? ...................

If it is the same, why do you think? ...............................................................

If it is difference, why do you think ...............................................................

What the things that do you think it is difference? ..............................................

2. How are religion and spirituality related to? ...................................................
3. Do you participate in any religious activities? ..................................................
4. Is worship important to you? .......................................................................
5. What do you consider the most significant act of worship in your life? ...............
6. After do you perform religious activities, how do you feel? ..............................

How activities are affecting to your life? ............ Why is like that? .....................

**Searching in meaning of life/ Purpose of life**

1. Do you have a sense of purpose in life or meaning in life? ................................

What gives your life meaning?

2. Does your illness interfere with your life goals? ..............................................
3. What do you in order to achieve purpose in your life? .......................................
4. Why do you want to get well? .......................................................................
5. How hopeful are you about obtaining a better degree of health? .........................
6. Do you feel that you have a responsibility in maintaining your health? ................
7. Will you be able to make changes in your life to maintain your health? ................
8. Are you motivated to get well? ....................................................................
9. What is the most important or powerful thing in your life? .................................

## The Elderly Thai Spiritual Well-Being Assessment (TSWBA)

**Instruction:** This assessment tool is the interviews form that to measure spiritual well-being of Thai elderly with chronic illness. This assessment tool cosmists two parts as follow:

Part I: Demographic data

Part II: Spiritual well-being of Thai elderly with chronic illness

**Part I: The demographic data**

**Instruction:** Interviewer will read the statements or questions to elderly person, then write sign √ in the square box ❐ or fill statements in the blank that follow as the answer of elderly person.

1. Date of collection data .................. Month ............... Year ......................
2. First Name ................................ Surname ......................................
3. Age ......... Date of Birthday Date ........... Month ............... Year ...........
4. Sex ❐ Male ❐ Female
5. Marriage Status ❐ Spouse ❐ Single ❐ Widow ❐ Divorce/ Separate
6. Religion ❐ Buddhism ❐ Christianity ❐ Islam ❐ No Religion
7. Level of education ❐ No Education ❐ Elementary Education
   ❐ Secondary Education ❐ High Education
   ❐ Diploma Education ❐ Bachelor Degree Education
   ❐ Higher Bachelor Degree Education .............................
8. Hometown.........................Duration of Live ........................Year/ Month
9. Address ............................Duration of Live .......................Year/ Month
10. Current Occupation
    10.1 ❐ No Work Identify your occupation before retire ...................
    10.2 ❐ Working: ❐ Farming ❐ Employee
    ❐ Merchant ❐ Government Officer ❐ Fisher
    ❐ Officer ❐ Other Identify ..................................

11. Resource of Income (Answer more than 1)

    ❒ Oneself: ❒ Elderly Pension ❒ Government Pension

    ❒ Saving Money ❒ Money from Property ❒ Working Money

    ❒ Spouse ❒ Child ❒ Other Identify ………..………

12. Sufficient Income ❒ Not enough ❒ Enough ❒ More than enough

13. Characteristics of house that you living

    ❒ Owner ❒ Child ❒ Relatives ❒ Rent

    ❒ Other …………………………………………………………………..........

14. The family member that you live with (Answer more than 1)

    ❒ Alone ❒ Spouse ❒ Child ❒ Relative

    ❒ Parent ❒ Other Identify……………………………………..……….

15. Type of chronic illness that are diagnosed by medicine (Answer more than 1)

    ❒ Diabetes Mellitus ❒ Coronary Artery Disease

    ❒ Hypertension ❒ Asthma

    ❒ Chronic Obstructive Pulmonary Disease ❒ Cerebrovascular Disease

    ❒ Chronic Renal Failure ❒ Gout

    ❒ Rheumatism ❒ Osteoporosis

    ❒ Eye Disease ❒ Cancer Identify ………………

    ❒ Other Disease …………………………

16. Duration of chronic illness that you are ………………..…………………… Year

17. Among 1 year, do you admit at hospital with chronic illness that you are?

    ❒ Yes, identify time to admit ……………………………………..……..

and identify chronic disease that you admit ……………………….

    ❒ No

18. Time frequency that you follow up with chronic illness that you are.

    ❒ Every week ❒ 3 times per month ❒ 2 times per month

    ❒ Once a month ❒ once per 2-3 month ❒ 1-2 times per year

    ❒ No follow up

19. By perceive with you, can you control symptom of chronic illness that you are?

    ❒ Can control symptom ❒ cannot control symptom

20. Within 6 month, do you go to meet medicine before appointment of follow up?

    ❒ No

    ❒ Yes, identify time to go ..............................................................

and identify chronic disease that you go ...........................

21. Attitude that you have for chronic illness that you are

    ❒ You think that these illnesses can cure

    ❒ You think that these illnesses can't cure

22. Attitude to medicine who cure chronic illness for you.

    ❒ Very expert ❒ More expert

    ❒ Fairly expert ❒ No expert

23. Attitude to nurse who care you.

    ❒ Encourage for you ❒ No encourage ❒ Feel anxious

24. Attitude to hospital that you go.

    ❒ Very famous ❒ More famous

    ❒ Fairly famous ❒ No famous

25. Ability to do activity daily living (Barthel ADL Index)

    25.1 Feeding ❒ Unable ❒ Needs help cutting

    ❒ Can do it independent

    25.2 Grooming ❒ Need help ❒ Can do it independent

    25.3 Transfer (bed to chair and back)

    ❒ Unable ❒ Major help (one or two people), can sit

    ❒ Minor help (verbal), can sit ❒ Independent

    25.4 Toilet use ❒ Dependent

    ❒ Needs some help, but can do something alone ❒ Independent

    25.5 Mobility (on level surfaces) ❒ Immobile

    ❒ Wheelchair independent, including corners

    ❒ Walks with help of one person (verbal)

    ❒ Independent (but may use any aid)

    25.6 Dressing ❒ Dependent

    ❒ Needs help but can do about half unaided

    ❒ Independent (including buttons, zips, laces, etc.)

25.7 Stairs ❒ unable ❒ Needs help (verbal, carrying aid)

❒ Independent

25.8 Bathing ❒ Dependent ❒ Independent (or in shower)

25.9 Bowels (1 week ago) ❒ Incontinent (or needs to be given enemas)

❒ Occasional accident ❒ Continent

25.10 Bladder (1 week ago)

❒ incontinent, or catheterized and unable to manage alone

❒ Occasional accident ❒ Continent

26. While you ill at home, who care? (Answer more than 1)

❒ Nobody ❒ Child ❒ grandchild

❒ Spouse ❒ Relative ❒ Other Identify ...................

27. Attitude to person who care for you.

❒ The best caring ❒ Fair ❒ Poor

28. While you ill at home, do anyone visit to you?

❒ Nobody (pass over 29) ❒ somebody (follow 28.1-28.3)

28.1 The person that visit to you

❒ Child ❒ Grandchild ❒ Relative

❒ Neighbor ❒ Other Identify ....................

28.2 Frequency of visiting

❒ Usually ❒ Often ❒ Sometime

28.3 Attitude to person that visit to you

❒ Encourage for you ❒ No encourage ❒ Feel anxious

29. Within 1 year, do you loss someone or something that you love?

❒ No loss anything or anybody

❒ Have loss something or someone (Answer more than 1)

❒ Spouse ❒ Parent ❒ Relative

❒ Child ❒ Grandchild ❒ Pet or matter

❒ Other ............................................................

**Part II: Spiritual well-being of elderly with chronic illness**

**Instruction:** Please consider these statements and select by write the sign √ in the blank that you perceive to statements follow actual situation of you

| Statement | Strongly agree | Agree | Sometime agree | Disagree | Strongly disagree |
|---|---|---|---|---|---|
| 1. You don't feel disappointed with your past. | | | | | |
| 2. Even if you have chronic illness, you can live a normal live. | | | | | |
| 3. You can cope with chronic illness in old age and be happy. | | | | | |
| 4. You are satisfied with all areas of your capability. | | | | | |
| 5. You are certainly to confront of serious life problem. | | | | | |
| 6. You can live among the conflict. | | | | | |
| 7. You can change the way of life every time | | | | | |
| 8. You can change your life follow the change of situation | | | | | |
| . | | | | | |
| . | | | | | |
| . | | | | | |
| Currently, why do you need to be alive: | | | | | |
| 38. Looking forward to seeing children and grandchildren grow up | | | | | |
| 39. Doing more good things | | | | | |

| Statement | Strongly agree | Agree | Sometime agree | Disagree | Strongly disagree |
|---|---|---|---|---|---|
| 40. Practice the Dharma more | | | | | |
| 41. Become a benefit to your community and society | | | | | |

## APPENDIX C

Data analysis: Qualitative and quantitative phase

## ANALYSIS OF DEFINITION, THEME/DOMAIN, AND INSTRUMENT OF SPIRITUALITY SPIRITUAL HEALTH AND SPIRITUAL WELL-BEING

Table 6 Definition of spirituality and spiritual well-being presented in literature reviews

| Author and date | Spirituality | Author and date | Spiritual well-being |
|---|---|---|---|
| Labun (1988) | Spirituality is expressed and shaped by the accepted practices and beliefs of a particular culture. This approach to spirituality implies that spiritual needs have their origin in the institutional religious domains, intimating at a belief in God or a deity. | Hungelman et al. (1985, 1996) | Spiritual well-being is a sense of harmonious interconnectedness between self, other/ nature, and ultimate other. It is achieved through a dynamic and integrative growth process which leads to a realization of the ultimate purpose and meaning of life. |
| Reed (1992) | Spirituality refers to the propensity to make meaning through a sense of relatedness to dimensions that transcend the self in such a way that empowers and does not devalue the individual. [Relatedness may be experienced intrapersonally (oneself); interpersonally (other, nature and environment); and transpersonally(unseen, God, or power greater than the self and ordinary source)] | Kirschling, Pittman (1989) | Spiritual well-being is analogous to the presence of spiritual health in the individual. It is uniquely expressed in terms of meaning of and satisfaction with life; and includes a sense of inner peace and harmony to one's life, transcendent component of a relationship with a higher being. |
| McSherry (2000) | The word 'spirit' has its origins from the Latin word 'spiritus', which generates images of life, breath, wind and air. Spirit relates to the unique spirit of an individual that is their life force, the essence and energy of their being. It is | NICA (1975) | The National Interfaith Coalition on Aging (NICA); Spiritual well-being is the affirmation of life in a relationship with God, self, community and environment that nurtures and celebrates wholeness (religious and |

Table 6 (Cont.)

| Author and date | Spirituality | Author and date | Spiritual well-being |
|---|---|---|---|
| | this force that develops in an individual the ability to transcend the natural laws and orders of this life, allowing access to a mysterious or transcendent dimension. It drives and motivates individuals to find meaning and purpose, allowing expression in all aspects and experiences of life, especially in times of crisis and need. | | socio-psychological components) |
| Wright (2002) | Qualitative research: Phenomenology (16 spiritual care stakeholders (Jewish, Christian, Hindu, Muslim, & Buddhist) no religious faith)<br>Spirituality: is a lfie orientation shaped by culture and history, incorporating values and beliefs, practices, customs and ritual.<br>Spirituality: is being at one with the universe and being in touch with nature and creation.<br>Spirituality: is concerned with the intangibility of transcendence and the tuning in to something both beyond and within, something deeper, something wider, something bigger. | Paloutzian & Ellison (1983) | Spiritual well-being has two dimensions including religious and existential orientation. |

Table 6 (Cont.)

| Author and date | Spirituality | Author and date | Spiritual well-being |
|---|---|---|---|
| Wasi (2004) | Spiritual health is inner sense of self, having faith and wisdom that contributes to ultimate goodness and finally, the happiness which occurs from that. It is a state of happiness and satisfaction in one's life, having faith and religious practice that includes a sense of value in being a human being, give love and compassion to all mankind including the environment and nature. | Stoll (1979, 1989) | Spiritual well-being is not a state but rather is indicative of the presence of spiritual health in the person. Therefore spiritual well-being is identified as behavioral expressions of spiritual health. |
| Tongprateep (2003) | Spiritual health is a state of balance between individual's life values, goals and belief system and person's relationship within himself or herself and with others. | Ellison (1983) | Spiritual well-being may not be the same things as spiritual health but emanates from an underlying state of spiritual health and is an expression of it.. Spiritual well-being arises from an underlying state of spiritual health and is expression of it. Conceptual: Spiritual well-being has a subjective meaning, making it difficult to operationalize, although indicators o the construct might be systematically developed. Spiritual well-being had both religious and social-psychological components and was an indicator of spiritual health. |

Table 6 (Cont.)

| Author and date | Spirituality | Author and date | Spiritual well-being |
|---|---|---|---|
| Fisher (2010) | Spiritual health is a dynamic state of being, shown by the extent to which people live in harmony within relationships in 4 domains of spiritual well-being; personal, communal, environmental, and transcendental domain. | Moberg & Brusek (1978) | Spiritual well-being is a two-dimensional construct: vertical dimension (individual's relationship with his/her "God") and a horizontal dimension (an individual's perception o lie's purpose and satisfaction apart from any religious references). |
| | | Fehring, Miller and Shaw (1997) | Spiritual well-being is an indication of individuals' quality of life in the spiritual dimension or simply an indication of their spiritual health. |
| | | Gomez & Fisher (2003). | spiritual well-being is considered primarily an individual state or outcome, as opposed to a set of beliefs about divinity, humanity, or ultimate truth |
| | | Tongprateep (2009) | Happiness is commonly viewed as being a sign of spiritual well-being which is not the same thing but it is an expression of spiritual health. Spiritual health and spiritual well-being are difficult to separate and usually used interchangeably that are abstract and personal experience. |

Table 7 Themes or domains of spirituality and spiritual well-being presented in literature reviews

| Author and date | Type of study | Sample | Concept that measure | Themes/ domains related research finding |
|---|---|---|---|---|
| Labun (1988) | Literature review of Concept | - | Spirituality | Mystical experience; Experience of transcendence; Religious practices; Belief system |
| Burkhardt. (1989) | Concept analysis | - | Spirituality | Unfolding mystery: mystery experience, life experiences, sense of transcendence, and discovering the meaning and purpose in life<br>Harmonious interconnectedness: relationship with all life (self, other, God, Higher Being, environment)<br>Inner strength |
| Reed (1992) | Literature review of Concept | .- | Spirituality | Interpersonally: related with one self<br>Intrapersonally: related with other, nature, and environment<br>Transpersonally: related with unseen, God, power greater than the self and ordinary sources |
| Walton (1996) | Concept analysis | - | Spirituality | Inner Strength and peace; A sense of meaning and purpose; Self reflection; Interconnectedness |
| Dyson, Cobb, & Forman (1997) | Literature review of Concept | - | Spirituality | The connectedness of self, other, and God; Belief; Meaning; Hope |
| McSherry & Draper (1998) | Literature review of Concept | - | Spirituality | Life experiences both positive and negative; Meaning and purpose; Need for hope and strength; Creativity; Self-awareness; Security and love; Need for trust |

Table 7 (Cont.)

| Author and date | Type of study | Sample | Concept that measure | Themes/ domains related research finding |
|---|---|---|---|---|
| | | | | Expressions of own values and beliefs; Need for forgiveness<br>Harmonious relationships; Attitudes and behaviors<br>Belief in God or Supreme Being<br>One's view of the world<br>Fears and expectations |
| Walton (1999) | Qualitative research: Grounded Theory | 13 patients recovering from acute myocardial infarctions. | Spirituality | Receiving presence was the core category: manifested through divine presence; presence of friends, family, or community and healthcare providers; and presence of creation (plants, animals, the environment)<br>Developing faith<br>Giving the gift of self<br>Discovering meaning and purpose |
| Meraviglia. (1999) | Critical analysis of the literature review | - | Spirituality | Faith/ Belief<br>Individual (Spiritual) experiences<br>The integrated/ wholeness of mind body and spirit<br>Connectedness with oneself, other, or God |
| McSherry, 2000 | - | - | Spirituality | Mystery and Transcendence |
| Tongprateep. (2000) | Qualitative research: Phenomenology | 12 Older Thai people | Spirituality | Spiritual beliefs: The law of karma, and life after death<br>Religious practices: Merit making, observance of moral percepts, gratitude and caring in family, and meditation<br>Consequences of spirituality: coping with the vicissitudes of life, being |

Table 7 (Cont.)

| Author and date | Type of study | Sample | Concept that measure | Themes/ domains related research finding |
|---|---|---|---|---|
| | | | | hopeful, and having a peaceful mind |
| Kunsongkeit & McCubbin. (2002) | Concept analysis | - | Spirituality: a multidimensional concept that involves a sense of connectedness between oneself and God, a higher being, environment that it makes one have meaning and purpose in life. | Sense of connectedness: Relationship to God/ Higher power, oneself, other, family, and environment<br>Belief<br>Meaning and purpose in life |
| Tanyi (2002) | Concept analysis | - | Spirituality | Belief and faith<br>Connectedness<br>Inner strength and peace<br>Meaning and purpose in life |
| Kunsongkeit, Suchaxaya, Panuthai, & Sethabouppha. (2003) | Qualitative research: Phenomenology | 7 male and 12 female Thai people | Spiritual health | Sense of connectedness in life: adherence to religion, belief in supernatural things, and relationship with persons<br>Happiness in life: life satisfaction and meaningful life<br>Power for living: will to live, and ability to cope with life's problem |

Table 7 (Cont.)

| Author and date | Type of study | Sample | Concept that measure | Themes/ domains related research finding |
|---|---|---|---|---|
| Pincharoen, & Congdon. (2003) | Qualitative research: Ethnography | 9 older Thai people | Spirituality | Connecting with spiritual resources provided comfort and peace: seeking religious resources, maintaining religious beliefs, practicing religious activities, and accumulating religious merit<br>Finding harmony through a healthy mind and body: letting go of conflicts, problems, anger, and worries; sustaining a body free of disease and disability; and continuing favorite activities<br>Living a valuable life: successfully coping with difficult life experiences, attaining life's goal, and contributing to society.<br>Valuing tranquil relationship with family and friends: hoping for a good future for their children, desiring respect from grandchildren, and preserving social relationships with friends<br>Experiencing meaning and confidence in death: preparing for death, desiring a comfortable death, and hoping for a positive reincarnation |
| Chiu, L., Emblen, J.D. et al. (2004) | Integrative Review | 213 samples of article | Spirituality | Existential reality: experience, meaning/ purpose in life, and hope<br>Transcendence: spirituality transcends<br>Connectedness/ Relationship with self, other, nature, and Higher Being or ultimate values<br>Power/ force/ energy: creative energy, motivation, guidance, and striving for inspiration |

Table 7 (Cont.)

| Author and date | Type of study | Sample | Concept that measure | Themes/ domains related research finding |
|---|---|---|---|---|
| Delgado (2005) | Discussion of the concept | | Spirituality | Faith or belief system<br>The search for purpose or meaning in life<br>Creative energy<br>Connection<br>Self-transcendence |
| McBrien (2006) | Concept Analysis | | Spirituality | Belief and faith<br>Inner strength and peace<br>Connectedness: relationships with self, others, God/ higher power, and environment |
| Pace & Stables (1997) | Descriptive and correlation study | 55 Terminally ill persons with AIDS and cancer | Spiritual well-being | Existential well-being: life purpose and satisfaction<br>Religious well-being: one's relationship with God |
| Fehring, Miller & Shaw (1997) | | | Spiritual well-being | Existential well-being: life purpose and satisfaction<br>Religious well-being: one's relationship with God |

Table 8 Instrument that used to measure the spirituality and spiritual well-being presented in literature reviews

| **Author and date** | **Instrument** | **Concept that measure** | **Operational definition** | **Themes/ domains related research finding** |
|---|---|---|---|---|
| Stoll (1979) | Stoll's Guideline for Spiritual Assessment | Spirituality | - | The person's concept of God or Deity<br>The person's sources of hope and strength<br>Religious practice and rituals<br>The person's perceived relationship between their spiritual beliefs and their state of health |
| Paloutzian & Ellison (1982) | Spiritual Well-Being Scale (SWB) | Spiritual well-being | Religious Well-Being: a sense of comfort derived from connectedness to a higher power that is sacred and eternal<br>Existential Well-Being: a subjective sense that one's life has meaning, purpose, and value | Religious Well-Being: relationship with higher power<br>Existential Well-Being: satisfaction with self in the world |
| O'Brien (1982) | Spiritual Assessment Scale (SAS) | Spiritual well-being | - | Personal faith: a personal relationship with God that reflect of an individual's transcendent values and philosophy of life<br>Religious practice: religious rituals<br>Spiritual contentment (living in now of God's |

Table 8 (Cont.)

| Author and date | Instrument | Concept that measure | Operational definition | Themes/ domains related research finding |
|---|---|---|---|---|
| | | | | love and accepting the ultimate strength of God) |
| Moberg (1984) | Index of Spiritual Well-Being | Spiritual well-being | - | Christian Faith<br>Elitism<br>Self-satisfaction<br>Personal Piety (Religious activities)<br>Subjective spiritual well-being<br>Optimism<br>Religious cynicism |
| Reed (1987) | The Spiritual Perspectives Scale (SPS) | Spiritual perspective of mental health nurses and caregivers | - | Transcendence<br>Optimism<br>Purpose in life |
| Elkins, Hedstrom, Hughes, Leaf, & Saunders (1988) | The spiritual Orientation Inventory (SOI) | Spirituality in nonreligious people | Dimension: transcendence, meaning and purpose in life, mission in life, sacredness in life, material values, altruism, idealism, awareness of the tragic, and fruits in spirituality | Transcendence<br>Sacredness in life<br>Material values<br>Altruism<br>Idealism<br>Meaning and purpose in life<br>Mission in life<br>Awareness of the tragic<br>Fruits in spirituality |
| Hungelman et al. (1985,1996) | The JAREL Spiritual Well-Being | Spiritual well-being in older adults | Spiritual well-being is a sense of harmonious interconnectedness between | Spiritual belief/ Faith<br>Purpose in life<br>Self-responsibility (Lack of belief) |

Table 8 (Cont.)

| Author and date | Instrument | Concept that measure | Operational definition | Themes/ domains related research finding |
|---|---|---|---|---|
| | | | self, others/ nature, and ultimate other which exists through a dynamic and integrative growth process with leads to a realization of the ultimate purpose and meaning in life. | Life satisfaction<br>Self-actualization |
| Cella, Tulsky, Gray et al. (1993) | The Functional Assessment of Chronic Illness Therapy-Spiritual Well-Being (FACT-Sp) | Spiritual well-being | - | The sense of meaning, peace and purpose in life<br>The relationship between illness and one's faith and spiritual's belief |
| Miller, Fleming, and Brown-Anderson (1998) | - | Spiritual well-being | - | Connection with God<br>Satisfaction with God and day-to-day living<br>Future/ Life contentment<br>Personal relationship with God Meaningfulness |
| Scott, Agresti, & Fitchett (1998) | - | Spiritual well-being | - | Affiliation<br>Alienation<br>Dissatisfaction with life |

Table 8 (Cont.)

| Author and date | Instrument | Concept that measure | Operational definition | Themes/ domains related research finding |
|---|---|---|---|---|
| Peterman, Fitchett, Brady, Hernandez, and Cella. (2002) | The Functional Assessment of Chronic Illness Therapy-Spiritual Well-Being Scale (FACIT-Sp) | Spiritual well-being | - | A sense of meaning and peace<br>Role of faith in illness |
| Gomez & Fisher (2003) | Spiritual Well-Being Questionnaire | Spiritual well-being | Spiritual well-being (Include the definition of NICA and conceptualization of spiritual well-being of Ellison, 1983; Paloutzian & Ellison, 1982) | Personal Dimension: How one intra-relates with oneself with regard to meaning, purpose, and values in lie<br>Communal Dimension: the quality of interpersonal relationship<br>Environmental Dimension: deals with care and nurture for the physical and biological world (sense of awe and unity with the environment)<br>Transcendental Dimension: the relationship of the self with some being beyond the human level |
| Fisher (2005, 2010) | Spiritual Well-Being Questionnaire (SHALOM) | Spiritual well-being | - | **Personal:** sense of identity, self-awareness, joy in life, inner peace, and meaning in life<br>**Communal:** love of other people, forgiveness toward others, trust between individuals, respect for others, and kindness toward other people |

Table 8 (Cont.)

| Author and date | Instrument | Concept that measure | Operational definition | Themes/ domains related research finding |
|---|---|---|---|---|
| | | | | **Environmental:** connection with nature, awe at breathtaking view, oneness with nature, harmony with the environment, and sense of 'magic' in the environment<br>**Transcendental:** personal relationship with the Divine/God, worship of the Creator, oneness with God, peace with God, and prayer life |

Table 9 List of participants in qualitative phase

| No. | Method | Code | Hometown | Religion | Age | Sex | Marital Status | Education | Occupation | Type of Chronic Illness | Duration of Chronic Illness | Living |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | In-depth Interviews | **ID1** | Chiang Mai | Buddhism | 76 | Female | Married | Primary E. (P.4) | Gardener | CRF | 2 | Spouse/ Child |
| 2 | | **ID2** | Bangkok | Buddhism | 76 | Male | Widowed | Secondary E (M.3) | Merchant | CA Colon | 7 | Child |
| 3 | | **ID3** | Surat Thani | Buddhism | 67 | Female | Widowed | Bachelor | Government Officer | HT | 14 | Child |
| 4 | | **ID4** | Chon Buri | Buddhism | 67 | Female | Married | Bachelor | Teacher | HT | 2 | Spouse/ Child |
| 5 | | **ID5** | Suphan Buri | Buddhism | 72 | Male | Priest | Higher Bachelor | Priest | HT | 5 | - |
| 6 | | **ID6** | Ayutthaya | Islam | 74 | Female | Widowed | Primary E. (P.4) | Merchant | HD, RA | 2 | Child |
| 7 | | **ID7** | Nakhon Nayok | Islam | 68 | Female | Married | Primary E. (P.4) | Farming | HT, DM | 3 | Spouse/ Child |
| 8 | | **ID8** | Samut Prakan | Islam | 70 | Female | Widowed | Secondary E (M.3) | Employee | DM | 5 | Child |
| 9 | | **ID9** | Chon Buri | Islam | 65 | Male | Widowed | Secondary E (M.3) | Fisher | HT | 2 | Child |
| 10 | | **ID10** | Bangkok | Islam | 75 | Male | Islamic Headman | Bachelor | Teacher | HT | 15 | Spouse/ Child |
| 11 | | **ID11** | Bangkok | Christianity | 73 | Female | Married | Primary E. (P.2) | Housewife | HT, RA | 14 | Spouse/ Child |
| 12 | | **ID12** | Bangkok | Christianity | 76 | Male | Married | Primary E. (P.4) | Merchant | HT, DM | 20 | Spouse/ Child |
| 13 | | **ID13** | Yasothon | Christianity | 69 | Female | Married | Secondary E (M.6) | Merchant | DM | 3 | Spouse/ Child |
| 14 | | **ID14** | Phitsanulok | Christianity | 72 | Female | Widowed | Primary E. (P.4) | Farming | HT, DM | 8 | Spouse/ Child |
| 15 | | **ID15** | Samut Prakan | Christianity | 63 | Male | Priest | Bachelor | Priest | HT | 1 | Relative |

Table 9 (Cont.)

| No. | Method | Code | Hometown | Religion | Age | Sex | Marital Status | Education | Occupation | Type of Chronic Illness | Duration of Chronic Illness | Living |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 16 | Focus Groups | **ID16** | Samut Prakan | Buddhism | 69 | Male | Widowed | Bachelor | Teacher | HT, DM | 2 | Child |
| 17 | | **ID17** | Chon Buri | Buddhism | 70 | Male | Widowed | Primary E. (P.4) | Merchant | HT | 3 | Child |
| 18 | | **ID18** | Sakon Nakhon | Buddhism | 69 | Female | Widowed | Primary E. (P.2) | Farming | DM | 15 | Child |
| 19 | | **ID19** | Phuket | Buddhism | 67 | Female | Separated | Secondary E (M.3) | Gardener | HT, Gout | 10 | Child |
| 20 | | **ID20** | Phetchaburi | Islam | 72 | Female | Widowed | No education | Employee | HT | 10 | Child |
| 21 | | **ID21** | Nakhon Nayok | Islam | 61 | Male | Married | Primary E. (P.4) | Farming | HT | 1 | Spouse/ Child |
| 22 | | **ID22** | Bangkok | Islam | 68 | Female | Single | Higher Bachelor | Teacher | HT | 5 | Relative |
| 23 | | **ID 23** | Nakhon Sawan | Islam | 77 | Male | Married | Secondary E (M.6) | Government Officer | HT | 9 | Spouse/ Child |
| 24 | | **ID24** | Pathum Thani | Christianity | 63 | Female | Single | Bachelor | Officer | HT | 2 | Relative |
| 25 | | **ID25** | Bangkok | Christianity | 75 | Male | Married | Secondary E (M.3) | Government Officer | DM | 12 | Spouse/ Child |
| 26 | | **ID 26** | Chiang Mai | Christianity | 64 | Male | Married | Primary E. (P.4) | Farming | HT, Gout | 3 | Spouse/ Child |
| 27 | | **ID27** | Phang Nga | Christianity | 78 | Female | Separated | No education | Gardener | HT, DM | 10 | Child |

Table 10 Number and percent of characteristics of participants in focus groups and in-depth interviews of qualitative study phase (n = 27)

| **Characteristics** | **Number** | **Percent** |
|---|---|---|
| **Age (years)** | | |
| (M = 70.22 SD = 4.74 Min-Max = 61-78) | | |
| Early older adults 60-69 years | 13 | 51.85 |
| Middle older adults 70-79 years | 14 | 48.15 |
| **Sex** | | |
| Female | 15 | 55.60 |
| Male | 12 | 44.40 |
| **Religion** | | |
| Buddhism | 9 | 33.33 |
| Islam | 9 | 33.33 |
| Christianity | 9 | 33.33 |
| **Marital Status** | | |
| Single | 3 | 11.11 |
| Married | 12 | 44.44 |
| Widowed | 10 | 37.04 |
| Divorced/ Separated | 2 | 7.41 |
| **Education** | | |
| No formal education | 2 | 7.41 |
| Primary education | 10 | 37.03 |
| Secondary education | 7 | 25.93 |
| Bachelor education | 6 | 22.22 |
| Higher bachelor education | 2 | 7.41 |

Table 10 (Cont.)

| Characteristics | Number | Percent |
|---|---|---|
| **Previously/ currently occupation** | | |
| Farming | 9 | 33.33 |
| Government Officer & Employee | 6 | 22.22 |
| Merchant | 4 | 14.82 |
| Teacher | 3 | 11.11 |
| Priest | 3 | 11.11 |
| Housewife | 2 | 7.41 |
| **Living Status** | | |
| Spouse and Child | 12 | 44.44 |
| Child | 11 | 40.74 |
| Relative & other | 4 | 14.82 |
| **Type of Chronic Illness** | | |
| Hypertension (HT) | 15 | 55.55 |
| Hypertension & Diabetes mellitus | 5 | 18.52 |
| Diabetes mellitus (DM) | 4 | 14.82 |
| Other disease | 3 | 11.11 |
| **Duration of illness** | | |
| (Median = 5.00 range = 19.00 Min-Max = 1-20) | | |
| 1-5 years | 15 | 55.55 |
| 6-10 years | 6 | 22.32 |
| 11-15 years | 5 | 18.52 |
| 16 years and over | 1 | 3.70 |

Table 11 Content validity index by experts judgment form of the second drat of Thai elderly spiritual well-being assessment (TSWBA)

| Item | Relevant | | | | Clarity | | | | Simplicity | | | | Ambiguity | | | | Commend |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Not relevant (1) | Item need some revision (2) | Relevant but need minor revision (3) | Very relevant (4) | Not clear (1) | Item need some revision (2) | Clear but need minor revision (3) | Very clear (4) | Not simple (1) | Item need some revision (2) | Simple but need minor revision (3) | Very simple (4) | Doubtful (1) | Item need some revision (2) | No doubt but need minor revision (3) | Meaning is clear (4) | |
| **Spiritual Well-Being Domain** | | | | | | | | | | | | | | | | | |
| Item 1-Item 57 | | | | | | | | | | | | | | | | | |

Table 12 Content validity index scores of the second draft assessment by seven experts

| **Questionnaire** | **CVI** | | | |
|---|---|---|---|---|
| | **Relevant** | **Clarity** | **Simplicity** | **Ambiguity** |
| **The total scale** | .87 | .85 | .88 | .87 |
| **Spiritual well-being Domain** | .83 | .90 | .89 | .90 |
| Happiness in life | .82 | .91 | .90 | .89 |
| Life equilibrium | .86 | .88 | .87 | .86 |
| Passion for live | .82 | .90 | .90 | .90 |
| An effective way of coping | .88 | .93 | .88 | .92 |
| A purpose in life | .86 | .95 | .86 | .91 |

Table 13 Inter-rater reliability analysis of ten trainers data collection by using the third draft of TSWBA

| Questionnaire | Alpha | Corrected Item-Total Correlation / Discrimination Validity | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Coefficient | Rater 1 | Rater 2 | Rater 3 | Rater 4 | Rater 5 | Rater 6 | Rater 7 | Rater 8 | Rater 9 | Rater 10 |
| **Total scale** | **.99** | .96 | .97 | .93 | .92 | .98 | .95 | .93 | .957 | .97 | .98 |
| **Spiritual Well-Being Domain** | **.99** | .95 | .94 | .90 | .95 | .95 | .93 | .92 | .93 | .96 | .94 |
| **Item 1** | **.99** | .99 | .84 | .91 | .97 | .99 | .90 | .92 | .99 | .97 | .99 |
| **Item 2** | **.99** | .99 | .88 | .94 | .99 | .95 | .92 | .95 | .99 | .99 | .99 |
| **Item 3** | **.99** | .99 | .99 | .95 | .94 | .94 | .95 | .99 | .99 | .99 | .99 |
| **Item 4** | **.99** | .99 | .99 | .92 | .99 | .90 | .93 | .99 | .99 | .99 | .99 |
| **Item 5** | **.98** | .98 | .94 | .85 | .98 | .90 | .93 | .98 | .93 | .98 | .95 |
| **Item 6** | **.99** | .92 | .94 | .92 | .84 | .99 | .92 | .82 | .99 | .92 | .99 |
| **Item 7** | **.98** | .84 | .99 | .87 | .86 | .99 | .99 | .91 | .84 | .99 | .88 |
| **Item 8** | **.99** | .99 | .99 | .91 | .83 | .99 | .99 | .83 | .91 | .99 | .99 |
| **Item 9** | **.97** | .99 | .99 | .87 | .89 | .87 | .99 | .84 | .89 | .99 | .99 |
| **Item 10** | **.99** | .86 | .88 | .88 | .88 | .99 | .99 | .82 | .82 | .99 | .88 |
| **Item 11** | **.99** | .90 | .88 | .99 | .99 | .88 | .99 | .88 | .86 | .99 | .99 |
| **Item 12** | **.99** | .95 | .99 | .83 | .99 | .94 | .99 | .90 | .96 | .94 | .99 |
| **Item 13** | **.99** | .99 | .93 | .99 | .99 | .93 | .97 | .99 | .99 | .99 | .99 |
| **Item 14** | **.98** | .86 | .95 | .86 | .92 | .89 | .99 | .92 | .86 | .95 | .99 |
| **Item 15** | **.99** | .99 | .99 | .90 | .99 | .90 | .99 | .99 | .82 | .99 | .97 |
| **Item 16** | **.98** | .89 | .88 | .90 | .88 | .99 | .85 | .99 | .90 | .99 | .88 |
| **Item 16** | **.98** | .89 | .88 | .90 | .88 | .99 | .85 | .99 | .90 | .99 | .88 |
| **Item 17** | **.99** | .99 | .96 | .92 | .99 | .99 | .92 | .96 | .92 | .99 | .99 |
| **Item 18** | **.98** | .89 | .99 | .89 | .93 | .88 | .86 | .89 | .93 | .98 | .89 |

Table 13 (Cont.)

| Questionnaire | Alpha Coefficient | Corrected Item-Total Correlation/ Discrimination Validity | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Rater 1 | Rater 2 | Rater 3 | Rater 4 | Rater 5 | Rater 6 | Rater 7 | Rater 8 | Rater 9 | Rater 10 |
| **Item 19** | **.98** | .99 | .99 | .87 | .89 | .87 | .88 | .87 | .89 | .99 | .92 |
| **Item 20** | **.98** | .99 | .88 | .88 | .85 | .99 | .81 | .88 | .99 | .89 | .99 |
| **Item 21** | **.98** | .89 | .88 | .88 | .99 | .83 | .88 | .99 | .88 | .99 | .92 |
| **Item 22** | **.99** | .99 | .94 | .94 | .99 | .99 | .84 | .97 | .99 | .94 | .95 |
| **Item 23** | **.99** | .99 | .95 | .95 | .99 | .99 | .99 | .92 | .99 | .99 | .95 |
| **Item 24** | **.99** | .95 | .90 | .86 | .99 | .99 | .99 | .90 | .88 | .92 | .97 |
| **Item 25** | **.98** | .88 | .99 | .81 | .99 | .88 | .99 | .88 | .89 | .88 | .90 |
| **Item 26** | **.99** | .95 | .99 | .91 | .90 | .99 | .99 | .87 | .99 | .84 | .95 |
| **Item 27** | **.99** | .90 | .99 | .92 | .90 | .99 | .93 | .85 | .99 | .99 | .96 |
| **Item 28** | **.99** | .91 | .91 | .93 | .99 | .99 | .85 | .84 | .93 | .99 | .91 |
| **Item 29** | **.98** | .99 | .99 | .99 | .81 | .90 | .87 | .87 | .90 | .87 | .99 |
| **Item 30** | **.99** | .99 | .99 | .88 | .99 | .88 | .99 | .88 | .84 | .88 | .99 |
| **Item 31** | **.98** | .87 | .99 | .92 | .99 | .90 | .90 | .87 | .90 | .87 | .99 |
| **Item 32** | **.99** | .98 | .99 | .88 | .99 | .83 | .99 | .99 | .99 | .99 | .88 |
| **Item 33** | **.99** | .96 | .99 | .83 | .99 | .99 | .92 | .91 | .92 | .99 | .96 |
| **Item 34** | **.99** | .99 | .94 | .98 | .99 | .99 | .86 | .99 | .99 | .94 | .97 |
| **Item 35** | **.99** | .89 | .99 | .90 | .99 | .99 | .90 | .99 | .99 | .99 | .91 |
| **Item 36** | **.99** | .89 | .89 | .89 | .99 | .99 | .99 | .99 | .89 | .99 | .87 |
| **Item 37** | **.99** | .95 | .94 | .94 | .99 | .99 | .95 | .94 | .94 | .97 | .97 |
| **Item 38** | **.98** | .87 | .94 | .98 | .87 | .98 | .81 | .95 | .98 | .87 | .87 |
| **Item 39** | **.99** | .99 | .94 | .91 | .94 | .99 | .94 | .99 | .96 | .96 | .99 |

Table 13 (Cont.)

| Questionnaire | Alpha | Corrected Item-Total Correlation/ Discrimination Validity | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Coefficient | Rater 1 | Rater 2 | Rater 3 | Rater 4 | Rater 5 | Rater 6 | Rater 7 | Rater 8 | Rater 9 | Rater 10 |
| **Item 40** | **.99** | .92 | .99 | .99 | .99 | .89 | .92 | .84 | .89 | .99 | .89 |
| **Item 41** | **.99** | .93 | .82 | .84 | .99 | .93 | .99 | .90 | .99 | .93 | .92 |
| **Item 42** | **.99** | .88 | .88 | .99 | .99 | .88 | .88 | .88 | .93 | .99 | .99 |
| **Item 43** | **.98** | .92 | .84 | .88 | .99 | .96 | .92 | .92 | .99 | .92 | .90 |
| **Item 44** | **.99** | .99 | .99 | .84 | .95 | .88 | .92 | .95 | .99 | .99 | .90 |
| **Item 45** | **.95** | .75 | .75 | .99 | .76 | .99 | .75 | .75 | .76 | .75 | .80 |
| **Item 46** | **.99** | .88 | .88 | .90 | .99 | .99 | .90 | .99 | .99 | .88 | .88 |
| **Item 47** | **.99** | .93 | .91 | .91 | .93 | .97 | .91 | .93 | .91 | .99 | .91 |
| **Item 48** | **.98** | .81 | .90 | .85 | .90 | .99 | .85 | .96 | .89 | .85 | .90 |
| **Item 49** | **.98** | .87 | .99 | .87 | .87 | .92 | .87 | .78 | .81 | .99 | .99 |
| **Item 50** | **.98** | .99 | .91 | .85 | .91 | .99 | .99 | .92 | .84 | .91 | .94 |
| **Item 51** | **.99** | .95 | .99 | .94 | .99 | .99 | .99 | .93 | .87 | .94 | .93 |
| **Item 52** | **.98** | .91 | .84 | .87 | .87 | .99 | .99 | .71 | .87 | .87 | .93 |
| **Item 53** | **.99** | .92 | .99 | .99 | .93 | .97 | .93 | .94 | .91 | .92 | .99 |
| **Item 54** | **.99** | .99 | .88 | .92 | .99 | .99 | .99 | .88 | .91 | .88 | .92 |
| **Item 55** | **.98** | .99 | .87 | .75 | .99 | .93 | .89 | .96 | .89 | .99 | .93 |
| **Item 56** | **.99** | .99 | .96 | .96 | .96 | .96 | .96 | .99 | .96 | .96 | .97 |
| **Item 57** | **.99** | .91 | .83 | .91 | .99 | .99 | .99 | .99 | .90 | .99 | .93 |

Table 14 Pearson correlation of the forth draft of TSWBA (n = 2,160)

| Item | SWB1 | SWB2 | SWB3 | SWB4 | SWB5 | SWB6 | SWB7 | SWB8 | SWB9 | SWB 10 | SWB 11 | SWB 12 | SWB 13 | SWB 14 | SWB 15 | SWB 16 | SWB 17 | SWB 18 | SWB 19 | SWB 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SWB1 | | | | | | | | | | | | | | | | | | | | |
| SWB2 | .85** | | | | | | | | | | | | | | | | | | | |
| SWB3 | .79** | .78** | | | | | | | | | | | | | | | | | | |
| SWB4 | .70** | .71** | .76** | | | | | | | | | | | | | | | | | |
| SWB5 | .69** | .67** | .74** | .77** | | | | | | | | | | | | | | | | |
| SWB6 | .69** | .72** | .73** | .71** | .72** | | | | | | | | | | | | | | | |
| SWB7 | .73** | .75** | .75** | .67** | .72** | .79** | | | | | | | | | | | | | | |
| SWB8 | .15** | .15** | .15** | .15** | .10** | .10** | .11** | | | | | | | | | | | | | |
| SWB9 | .20** | .22** | .25** | .20** | .18** | .19** | .21** | .49** | | | | | | | | | | | | |
| SWB10 | .25** | .25** | .27** | .22** | .17** | .22** | .23** | .41** | .71** | | | | | | | | | | | |
| SWB11 | .18** | .14** | .21** | .15** | .17** | .16** | .13** | .30** | .55** | .69** | | | | | | | | | | |
| SWB12 | .23** | .23** | .23** | .18** | .15** | .18** | .21** | .37** | .52** | .69** | .65** | | | | | | | | | |
| SWB13 | .23** | .22** | .26** | .20** | .16** | .16** | .19** | .42** | .57** | .59** | .61** | .68** | | | | | | | | |
| SWB14 | .22** | .22** | .24** | .22** | .22** | .21** | .23** | .43** | .51** | .57** | .50** | .60** | .62** | | | | | | | |
| SWB15 | .19** | .18** | .22** | .21** | .19** | .17** | .21** | .43** | .48** | .50** | .45** | .46** | .52** | .52** | | | | | | |
| SWB16 | .16** | .12** | .20** | .19** | .16** | .12** | .17** | .34** | .42** | .44** | .37** | .43** | .46** | .46** | .69** | | | | | |
| SWB17 | .23** | .20** | .25** | .28** | .22** | .20** | .24** | .35** | .47** | .51** | .43** | .47** | .48** | .52** | .68** | .72** | | | | |
| SWB18 | .22** | .19** | .22** | .26** | .17** | .16** | .20** | .38** | .48** | .51** | .48** | .51** | .53** | .54** | .65** | .66** | .72** | | | |
| SWB19 | .26** | .22** | .22** | .27** | .20** | .20** | .22** | .40** | .50** | .52** | .48** | .50** | .54** | .59** | .66** | .56** | .65** | .77** | | |
| SWB20 | .25** | .21** | .24** | .22** | .22** | .23** | .31** | .39** | .46** | .45** | .41** | .47** | .49** | .53** | .54** | .52** | .58** | .62** | .65** | |
| SWB21 | .26** | .27** | .25** | .21** | .19** | .22** | .26** | .39** | .51** | .50** | .43** | .48** | .53** | .52** | .49** | .39** | .50** | .48** | .60** | .62** |

** Correlation is significant at the .01 level (2-tailed)
* Correlation is significant at the .05 level (2-tailed)

Table 14 (Cont.)

| Item | SWB1 | SWB2 | SWB3 | SWB4 | SWB5 | SWB6 | SWB7 | SWB8 | SWB9 | SWB 10 | SWB 11 | SWB 12 | SWB 13 | SWB 14 | SWB 15 | SWB 16 | SWB 17 | SWB 18 | SWB 19 | SWB 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SWB22 | .24** | .24** | .25** | .24** | .21** | .25** | .25** | .37** | .51** | .47** | .44** | .44** | .49** | .45** | .52** | .43** | .48** | .54** | .57** | .56** |
| SWB23 | .17** | .13** | .19** | .18** | .16** | .15** | .16** | .32** | .36** | .40** | .39** | .38** | .42** | .43** | .51** | .48** | .48** | .50** | .48** | .51** |
| SWB24 | .19** | .22** | .21** | .18** | .11** | .17** | .20** | .39** | .55** | .53** | .45** | .48** | .52** | .48** | .47** | .36** | .45** | .45** | .48** | .46** |
| SWB25 | .24** | .19** | .23** | .21** | .18** | .17** | .22** | .31** | .38** | .48** | .42** | .49** | .49** | .46** | .53** | .43** | .46** | .49** | .52** | .47** |
| SWB26 | .18** | .18** | .21** | .16** | .13** | .15** | .21** | .35** | .45** | .45** | .39** | .41** | .48** | .39** | .49** | .43** | .46** | .45** | .45** | .46** |
| SWB27 | .21** | .15** | .21** | .18** | .19** | .15** | .18** | .33** | .38** | .45** | .43** | .46** | .48** | .46** | .52** | .48** | .49** | .50** | .51** | .48** |
| SWB28 | .22** | .18** | .21** | .16** | .18** | .19** | .21** | .36** | .47** | .50** | .44** | .50** | .49** | .52** | .51** | .49** | .53** | .53** | .55** | .51** |
| SWB29 | .14** | .14** | .18** | .14** | .16** | .15** | .16** | .38** | .40** | .45** | .44** | .49** | .49** | .43** | .52** | .48** | .47** | .48** | .47** | .44** |
| SWB30 | .20** | .17** | .21** | .19** | .16** | .16** | .18** | .36** | .50** | .49** | .45** | .50** | .53** | .43** | .53** | .46** | .48** | .47** | .47** | .43** |
| SWB31 | .22** | .21** | .26** | .21** | .19** | .20** | .26** | .40** | .53** | .48** | .44** | .51** | .53** | .46** | .53** | .49** | .51** | .49** | .51** | .50** |
| SWB32 | .25** | .24** | .25** | .20** | .19** | .20** | .25** | .37** | .52** | .52** | .47** | .52** | .53** | .45** | .57** | .67** | .53** | .51** | .54** | .50** |
| SWB33 | .18** | .13** | .18** | .15** | .16** | .11** | .16** | .29** | .33** | .35** | .36** | .41** | .44** | .35** | .47** | .47** | .40** | .46** | .45** | .45** |
| SWB34 | .24** | .22** | .24** | .17** | .17** | .18** | .24** | .33** | .49** | .47** | .41** | .50** | .49** | .51** | .50** | .42** | .53** | .52** | .52** | .54** |
| SWB35 | .21** | .21** | .23** | .17** | .15** | .16** | .21** | .35** | .48** | .45** | .37** | .43** | .49** | .50** | .43** | .39** | .45** | .47** | .52** | .49** |
| SWB36 | .22** | .20** | .21** | .19** | .19** | .14** | .18** | .31** | .41** | .44** | .41** | .46** | .48** | .46** | .45** | .43** | .46** | .49** | .53** | .47** |
| SWB37 | .22** | .17** | .25** | .20** | .22** | .15** | .16** | .32** | .35** | .40** | .43** | .40** | .48** | .41** | .44** | .44** | .44** | .45** | .48** | .41** |
| SWB38 | .17** | .17** | .21** | .20** | .18** | .15** | .15** | .31** | .47** | .49** | .43** | .49** | .48** | .50** | .49** | .40** | .51** | .47** | .51** | .46** |
| SWB39 | .22** | .21** | .22** | .20** | .19** | .16** | .20** | .36** | .49** | .47** | .40** | .43** | .52** | .52** | .47** | .42** | .45** | .46** | .51** | .47** |
| SWB40 | .24** | .23** | .29** | .21** | .20** | .21** | .22** | .34** | .50** | .53** | .47** | .52** | .53** | .50** | .49** | .43** | .48** | .47** | .51** | .44** |
| SWB41 | .20** | .15** | .19** | .17** | .21** | .15** | .19** | .32** | .37** | .38** | .38** | .40** | .43** | .47** | .38** | .38** | .42** | .48** | .48** | .49** |
| SWB42 | .21** | .14** | .24** | .17** | .23** | .16** | .20** | .24** | .37** | .38** | .40** | .40** | .41** | .38** | .38** | .45** | .45** | .45** | .45** | .46** |
| SWB43 | .24** | .18** | .23** | .23** | .23** | .19** | .20** | .35** | .38** | .39** | .40** | .41** | .43** | .40** | .37** | .38** | .43** | .46** | .49** | .47** |
| SWB44 | .19** | .10** | .18** | .16** | .22** | .14** | .17** | .27** | .33** | .33** | .34** | .32** | .34** | .35** | .41** | .44** | .47** | .43** | .41** | .43** |

Table 14 (Cont.)

| Item | SWB1 | SWB2 | SWB3 | SWB4 | SWB5 | SWB6 | SWB7 | SWB8 | SWB9 | SWB 10 | SWB 11 | SWB 12 | SWB 13 | SWB 14 | SWB 15 | SWB 16 | SWB 17 | SWB 18 | SWB 19 | SWB 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SWB45 | .17** | .13** | .18** | .18** | .17** | .15** | .19** | .36** | .45** | .43** | .42** | .45** | .48** | .46** | .51** | .51** | .56** | .52** | .48** | .52** |
| SWB46 | .16** | .16** | .21** | .14** | .10** | .13** | .15** | .31** | .47** | .52** | .47** | .48** | .51** | .45** | .52** | .46** | .54** | .52** | .50** | .47** |
| SWB47 | .45** | .46** | .47** | .47** | .43** | .45** | .44** | .21** | .22** | .19** | .17** | .16** | .19** | .21** | .19** | .10** | .20** | .19** | .22** | .22** |
| SWB48 | .23** | .17** | .24** | .19** | .16** | .11** | .17** | .27** | .37** | .42** | .44** | .41** | .44** | .38** | .46** | .46** | .50** | .52** | .48** | .43** |
| SWB49 | .23** | .19** | .24** | .20** | .21** | .17** | .20** | .24** | .38** | .37** | .40** | .38** | .38** | .35** | .32** | .36** | .39** | .41** | .38** | .41** |
| SWB50 | .24** | .21** | .25** | .19** | .19** | .15** | .19** | .30** | .41** | .44** | .43** | .45** | .46** | .47** | .42** | .39** | .44** | .44** | .48** | .46** |
| SWB51 | .23** | .22** | .25** | .22** | .23** | .14** | .22** | .27** | .40** | .41** | .37** | .44** | .45** | .46** | .44** | .42** | .46** | .52** | .49** | .51** |
| SWB52 | .24** | .22** | .25** | .21** | .21** | .20** | .25** | .30** | .48** | .55** | .48** | .54** | .50** | .54** | .47** | .44** | .54** | .52** | .52** | .52** |
| SWB53 | .15** | .14** | .14** | .10** | .09** | .07** | .12** | .13** | .34** | .30** | .28** | .31** | .26** | .20** | .30** | .30** | .30** | .30** | .25** | .28** |
| SWB54 | .02 | .04 | .03 | -.04 | -.02 | -.00 | .06** | .10** | .30** | .34** | .31** | .28** | .28** | .25** | .25** | .18** | .28** | .27** | .25** | .28** |
| SWB55 | .17** | .19** | .19** | .11** | .09** | .15** | .20** | .20** | .36** | .41** | .36** | .38** | .37** | .30** | .32** | .27** | .32** | .33** | .32** | .35** |
| SWB56 | .46** | .42** | .44** | .42** | .37** | .39** | .41** | .18** | .29** | .29** | .23** | .23** | .24** | .25** | .22** | .15** | .26** | .23** | .23** | .24** |
| SWB57 | .11** | .10** | .10** | .01 | .02 | .07** | .11** | .13** | .34** | .43** | .36** | .41** | .38** | .32** | .38** | .32** | .34** | .34** | .33** | .31** |

** Correlation is significant at the .01 level (2-tailed)

* Correlation is significant at the .05 level (2-tailed)

Table 14 (Cont.)

| Item | SWB 21 | SWB 22 | SWB 23 | SWB 24 | SWB 25 | SWB 26 | SWB 27 | SWB 28 | SWB 29 | SWB 30 | SWB 31 | SWB 32 | SWB 33 | SWB 34 | SWB 35 | SWB 36 | SWB 37 | SWB 38 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SWB22 | .71** | | | | | | | | | | | | | | | | | |
| SWB23 | .47** | .52** | | | | | | | | | | | | | | | | |
| SWB24 | .58** | .62** | .47** | | | | | | | | | | | | | | | |
| SWB25 | .48** | .48** | .58** | .54** | | | | | | | | | | | | | | |
| SWB26 | .46** | .46** | .44** | .57** | .61** | | | | | | | | | | | | | |
| SWB27 | .42** | .42** | .59** | .39** | .67** | .62** | | | | | | | | | | | | |
| SWB28 | .49** | .50** | .55** | .54** | .63** | .66** | .71** | | | | | | | | | | | |
| SWB29 | .40** | .43** | .51** | .43** | .51** | .48** | .50** | .57** | | | | | | | | | | |
| SWB30 | .48** | .48** | .39** | .55** | .44** | .46** | .40** | .45** | .55** | | | | | | | | | |
| SWB31 | .49** | .47** | .41** | .58** | .47** | .50** | .44** | .52** | .57** | .77** | | | | | | | | |
| SWB32 | .50** | .49** | .44** | .53** | .48** | .50** | .46** | .49** | .51** | .68** | .75** | | | | | | | |
| SWB33 | .35** | .38** | .56** | .34** | .56** | .43** | .50** | .49** | .55** | .48** | .56** | .59** | | | | | | |
| SWB34 | .57** | .47** | .42** | .50** | .43** | .41** | .42** | .48** | .42** | .54** | .60** | .61** | .45** | | | | | |
| SWB35 | .57** | .51** | .37** | .57** | .40** | .45** | .39** | .46** | .38** | .52** | .59** | .54** | .42** | .73** | | | | |
| SWB36 | .49** | .48** | .48** | .45** | .49** | .43** | .50** | .50** | .46** | .48** | .50** | .52** | .49** | .60** | .68** | | | |
| SWB37 | .39** | .46** | .48** | .35** | .48** | .43** | .53** | .52** | .53** | .42** | .46** | .46** | .51** | .42** | .52** | .74** | | |
| SWB38 | .56** | .49** | .44** | .51** | .48** | .43** | .47** | .53** | .43** | .47** | .49** | .51** | .39** | .56** | .53** | .58** | .57** | |
| SWB39 | .55** | .51** | .45** | .52** | .48** | .44** | .48** | .51** | .44** | .47** | .51** | .49** | .41** | .51** | .56** | .56** | .54** | .71** |
| SWB40 | .52** | .51** | .44** | .52** | .48** | .48** | .49** | .54** | .47** | .51** | .52** | .58** | .39** | .53** | .50** | .53** | .50** | .67** |
| SWB41 | .43** | .45** | .42** | .42** | .41** | .41** | .46** | .50** | .50** | .41** | .46** | .40** | .41** | .47** | .53** | .52** | .54** | .50** |

** Correlation is significant at the .01 level (2-tailed)
* Correlation is significant at the .05 level (2-tailed)

Table 14 (Cont.)

| Item | SWB 21 | SWB 22 | SWB 23 | SWB 24 | SWB 25 | SWB 26 | SWB 27 | SWB 28 | SWB 29 | SWB 30 | SWB 31 | SWB 32 | SWB 33 | SWB 34 | SWB 35 | SWB 36 | SWB 37 | SWB 38 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SWB42 | .38** | .39** | .44** | .29** | .43** | .39** | .50** | .49** | .48** | .35** | .41** | .44** | .41** | .39** | .38** | .49** | .55** | .45** |
| SWB43 | .40** | .45** | .46** | .41** | .48** | .41** | .46** | .53** | .49** | .36** | .43** | .42** | .45** | .40** | .42** | .52** | .55** | .45** |
| SWB44 | .31** | .35** | .41** | .28** | .38** | .38** | .40** | .43** | .43** | .36** | .37** | .42** | .33** | .45** | .34** | .44** | .43** | .39** |
| SWB45 | .43** | .49** | .48** | .47** | .47** | .46** | .47** | .54** | .48** | .42** | .51** | .49** | .42** | .53** | .50** | .50** | .51** | .51** |
| SWB46 | .51** | .47** | .35** | .53** | .40** | .44** | .39** | .45** | .42** | .53** | .51** | .52** | .29** | .58** | .54** | .49** | .41** | .50** |
| SWB47 | .24** | .25** | .17** | .21** | .17** | .18** | .14** | .14** | .16** | .19** | .19** | .20** | .14** | .18** | .23** | .19** | .19** | .20** |
| SWB48 | .42** | .41** | .47** | .33** | .44** | .35** | .46** | .42** | .42** | .40** | .41** | .47** | .44** | .46** | .42** | .51** | .49** | .47** |
| SWB49 | .37** | .38** | .36** | .34** | .34** | .34** | .40** | .38** | .35** | .39** | .41** | .37** | .33** | .44** | .43** | .44** | .46** | .43** |
| SWB50 | .45** | .41** | .41** | .42** | .42** | .38** | .44** | .41** | .44** | .45** | .48** | .49** | .39** | .51** | .50** | .52** | .52** | .52** |
| SWB51 | .41** | .38** | .46** | .39** | .46** | .39** | .43** | .39** | .42** | .44** | .50** | .46** | .45** | .50** | .48** | .51** | .48** | .46** |
| SWB52 | .47** | .45** | .43** | .46** | .48** | .38** | .45** | .48** | .46** | .48** | .50** | .51** | .37** | .53** | .45** | .48** | .46** | .45** |
| SWB53 | .15** | .35** | .21** | .23** | .19** | .25** | .20** | .35** | .36** | .36** | .17** | .39** | .35** | .31** | .24** | .32** | .32** | .32** |
| SWB54 | .28** | .28** | .17** | .34** | .18** | .21** | .22** | .26** | .18** | .32** | .32** | .34** | .15** | .41** | .33** | .26** | .16** | .31** |
| SWB55 | .39** | .38** | .23** | .46** | .29** | .32** | .29** | .31** | .28** | .38** | .39** | .39** | .22** | .37** | .37** | .30** | .22** | .31** |
| SWB56 | .27** | .25** | .11** | .30** | .18** | .20** | .18** | .20** | .13** | .31** | .24** | .28** | .13** | .31** | .33** | .23** | .18** | .22** |
| SWB57 | .29** | .31** | .28** | .30** | .34** | .24** | .31** | .32** | .37** | .35** | .33** | .39** | .24** | .34** | .26** | .32** | .27** | .31** |

Table 14 (Cont.)

| Item | SWB 39 | SWB 40 | SWB 41 | SWB 42 | SWB 43 | SWB 44 | SWB 45 | SWB 46 | SWB 47 | SWB 48 | SWB 49 | SWB 50 | SWB 51 | SWB 52 | SWB 53 | SWB 54 | SWB 55 | SWB 56 | SWB 57 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SWB40 | .64** | | | | | | | | | | | | | | | | | | |
| SWB41 | .53** | .54** | | | | | | | | | | | | | | | | | |
| SWB42 | .42** | .50** | .60** | | | | | | | | | | | | | | | | |
| SWB43 | .47** | .49** | .56** | .63** | | | | | | | | | | | | | | | |
| SWB44 | .32** | .42** | .46** | .56** | .57** | | | | | | | | | | | | | | |
| SWB45 | .54** | .51** | .54** | .50** | .62** | .63** | | | | | | | | | | | | | |
| SWB46 | .49** | .54** | .42** | .38** | .39** | .44** | .55** | | | | | | | | | | | | |
| SWB47 | .22** | .20** | .21** | .20** | .22** | .16** | .17** | .12** | | | | | | | | | | | |
| SWB48 | .44** | .47** | .43** | .46** | .49** | .42** | .51** | .55** | .19** | | | | | | | | | | |
| SWB49 | .42** | .40** | .45** | .43** | .49** | .38** | .47** | .47** | .20** | .64** | | | | | | | | | |
| SWB50 | .53** | .49** | .52** | .48** | .49** | .38** | .45** | .50** | .18** | .57** | .69** | | | | | | | | |
| SWB51 | .51** | .41** | .53** | .45** | .45** | .38** | .50** | .47** | .14** | .54** | .60** | .74** | | | | | | | |
| SWB52 | .52** | .54** | .49** | .45** | .43** | .40** | .52** | .54** | .10** | .51** | .50** | .60** | .68** | | | | | | |
| SWB53 | .32** | .32** | .29** | .20** | .25** | .21** | .33** | .43** | .06** | .37** | .43** | .43** | .43** | .43** | | | | | |
| SWB54 | .28** | .31** | .22** | .13** | .16** | .16** | .28** | .44** | -.03 | .33** | .31** | .33** | .32** | .42** | .58** | | | | |
| SWB55 | .32** | .36** | .27** | .18** | .26** | .16** | .30** | .42** | .09** | .31** | .30** | .37** | .36** | .43** | .52** | .68** | | | |
| SWB56 | .25** | .26** | .20** | .16** | .18** | .17** | .24** | .33** | .37** | .41** | .21** | .22** | .24** | .29** | .26** | .21** | .26** | | |
| SWB57 | .32** | .38** | .26** | .25** | .26** | .21** | .32** | .38** | -.05* | .35** | .26** | .34** | .39** | .52** | .36** | .47** | .53** | .10** | |

** Correlation is significant at the .01 level (2-tailed)

* Correlation is significant at the .05 level (2-tailed)

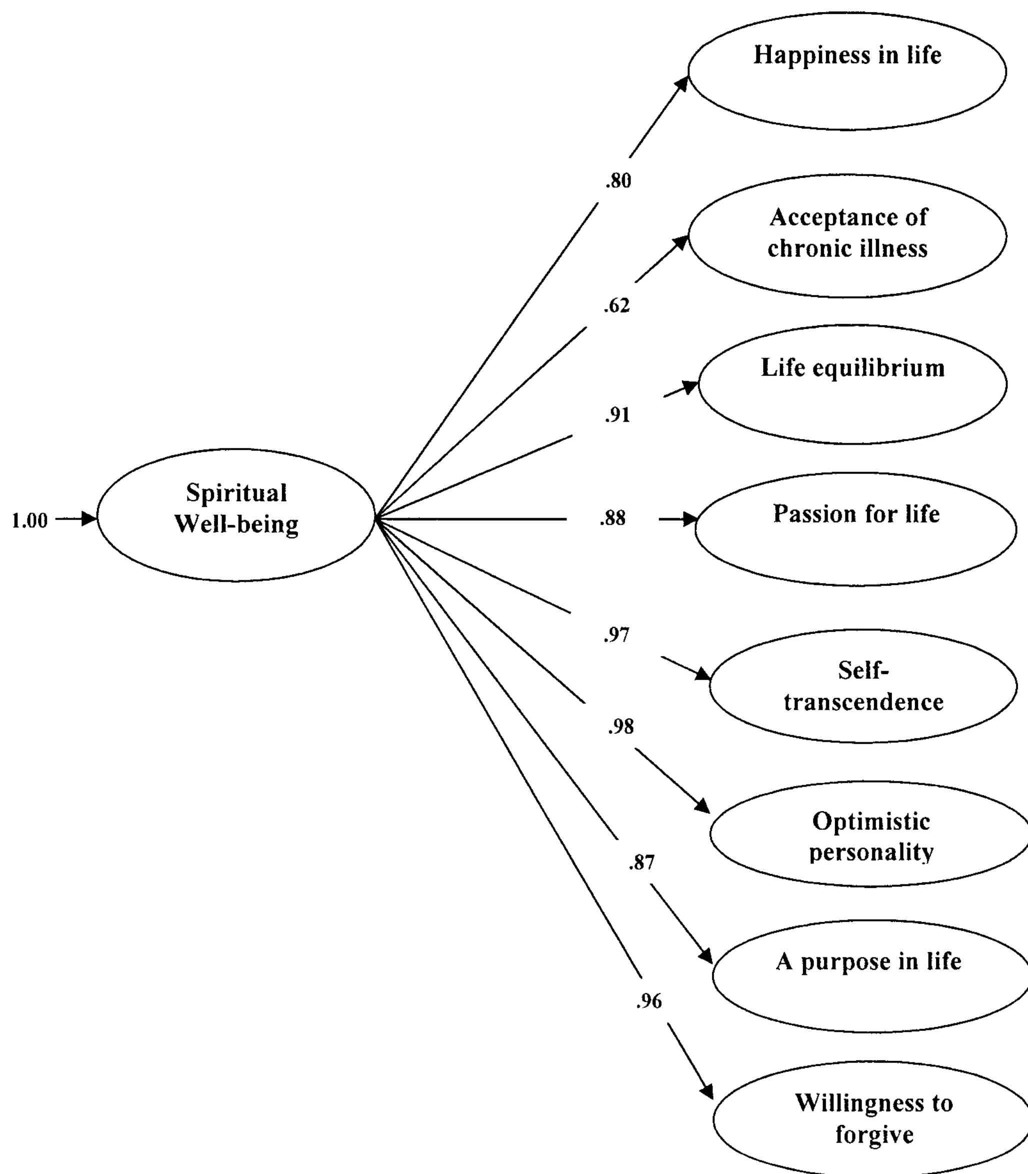


Figure 11 Second-order confirmatory factor analysis

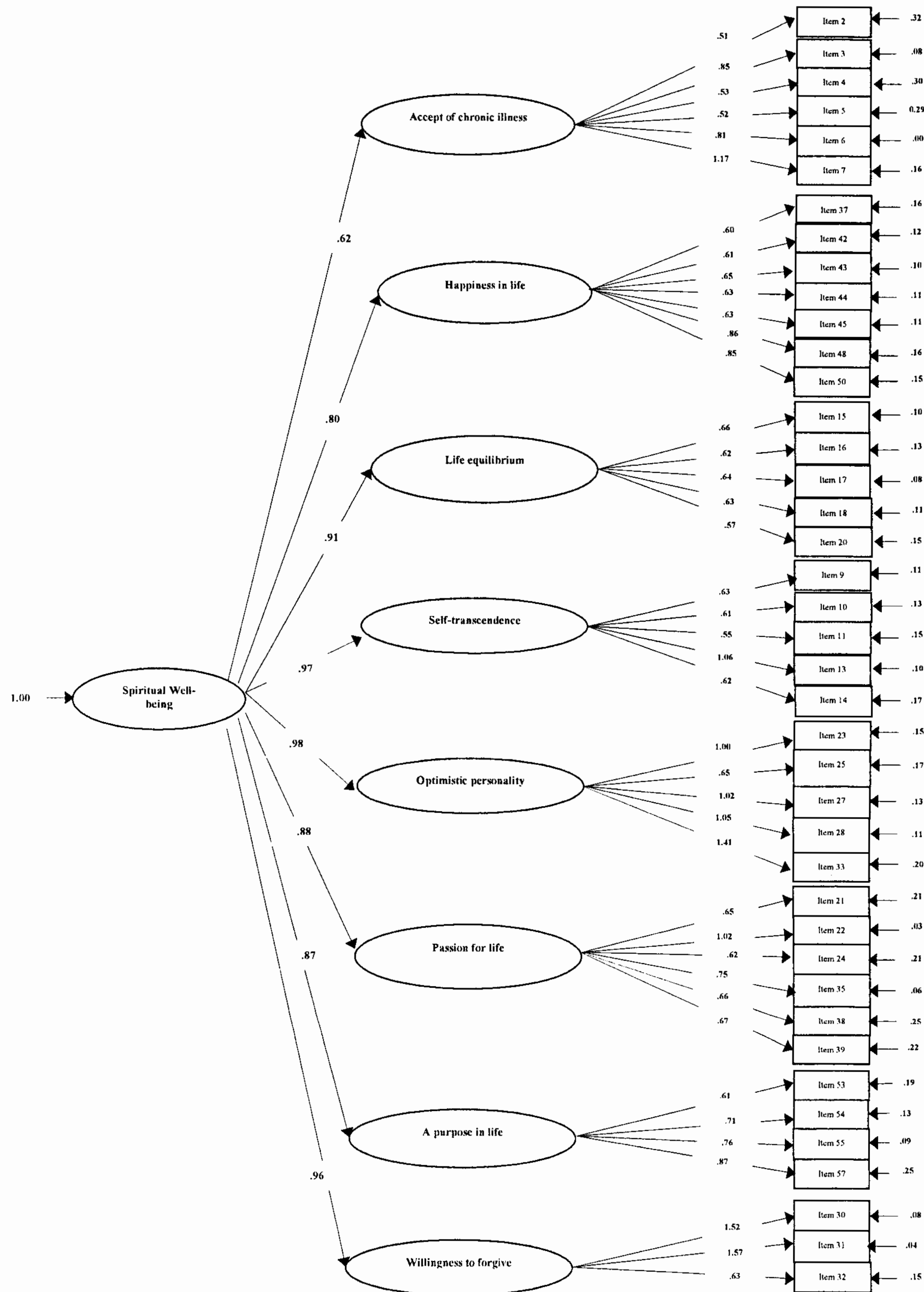


Figure 12 Second-order confirmatory factor analysis: Full model