Development of the Spiritual Well-being Scale for Thai Buddhist Adults with Chronic Illness

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Abstract: In this study we developed the Spiritual Well-being Scale for Thai Buddhist Adults with Chronic Illness, based on Buddhist precepts. The development of a culturally and religiously appropriate measure of spiritual well-being with acceptable validity and reliability is essential for caring for this group of people since measures from the West are not appropriate without significant adaptation. In this paper we also explain some of the important Buddhist precepts that are critical for nurses and other health professionals to understand our perspectives of spiritual well-being.

The study was divided into two phases. In the first phase, the spiritual well-being of Thai Buddhists with chronic illness was defined. Dimensions and items were then generated by a literature review and content analysis of in-depth interviews by seven experts. The preliminary Scale was designed using a Likert scale comprised of 34 items and then tested for content validity by the same seven experts. The content validity index of the 32-item revised draft was 0.97. In the second phase, the psychometric properties of the revised scale were tested by 200 Thai Buddhist adults with chronic illness. To test construct validity, exploratory factor analysis was performed resulting in three dimensions with 13 items that explained 61.67% of the variance. The alpha coefficient of the entire scale was 0.88.

This study showed that the Scale is well-validated and acceptably reliable for assessing spiritual well-being of Thai Buddhist adults with chronic illness. Thus, it can be used in nursing practice, education, research, and other health disciplines. However, further studies are required to test this Scale in other groups of Thai Buddhist adults with chronic condition who have the same characteristics as the samples in this study to confirm its construct and usability; as well as other age groups, in various regions of Thailand to strengthen the validity and reliability.


Keywords: Buddhism; Chronic illness; Psychometric testing; Spiritual well-being; Thailand.

Introduction

Chronic illness affects people’s lives not only during the diagnostic period, but may also affect them throughout their life. Although there are many effective treatments for those resulting in an increasing survival rate, people with chronic illness may suffer from the disease physically, psychologically, socially and spiritually.1,2 Such suffering may lead to individuals’
Spiritual distress. However, Morris revealed that spiritual distress can be beneficial to people. In some crisis circumstances, spiritual distress can promote spiritual growth through practicing reflection on purposes, personal limitations, meaning of suffering and issues of control.5

Spiritual well-being plays a crucial role in one’s perception of illness, for it can help people adapt to chronic illness, and offer some protection against anxiety, negative emotion,4 hopelessness and suicidal ideation.5 Considering self-growth, and, spiritual well-being can enhance the mental adaptation of people with chronic illness by finding new meaning in life that leads to positive reflection such as hope, purposefulness, fulfillment, willpower, disease hardiness and peacefulness.6-7 In addition, spiritual well-being also helps people to confront death positively with strength, consciousness, happiness and dignity. Therefore, it is vital to enhance spiritual well-being in persons with chronic illness.

As spiritual well-being is one of the goals of nursing care for persons, it is important that health providers have a good measurement instrument to try to evaluate spiritual well-being, and to obtain accurate data needed for planning suitable care. However, spiritual well-being is a variable that is difficult to measure because of its abstractness and unclear conceptual definitions related to different elements by different authors, including familial background, philosophy of living, society, popularity, belief, culture and particular religions.8 When searching the literature regarding the use of a spiritual well-being instrument in Thailand, it was found that all measurements used in various studies were developed in the west and within a Christian context.9-12 Generally, these are not suitable to be used for Thai people who are Buddhist. In the Thai context, the way of life and spirituality has been influenced by Buddhist doctrine and Buddha’s teachings. Thai Buddhist beliefs include those about merit making, sin, the Law of Causes and Effects (Kamma), and an afterlife. In addition, supernatural beliefs as evidenced by magical amulets, ghosts, spirits, and magical incantations, as well as Brahmin beliefs also affect both spirituality and the way of life of Thai people.13

To date, only a few spiritual well-being instruments were developed within the Thai context and culture,14-15 and existing scales have some limitations. Accordingly, developing an instrument to measure spiritual well-being for Thai Buddhists with chronic illness is much needed. In this study spiritual well-being refers to one’s self-perception about being peaceful and happy in life, understanding self and the nature of life, and having sense of connectedness and hope.

Review of Literature

Chronic illness is prolonged and recurrent. It may negatively affect the holistic health, physical, psychological, social and spiritual of people with chronic illness.1-2 Physical, psychological and social distress resulting from chronic illness can affect a person’s spiritual aspect leading to spiritual distress. Chronic illnesses may also leave a person in a state of imbalance or disharmony of mind, body and spirit. This has the potential to affect a person’s ability to function normally, induce profound changes in a person’s life, and result in negative effects on well-being. People with chronic illness may have markedly impaired quality of life and experience various physical and emotional symptoms, such as dyspnea, fatigue, edema, sleeping difficulties, depression, and chest pain. The main goal in caring is to improve their quality of life or well-being, which holds the spiritual aspect as highest in importance.7

Spiritual well-being is an essential resource for achieving a person’s well-being, because it can integrate spirituality with other health dimensions to assist caring and treatment to become truly holistic health. In addition, spiritual well-being can help people with chronic illness decrease their negative emotions.5 It can also enhance mental adaptation of people with chronic illness by finding new meaning in life that leads to positive reflection such as hope, purposefulness,
fulfillment, willpower, hardiness toward disease and peacefulness. Furthermore, spiritual well-being helps people to confront death with strength, consciousness, happiness, dignity of human beings, and protect against end-of-life despair. Moreover, spiritual well-being is able to contribute to self-integrity, peace, hope and true happiness.

The word “spiritual well-being” is not a new term in the Thai context. Although the issue of a Thai world of spiritual well-being is controversial, the ultimate agreement about these debates is that from the perspective of Buddhism, the term “wisdom” or “intellectual well-being” is used instead of “spiritual well-being.” In Thailand, Theravada Buddhism is the core religion among 93.4% of the Thai population. Most behaviors, ways of life, beliefs and spirituality of Thais, and the majority of other aspects of the Thai culture, are influenced by Buddhist principles and Buddha’s teachings. Buddhism is the religion of knowledge and truth that believes in humans’ ability, not in God or any supernatural power. In Buddhism, spiritual well-being results from wisdom of ‘not-self’ which helps people to overcome and eventually to reach the highest development of spirituality – emptiness.

Wasi defined spiritual well-being as an inner sense of self as well as having faith and wisdom contributing to ultimate goodness and happiness. Similarly, Satheerasutt defined spiritual well-being as mental happiness, calmness, strong spirituality, sensitivity to stimuli, and consciousness of one’s responsibility and life.

Existing instruments for spiritual well-being: At present, there is a limited amount of research on culturally appropriate spiritual well-being instruments for Thai Buddhist people. According to literature reviews regarding the use of spiritual well-being instruments in Thailand, most research instruments were developed from a Judeo-Christian perspective. These existing scales are not appropriate because of inadequate psychometric properties in terms of being standardized and specific. Some scales cannot be used with individuals who do not believe in God; who believe in a different higher being; or whose religions have not been noted. One of these scales is an age-specific assessment tool developed specifically to address a population’s cultural diversity but there was no evidence to show its validity. Therefore, these instruments might not truly explain beliefs, culture, and Buddhism affecting Thais’ way of life.

Although spiritual well-being scales have been increasingly developed to be appropriate within Thai culture and social context, the Scale so have some limitations. One study developed an instrument based on a conceptual framework of Eastern spiritual well-being. However, this instrument can be used only with healthy adolescent groups, and its quality has not yet been proved due to a lack of appropriate testing. Another tool is based on a conceptual framework of Thai culture and context, but was assessed in samples whose religions were Buddhist, Islam, and Christian. Therefore, this tool would not be inappropriate to use with other groups of individuals. These limitations of existing tools contribute to a lack of a culturally appropriate measure for Thai adults with chronic illness regarding their spiritual well-being.

Study Aim and Objectives

The aim and justification for our work in developing a culturally appropriate and sensitive measure of spiritual well-being for Thai adults with chronic illness was three-fold: provide a reliable assessment tool for spiritual well-being; strengthen the quality of research in this area; and ultimately assist in providing more holistic health care to these adults. The objectives of this study were to: develop the Spiritual Well-being Scale for Thai Buddhist Adults with Chronic Illness (SWS-TBACI); and assess the tool’s psychometric properties.

Methods

Design: This study is instrument development research in two phases using DeVellis’ and Mishel’ guidelines. The methods for these two phases are described separately. Phase One (instrument
development) utilized a qualitative and quantitative approach to: define the concept and operational definition of spiritual well-being; develop an interview guide; generate an item pool; determine the format for instrument; review items; and pretest the instrument. Phase Two (instrument validation) utilized a quantitative approach to test the psychometric properties of the tool’s validity and reliability.

**Ethical Considerations:** The study received approval from the Research Ethics Review Committee of Faculty of Nursing, Chiang Mai University. The study’s objectives, procedures, potential risks and benefits, protection of confidentiality and rights to withdraw were explained to all prospective participants. Prior to signing the consent form, participants were assured about confidentiality and anonymity, and had an opportunity to ask questions.

**Procedure and Data Analysis:** This comprised six steps under two main phases. Each step involved method, sample, and data analysis. Only Steps 1 and 3 did not use any samples. The SWS–TBACI developmental process followed the procedures outlined in Figure 1.

![Figure 1 Results of the SWS–TBACI Development Process](image-url)
**Phases 1: Instrument Development.** There were five steps in this phase: defining the concept, generating an item pool, determining the format for the instrument, reviewing items, and pre-testing.

Step 1 was defining the concept involved clarifying the concept of spiritual well-being, exploring its structure and specifying its dimensions and operational definitions in the Thai Buddhist culture and context. The pre-specified operational definitions and dimensions of the SWS-TBACI were derived from inductive qualitative studies, and literature reviews in three main concepts, chronic illness, spiritual well-being, and Thai Buddhist culture. Literature data were analyzed using content analysis. The main ideas were identified and categorized into the conceptual structure of the SWS-TBACI.

Step 2 involved generating an item pool for each of the identified dimensions of the SWS-TBACI which were gained from information from Step 1; reviewed literature and published questionnaires developed on Buddhists concept of spiritual well-being; and in-depth interviews. These interviews with seven experts were conducted to establish the specified conceptual structure of the Scale. These were comprised of two professors in education who taught Buddhist philosophy; two professional nurses experienced in research regarding spirituality, Buddhism, and chronic illness; a Buddhist monk; and two Thai adults who had chronic illness. These were all purposely selected for in-depth interviews and all were Buddhists. The participants were four females and three males whose ages ranged from 36–85 years old (Mean = 51.8, SD = 15.6). Examples of interview questions were: “What is your definition of spiritual well-being?”; “How do you define spiritual well-being as you experience chronic illness?”; “What is your definition of happiness?”; “How do you define happiness as you experience chronic illness?”; and “How do you create your happiness?”. Data from the literature and interviews were analyzed using content analysis. The main dimensions were identified, categorized, and arranged into the structure of the SWS-TBACI. Five dimensions with 34 items were generated from a categorized theme emerging: being peaceful (n = 9); being happy (n = 7); understanding self and nature of life (n = 6); having a sense of connectedness (n = 5); and, having hope (n = 7).

Step 3 was undertaken after generating the item pool. A Likert scale was chosen as the format of the developed SWS-TBACI. The 5-point responses ranged from 1 to 5, where “1” means “strongly disagree” and “5” means “strongly agree”. The first draft of the 34-item SWS-TBACI was then completely developed and determined for the further step.

In Step 4 reviewing items was conducted to evaluate content validity, appropriateness, accuracy, and representation of the instrument; and to confirm or invalidate the definition of the phenomenon by a group of people who were knowledgeable in the content area. This step involved asking experts about their evaluation of the 34 items of the SWS-TBACI. They evaluated the content validity, assessed that the clarity of wording, and that the appropriateness of questions should range from 3–20. The experts purposely selected for reviewing the Scale were three nursing professors who had experience in research regarding spirituality and the Buddhist religion, two professors in education who taught Buddhist philosophy, a professional nurse who had experience in chronic illness, and a Buddhist monk. The Evaluation Form for Experts was sent by mail to each expert. After their review of the 34-item SWS-TBACI, two items were deleted, and 16 items were reworded for clarity, and then the second draft of the 32-item SWS-TBACI was considered valid.

Pretesting in Step 5 involved reviewing and evaluating the Scale in terms of clarity of language and format, ease of understanding, readability, and length of appropriateness of the overall Scale. In the literature there was a great variance in the estimated sample size to test the accuracy, clarity, and level of readability of an instrument: three participants or
Therefore, 30 participants were purposely selected for pre-testing the Scale. The pre-test population should be similar to the target population for which the final instrument will be used. The target population was Thai people with chronic illness whose religion was Buddhism. The inclusion criteria included: being aged 40–59 years; having at least one health condition or a disability including cardiovascular disease, stroke, chronic obstructive pulmonary disease, hypertension, diabetes, and tuberculosis for more than three months that required ongoing management; having good consciousness and perception; understanding Thai language and being able to be interviewed; and willing to participate in this study. The majority of participants were female (60.0%) whose ages ranged from 46–59 years old (Mean = 54.2, SD = 3.9); married (80.0%); and had finished primary school (70.0%). More than half (56.7%) had hypertension. Their duration of illness varied from 1–11 years (mean = 5.8, SD = 2.4).

The second draft of the SWS-TBACI and The Evaluation Form for Clarity and Readability of the Instrument was sent to each participant agreeing to participate in this step. The participants were asked to identify the length of time required for filling out the Scale and to make suggestions. The results revealed that the instruction and items were clear and understandable. Twenty four participants agreed that the length of the Scale was appropriate with the time spent to complete reading the Scale, ranging from 6–16 minutes. The average time for completing the Scale was 11.8 minutes (SD = 2.5). Most participants also evaluated the difficulty in selection the responses as easy. Moreover, all participants evaluated the sequence of items as easy to follow. The results of this step showed that all items were acceptable. Therefore, the result of the third draft of the Scale was to keep 32 items.

**Phase 2: Instrument Validation.** Field testing was the step of this phase, aiming to evaluate the construct validity and reliability of the SWS-TBACI. Step 6 involved field testing, conducted to evaluate the performance of the individual items by using item analysis and construct validity. The estimated sample size was based on factor analysis. The acceptable sample size for psychometric evaluation of a new instrument requires a ratio of 5 to 10 participants per item or at least 200–300 participants in total, whichever, is greatest. The third draft of the SWS-TBACI had five dimensions with 32 items. Therefore, 200 participants meeting the same inclusion criteria as pre-test population in Step 5 were recruited by using multi-stage random sampling procedure as follows: (1) Two provinces were randomly selected from 8 provinces of the upper northern region of Thailand; (2) Four Sub-District Health Promoting Hospitals were then randomly selected from each of these two provinces; and (3) 200 participants were identified via a list of names obtained from nurses at Sub-District Health Promoting Hospital. The majority of participants were: female (74.0%) whose age ranged from 40–59 years (Mean = 52.2, SD = 5.5); married (75.5%); lived in a nuclear family (60.5%); and had finished primary school (73.5%). The education level of most participants was consistent with the report of National Statistical Office which showed that the average number of years of education for Thais aged 15–59 years was 8.8 years. More than half of them (59.0%) had hypertension, and their duration of illness varied widely from 1–14 years (Mean = 4.9, SD = 3.2).

Univariate analysis was used to describe the normality of each item and distribution. The results showed that the data from 200 participants with slightly abnormal distribution might not affect the further analysis. Bivariate analysis was then conducted to evaluate item analysis. In this step, the discrimination power of items was estimated using the Mann–Whitney Test to compare mean scores between two groups which were high score and low score. An alpha of 0.05 was selected as the level of significance. Item correlation with Pearson’s product–moment correlation coefficient
was used to identify the functions of items in the entire Scale; and the items which did not meet the four criteria were considered to be deleted from the Scale. Thus, 10 items were dropped out and 22 items were retained.

Then, Cronbach’s alpha coefficient was used to evaluate the internal consistency of the total Scale. An alpha coefficient of 0.7 or greater is acceptable for a newly developed instrument.\textsuperscript{32, 35} According to item analysis guidelines, the alpha coefficient of the 32-item Scale was 0.85 and 22-item Scale’s alpha coefficient was 0.91. This finding revealed that dropping 10 items did not affect the reliability of the Scale. Thus, 22 items with five dimensions were determined for the further factor analysis.

Next, exploratory factor analysis (EFA) was used to confirm the internal structure of the Scale item set. A principal components and varimax rotation was used to extract and rotate the components. In addition, the criteria set for analyzing and interpreting items were an Eigen value of 1.0, item loading above 0.40 on each factor, no or few cross-loadings items, and any factors with fewer than three items.\textsuperscript{28, 32}

Results

The content validity of the SWS–TBACI at the I-CVI ranged from 0.78 to 1.00 and at the S-CVI was 0.97, which were acceptable. In addition, the face validity and feasibility was tested and considered satisfactory.

To ascertain the construct validity, the assumption for factor analysis was tested. The result of Kaiser–Meyer–Olkin measure reported the sampling adequacy at 0.87. The Bartlett’s test of sphericity showed a significantly high inter-item correlation ($X^2 = 1081.9, p = 0.00$). Eventually, the final SWS–TBACI version consisted of three dimensions with 13 items: having hope and sense of connectedness (5 items); understanding self and nature of life (4 items); and being happy (4 items). Three dimensions showed a total percentage variance of 61.76% with communality ranging from 0.45 to 0.85; see Table 1. Furthermore, the SWS–TBACI Scale showed acceptable internal consistency reliability both in the overall Scale (0.88) and in each dimension (0.76 to 0.81); see Table 2.

Table 1 Component, Item, statement, eigenvalue, factor loading and percent of variance (n = 200)

<table>
<thead>
<tr>
<th>Component</th>
<th>Item</th>
<th>Statement</th>
<th>Factor loading</th>
<th>Percent of variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Having hope and sense of connectedness</td>
<td></td>
<td>Eigenvalue = 5.60</td>
<td>.45–.85</td>
<td>43.13</td>
</tr>
<tr>
<td>ho31</td>
<td>You feel hopeful about your life.</td>
<td>.85</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ho30</td>
<td>You have strength of mind to encounter your chronic illness.</td>
<td>.76</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ho32</td>
<td>You have a life goal that you have to reach.</td>
<td>.75</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c27</td>
<td>You believe that the Buddhist doctrine you respect is always true.</td>
<td>.60</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c25</td>
<td>You believe in the statement that “you can only rely on yourself”?</td>
<td>.45</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Understanding self and nature of life</td>
<td></td>
<td>Eigenvalue = 1.29</td>
<td>.68–.77</td>
<td>9.94</td>
</tr>
<tr>
<td>u21</td>
<td>Your illness helps you learn to forgive yourself and others conditions</td>
<td>.77</td>
<td></td>
<td></td>
</tr>
<tr>
<td>u18</td>
<td>Your illness has changed your life.</td>
<td>.73</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The SWS–TBACI consists of 13 positive-worded items, and uses a 5-point Likert scale. Three dimensions of the SWS–TBACI corresponded to the five original proposed dimensions, and these are described below:

**Dimension 1:** having hope and a sense of connectedness involved two inter-related dimensions from the specified dimensions. The statements of typical items in this dimension reflected the different underpinning attributes. Three items are based on having hope, two items regarding purpose of life (*Attha*), and one item regarding having will (*Chanda*). The two remaining items based on having a sense of connectedness comprised one item regarding connectedness with self and another one regarding connectedness with religious doctrine. Five items are well supported by Buddhist doctrine. In Buddhism, purpose of life refers to the benefits used as a living goal and contributes to hope; and will-focused hope is realistic hope in the right and appropriate direction to overcome difficulties including illness. Therefore, a person with hope can cope with problems effectively; appraise illness as a challenge, not as threat; anticipate a positive future; and solve problems with effort and patience. Regarding having a sense of connectedness, oneself is the best refuge of person and stated as “Rely on yourself first”; and Buddhists practicing religious principles can live mindfully, have happiness and spiritual strength. Moreover, purpose of life and will-focused hope are categorized as connected thing in terms of mental factors (*Nāma*) that a person holds to have a sense of connectedness in life.26–38

**Dimension 2:** understanding self and the nature of life included only one dimension which was similar to the specified dimension. Four items capture three underpinning attributes including self-awareness, awareness of life, and being with reality happily. One item was based on self-awareness and one item was based on awareness of life. The two remaining items were based on being with reality happily. The findings

| Table 1 | Component, Item, statement, eigenvalue, factor loading and percent of variance (n = 200) (Continued) |
|-----------------|--------------------------------|-----------------|-----------------|-----------------|
| Component Item | Statement | Factor loading | Percent of variance |
| u17 | Your illness has led to self-knowledge. | .71 | |
| u22 | You can accept your physical condition. | .68 | |
| 3. Being happy Eigenvalue = 1.12 | | .64–.79 | 8.68 | |
| h14 | You feel that your life is happy. | .79 | |
| h15 | Your illness can strengthen your mind. | .71 | |
| p9 | You live normally at the present time. | .67 | |
| h13 | You will keep living regardless of your symptoms. | .64 | |

| Table 2 | Item–total correlation and Cronbach’s Alpha Coefficient |
|-----------------|--------------------------------|-----------------|-----------------|
| Scale Number of Items | Item–total correlation | Cronbach’s Alpha Coefficient |
| Having hope and sense of connectedness | 5 | .32–.68 | .81 |
| Understanding self and nature of life | 4 | .39–.62 | .80 |
| Being happy | 4 | .36–.50 | .76 |
| Total | 13 | .32–.68 | .88 |

**Discussion**

The SWS–TBACI consists of 13 positive-worded items, and uses a 5-point Likert scale. Three dimensions of the SWS–TBACI corresponded to the five original proposed dimensions, and these are described below:

**Dimension 1:** having hope and a sense of connectedness involved two inter-related dimensions from the specified dimensions. The statements of typical items in this dimension reflected the different underpinning attributes. Three items are based on having hope, two items regarding purpose of life (*Attha*), and one item regarding having will (*Chanda*). The two remaining items based on having a sense of connectedness comprised one item regarding connectedness with self and another one regarding connectedness with religious doctrine. Five items are well supported by Buddhist doctrine. In Buddhism, purpose of life refers to the benefits used as a living goal and contributes to hope; and will-focused hope is realistic hope in the right and appropriate direction to overcome difficulties including illness. Therefore, a person with hope can cope with problems effectively; appraise illness as a challenge, not as threat; anticipate a positive future; and solve problems with effort and patience. Regarding having a sense of connectedness, oneself is the best refuge of person and stated as “Rely on yourself first”; and Buddhists practicing religious principles can live mindfully, have happiness and spiritual strength. Moreover, purpose of life and will-focused hope are categorized as connected thing in terms of mental factors (*Nāma*) that a person holds to have a sense of connectedness in life.26–38

**Dimension 2:** understanding self and the nature of life included only one dimension which was similar to the specified dimension. Four items capture three underpinning attributes including self-awareness, awareness of life, and being with reality happily. One item was based on self-awareness and one item was based on awareness of life. The two remaining items were based on being with reality happily. The findings
are well supported by Buddhist doctrine involving the Law of Nature or the Three Characteristics (impermanence, state of suffering and selflessness or non-self); the Four Noble Truths (suffering, the cause of suffering, the cessation of suffering and the path leading to the cessation of suffering); the Law of Causes and Effects (Kamma); Divine Messengers (a young baby, an old man, a sick man, a criminal subjected to punishment, and a dead man); and Worldly Conditions. These Buddhist doctrines focus on the truth of life or the nature of life that is a natural phenomenon all beings have to encounter inevitably.\textsuperscript{36-38}

Dimension 3: being happy involved two interrelated dimensions forming the specified dimensions—being happy and being peaceful. The statements of typical items in this dimension reflected the different underpinning attributes. Three items based on being happy focused on an optimistic view (\textit{Kusala-citta}). The one remaining item of being peaceful focused on having determination and patience (\textit{Khanti}). These findings are well supported by Buddhist doctrine. Concerning an optimistic view, Buddha taught people to see and face suffering mindfully and happily, without avoidance. Such seeing helps a person notice an opportunity in crisis and contributes to freedom of mind and wisdom.\textsuperscript{39} Persons having determination and patience can control their emotions and be patient with suffering from illness, psychological pain, and so on. In addition, a Buddhist proverb "\textit{Natthi Santi Param Sukham}" means no happiness exceeds peace. Happiness attained from internal peace is \textit{Nibbana}, the apex of happiness.\textsuperscript{36,38-39}

The SWS-TBACI displayed the multi-dimension of spiritual well-being. The essence of the dimensions “having hope and sense of connectedness,” and “being happy” were similar to previous studies in the Thai context and culture\textsuperscript{14-15,30-31} and Western views.\textsuperscript{25-26} The dimension, “understanding self and nature of life,” and sub-dimension, “connectedness with self” were found to be unique when they were compared to other instruments in the Thai context and culture.\textsuperscript{14-15} It can thus be summarized that in the Buddhist perspective, spiritual well-being refers to an understanding of life, a happy and peaceful mind, and having hope with a sense of connectedness.

The final CVI at the I-CVI and at the S-CVI, indicates that the Scale is acceptable for content validity since the expected value for new scale is a minimum I-CVI of 0.78 for seven experts, and the S-CVI of 0.90 or higher.\textsuperscript{40} This means that the SWS-TBACI is acceptable to represent the concept of spiritual well-being in Thai culture based on its definitions, dimensions, and attributes which were mostly derived from Buddhist doctrine. In addition, all items produced in the Thai language could convey the spiritual well-being in Thai culture and context more directly than by translation.

Construct validity of the developed Scale was considered satisfactory. Though three dimensions were consistent with the proposed structures and showed acceptable reliability estimates. Each dimension encompassing a set of items was extracted and intercorrelated items were clustered, so the SWS-TBACI finally consisted of 13 items constituting three dimensions. Each dimension consisted of four to five items. This number seemed to be acceptable as Streiner\textsuperscript{41} suggested that each dimension should contain at least three items. Furthermore, these factors showed a total percentage variance of 65.15%. This value was above the expected level, more than 60% of explained variance for factor analysis which is adequate to capture the main features of a phenomenon.\textsuperscript{28,42}

The SWS-TBACI showed acceptable internal consistency reliability both in the overall Scale and in each dimension, since the coefficients exceed the expected value for a newly-developed instrument of 0.70.\textsuperscript{32,35} Additionally, items of the Scale measure attributes of the same construct and the Scale indicated internal consistency or homogeneity of dimensions and items. Moreover, alpha coefficients less than 0.90 should not be considered redundancy of items in a scale.\textsuperscript{29} The total Scale has an alpha of 0.88, so it might be assumed to not have redundancy. It could be explained that all three dimensions were constituted by a set of
items generated from the same attributes, so there were a number of items measuring the same attributes.

**Limitations**

Like all studies, this study has limitations. Firstly, the SWS-TBACI is to be used only in assessing spiritual well-being among Thais who are middle-aged adults, chronically ill and Buddhist. Therefore, it may not be appropriate for use with other groups of individuals. Secondly, the Scale does not indicate specific degrees of spiritual well-being or non-spiritual well-being. Finally, this instrument has not been tested for its concurrent or predictive criterion-related validity, because in this study there was no available existing scale.

**Conclusions and Implications for Nursing Practice**

The SWS-TBACI is a new scale whose purpose is to assess spiritual well-being in Thai Buddhist adults with chronic illness. It shows evidence of content and constructing validity and adequate internal consistency reliability. Additionally, the uniqueness of the SWS-TBACI compared to the other existing instruments, is that it was developed based on Thai culture, particularly Buddhism, with a specific focus on adults with chronic illness. In Thai culture, Buddhist principles and Buddha’s teaching function for the Thai people as guidelines to provide a way of life.

The uniqueness of the SWS-TBACI can be helpful for health care providers in assessing a sense of spiritual well-being among Thai Buddhist adults with chronic illnesses. It is also an appropriate and usable scale in nursing practice due to its small number of items, being easily understandable, taking a short time to complete the scale, and ability to assess spiritual well-being. In addition, the SWS-TBACI might be applied to nursing education in terms of the exemplary instrument of spiritual well-being. Moreover, it can be used in studies concerning prediction and correlation between spiritual well-being and health or illness.

However, further studies are required to use this new Scale in other groups of Thai Buddhist adults with chronic condition who have the same characteristics as the samples in this study to confirm its construct and usability; and in other age groups, in various regions of Thailand and in various biographic characteristics persons to strengthen the external validity. The studies of confirmatory factor analysis, predictively or concurrent criterion-related validity with the existing scales should also be undertaken.

**Acknowledgments**

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**References**

Development of the Spiritual Well-being Scale for Thai Buddhist Adults with Chronic Illness


การพัฒนาแบบวัดความสุขทางจิตวิญญาณสำหรับผู้ใหญ่ชาวไทยพุทธที่เจ็บป่วยเรื้อรัง

แสงเดือน พรมแก้วงาม ลินจง โปธิบาล วิจิตร ศรีสุพรรณ กนกพร สุคาวัง

บทคัดย่อ: การศึกษาครั้งนี้ผู้วิจัยได้พัฒนาแบบวัดความสุขทางจิตวิญญาณสำหรับผู้ใหญ่ชาวไทยพุทธที่เจ็บป่วยเรื้อรังตามหลักการของพุทธศาสนา การพัฒนาเครื่องมือวัดความสุขทางจิตวิญญาณที่มีความเหมาะสมทางวัฒนธรรมและศาสนา รวมทั้งมีความตรงและความเที่ยงที่ยอมรับได้เป็นสิ่งที่จำเป็นสำหรับการให้การดูแลผู้ป่วยยุคใหม่ ผู้วิจัยได้เน้นจากหลักการพุทธที่พัฒนามากจากประเทศตะวันตกไม่มีความเหมาะสมในการนำมาปรับใช้ ดังนั้นผู้วิจัยจึงได้อธิบายแนวคิดทางพุทธศาสนาบางประการที่มีความสำคัญสำหรับพยาบาลและบุคลากรทางสุขภาพอื่นๆ ในการทำความเข้าใจความสุขทางจิตวิญญาณตามมุมมองของพุทธ

การวิจัยเพื่อพัฒนาเครื่องมือวัดนี้ประกอบด้วยสองระยะ ในระยะที่หนึ่งเป็นการให้ความหมายของความสุขทางจิตวิญญาณของคนไทยพุทธที่เจ็บป่วยเรื้อรัง จากนั้นเป็นการสร้างองค์ประกอบและข้อคำถามจากการหาความร่วมมือร่วมกับการวิเคราะห์เนื้อหาจากข้อมูลการสัมภาษณ์เชิงลึกผู้เชี่ยวชาญ 7 คน แบบวัด ที่ว่างขั้นตอนแรกออกแบบเป็นลิเคิร์ทสเกล มีข้อคำถาม 34 ข้อ หลังจากนั้นบนแบบวัดคัด เลือกข้อคำถามที่มีความสัมพันธ์มากที่สุดกับความทุกข์ และผู้ที่เห็นด้วย 7 คน จากนั้นให้เด็กที่มีความสัมพันธ์ดังกล่าวจำแนกข้อคำถาม 32 ข้อ มีค่าเท่ากับ 0.97 ในระยะที่สอง เป็นการตรวจสอบคุณภาพของแบบวัดกับผู้ใหญ่ชาวไทยพุทธที่เจ็บป่วยเรื้อรังจำนวน 200 คน การตรวจสอบความตรงที่เกิดขึ้นจะเน้นโดยการแสดงความเข้าใจสำหรับองค์ประกอบของโครงสร้างของแบบวัด มีค่าเท่ากับ 61.76 คำสั่งประสิทธิ์และเหล่าขององค์ประกอบที่เหมาะสมที่สุดเท่ากับ 0.88

การศึกษาครั้งนี้แสดงให้เห็นว่าแบบวัดที่ได้มีความตรงที่ดีและความเที่ยงที่ยอมรับได้สำหรับการประเมินความสุขทางจิตวิญญาณสำหรับผู้ใหญ่ชาวไทยพุทธที่เจ็บป่วยเรื้อรัง ดังนั้นแบบวัดนี้จะสามารถนำไปใช้ในการปฏิบัติการพยาบาล การศึกษา การวิจัย และในกลุ่มสาระวิชาทางสุขภาพอื่นๆได้อย่างถูกต้อง การวิจัยนี้น่าจะมีการทดสอบแบบวัดนี้ในกลุ่มใหญ่ของผู้ใหญ่ชาวไทยพุทธที่เจ็บป่วยเรื้อรังที่มีลักษณะเช่นเดียวกับกลุ่มตัวอย่างในการศึกษาเพื่อขับเคลื่อนแนวคิดและการนำไปใช้ ควรศึกษาในกลุ่มอายุที่ต่างกัน ในภูมิภาคต่างๆ ของประเทศไทย เพื่อช่วยในการระบายและความทรงจำของแบบวัดต่อไป


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