ORIGINAL ARTICLE

Development of Islamic Spiritual Health Scale (ISHS)

Fatemeh Khorashadizadeh,[1] Abbas Heydari,[2] Fatemeh Heshmati Nabavi,[3] Seyed Reza Mazlom,[4] Mahdi Ebrahimi,[5] Habibollah Esmaili[6]

Abstract

Objective: To develop and psychometrically assess spiritual health scale based on Islamic view in Iran.

Methods: The cross-sectional study was conducted at Imam Ali and Quem hospitals in Mashhad and Imam Ali and Imam Reza hospitals in Bojnurd, Iran, from 2015 to 2016 In the first stage, an 81-item Likert-type scale was developed using a qualitative approach. The second stage comprised quantitative component. The scale's impact factor, content validity ratio, content validity index, face validity and exploratory factor analysis were calculated. Test-retest and internal consistency was used to examine the reliability of the instrument. Data analysis was done using SPSS 11.

Results: Of 81 items in the scale, those with impact factor above 1.5, content validity ratio above 0.62, and content validity index above 0.79 were considered valid and the rest were discarded, resulting in a 61-item scale. Exploratory factor analysis reduced the list of items to 30, which were divided into seven groups with a minimum eigen value of 1 for each factor. But according to scatter plot, attributes of the concept of spiritual health included love to creator, duty-based life, religious rationality, psychological balance, and attention to afterlife. Internal reliability of the scale was calculated by alpha Cronbach coefficient as 0.91.

Conclusion: There was solid evidence of the strength factor structure and reliability of the Islamic Spiritual Health Scale which provides a unique way for spiritual health assessment of Muslims.

Keywords: Islamic spiritual health scale, Nursing, Psychometrics process. (JPMA 67: 386; 2017)

Introduction

Dating back to Florence Nightingale, spirituality has held great value in nursing for clients and practitioners alike. Spirituality has special relevance when health or illness is considered.[1] It seems spirituality is related to health in some ways.[2] Several scholars stated that considering client's spiritual health could enhance holistic nursing care[3] and a system should pay attention to spiritual care as an important dimension of patient care.[4] Specially, patients who undergo crisis and stress in their lives begin to show their major concern on problems as well as spiritual inquiries, and they are eventually willing to apply various spiritual activities and resources facing to crises and diseases.

Health is a cultural product, meaning that understanding health involves the process of adaptation to a socially created reality.[5] According to Islamic view, spiritual health is closely related to religion. Islam takes a holistic approach to health.[6] Also, there is central philosophy that physical health cannot be achieved without emotional, mental and spiritual health. Based on Islamic view, spiritual health is the most important dimension of health, which the other dimensions are dependent on.[7]

Huge progress in the material world could not prevent problems which the current generation faces. Many organisations like the World Health Organisation (WHO) are keen on looking forward to answers in the spiritual health area. Thus, assessing spiritual health is very important to guarantee human relief from endeavours like stress, anxiety, loneliness, high level of aspirations, crime and suicide.[8] No serious attempt has been made to develop a spiritual health scale across the globe,[8] especially based on the Islamic view. All available standard scales which measure spiritual well-being or health focus on psychological, managerial or emotional aspects of an individual, and are not related to spiritual health. Though the standard tool on spiritual health does not exist, there are some studies to show relationship between spiritual practices and health. Empirical evidence is available to indicate a direct relationship between religious involvement and spirituality with positive health outcomes.[8] There is also a belief that spiritual health plays an important preventive and curative role in healthcare systems.[9,10] As a lot of problems in nursing professional care are based on the liberalism philosophy, it is necessary

[1]Department of Nursing, North Khorasan University of Medical Science, Bojnurd, [2,4]Department of Medical Surgical Nursing, [3]Department of Community and Mental Health, School of Nursing and Midwifery, [5]Department of Islamic Studies, [6]Department of Health Sciences, Mashhad University of Medical Sciences, Mashhad, Iran.

Correspondence: Abbas Heydari. Email: Heyadria@mums.ac.ir

to think about a new philosophy in nursing care. Islamic philosophy is the best choice. The function of nursing based on Islamic philosophy may have some similarities with liberalism, but there are a lot of differences in principles. Now, it is a good time to create a new philosophy for Islam-based nursing. Also, there are suggestions to practitioners regarding assessment of the contribution of a patient's spiritual health, including noting evidence of the patient's religious affiliation and responding to spiritual references.[11]

The power of a questionnaire depends on its theoretical base and the rigour with which it is developed and tested.[12] Thus researchers must develop a systematic approach for studying spiritual health.[13] In previous studies, the concept of spiritual health has been analysed, but most studies were done at the theoretical analysis level or empirical observation separately. It is important to analyse the concept of spiritual health according to both theoretical and empirical observations as well as develop a sound instrument of spiritual health assessment of Muslim patients based on Islamic literature and Iranian experience and culture for developing a proper scale.

The controversy surrounding the conceptualization of spiritual health indicated that this concept is subjective, diverse, context- based and related to religion of individuals. Therefore, it was felt necessary to offer Islamic and Iranian researchers a scale with which spiritual health in Islamic patients could be assessed. This was felt necessary because the researchers frequently applied western scales or irrelevant instruments to Islamic view and Iranian culture. A mixed-method study was conducted to explore spiritual health based on Islamic views. In the first phase a hybrid model was developed for concept analysis which consisted of five phases: theoretical phase, initial fieldwork phase, initial analytical, final fieldwork and final analytical phase. The definitions of ISHS and five domains were: love to Creator, psychological balance, duty- based life, religious rationality, and attention to afterlife.[14]

These were elaborated were: "Spiritual health in nursing in light of Islam taught is a dynamic process approached to Allah (Creator of humans and all things) which patient creates the meaning of the disease by communicating scholarly, wisely, and lovingly to Creator, self, and others. This continuum to provide transcendence consists of love to Creator, duty-based life, religious rationality, and attention to afterlife. Patients have different degrees, situations and qualities on this continuum. Spiritual health causes psychological balance and actualises spirit like attributes of Creator (Allah)."

Spiritual health in the light of Islam is a series of actions or steps taken in order to develop sprit like attributes of Creator (Allah), not just any God. It has constant changes, activities or progresses. The levels of spiritual health are dependent on how much an ill person is close to his Lord. This inner relationship is established and strengthened by unique activities that have been prescribed by Allah Himself, even in illness. Patient creates the meaning of the disease by reflection on interconnectedness with Allah, self, and others. Because everyone is specific, this meaning should individually be created, not to discover or find. When the patient connects to Allah, spiritual health as a metaphysical entity can cause satisfaction, hope, personal stability, self- consciousness/ awareness during disease. The patient understands that every event during the disease was designed purposefully and intellectually by Allah for growing human spirit. Thus, the ill person is reviving his remembrance, developing his love, reminding him/her of these Divine commands, and thus preparing him/her for more obedience to Allah. Thus, he/ she continues his/ her journey on the path of spiritual health and prepares to undergo any hardships in the path. One keeps in mind that the disease may lead to death. Thus the patient tries to prepare for the reckoning of the Day of Judgment by performing carefully and lovingly all religious duties during disease and after that. The better a man does this, with a sense of responsibility, obedience and humility, and with the object of seeking the pleasure of the Lord during the disease, the nearer will a man be to Allah. An ill person sees disease as a question paper. He/ she should give the best account of himself/ herself that he/ she can.[14]

As mentioned above, the nursing profession has long prided on its holistic approach to care, in which the needs of the whole person are recognised. In the light of this focus on the whole person based on Islamic teachings, the noticeable absence of spiritual health tools in Iran is a cause for concern. The current study was planned to examine psychometric properties of spiritual health scale on the basis of Islamic thoughts.

Materials and Methods

The cross-sectional study was conducted at Imam Ali and Quem hospitals in Mashhad and Imam Ali and Imam Reza hospitals in Bojnurd, Iran, from 2015 to 2016. In the first phase, the Islamic Spiritual Health Scale (ISHS) was developed through a qualitative approach based on Hybrid Model for Concepts Analysis.[15]

The Ethics Committees of Mashhad University of Medical Sciences, Iran, approved the study.

The items were drawn from: a review of the Islamic literature dealing with spiritual health; and observations

and semi-structured interviews with hospitalised adult Muslim patients with various diseases.[16] The first step in item pool creation defined the overall constructs and the domains.[17]

For five categories, a list of 363 items consisting of 27 empirical referents were developed. The categories and their number of references were: love to Creator with 10 referents, psychological balance with 5 referents, duty-based life with 3 referents, religious rationality with 6 referents, and attention to afterlife with 3 referents (Figure).

Item pool was reviewed in several meetings. The goal was to create a set of items to complete other domains in the multidimensional instrument.

To examine qualitative face validity, the 'think aloud' method was used and 10 Muslim patients were interviewed to elicit their interpretations for each item to confirm what the items actually meant to them. In this process, efforts were made to ground the items in the specific whenever possible, though keeping them broad enough to encompass a variety of perspectives and situations. Their comments were used to refine the items in the light of the responses. Then, quantitative face validity was conducted. For assessing quantitative face validity, impact factor of each item was identified. The

Figur: Conceptualization of spiritual health based on Islamic view.

patients graded on a 5-point Likert scale. From the proportion of patients who identified it as important, (impact score = frequency importance). Those items associated with an impact score above 1.5 (which corresponds to a mean frequency of 50%) were retained for further analysis. The "clinical impact method" was selected for clarity and simplicity and to preserve face validity.

Moreover, for qualitative content validity, 10 experts were asked to rate each item based on the relevance, clarity and simplicity of items.

Of the items finalized, 43 were cognitive items and scored using a four-point Likert scale in which response categories were "I strongly agree", "I agree", "I disagree", and "I strongly disagree". The response categories of the psychomotor items were "always", "most of the time", "sometimes", and "never". No opportunity for a "neutral" or "cannot say" choice was provided. The items were cast in positive or negative terms. Approximately 6% of the statements (14/82) were negatively worded to prevent response set bias.

In the second phase, hospitalized adult Muslim patients were included. There was a lack of consensus on ideal sample size for factor analysis research. Rules of thumb were plentiful and referenced both overall sample sizes as well as participant to variable ratios. The rule of thumb in scale development is that 300 respondents were necessary to factorise items successfully. It is often used in 5-10 responses per item.[18,19] Given that the Kaiser-Meyer-Olkin Measure (KMO) of the first analysis of the draft ISHIS was 0.87 and all variables had loadings above 0.4 and Bartlett's Test was significant (p=0.000), the sample size was calculated to meet the demand of factor analysis. The sample was raised using accessible sampling from the participating hospitals.

Factor analysis is a flexible analytical tool, providing a broad scope of options through the various statistical packaged programmes. It could analyse large groups of variables, and identify any underlying association between items associated with spiritual health. A principle aim of factor analysis is to summarise interrelationships among variables in a concise but accurate manner which is helpful to conceptualisation. The initial step in factor analysis is selection of an appropriate theoretical model. The Classical Model is based on measurement error as random and thus, all variance is unique to an individual item. Applying Classical Model is attributed to the fact that all items in the ISHS were designed independently from each other and any measurement was therefore random and specific and unique to each item listed in the scale.[19,20] For construct validity, ISHS has undergone rigorous statistical testing for explanatory factor analysis. Exploratory Factor Analysis was used in this investigation because what was being addressed was not hypothesis but subjective and abstract theme. It was also decided that the Classical Model would be more suitable to this research design.

To assess reliability of the scale, Cronbach alpha coefficient and test- retest were conducted.

Results

From the initial pool of 363 items, those based on empirical referents and good and clear writhing were assessed. After that, the number of items was brought down to 82. Some changes were made on 30 items after qualitative face and content validity based on comments. After face validity, all items had a mean impact score ¢1.5 (Table-1).

Test-retest results (r = 0.83) did not show any significant differences between the values (p>0.05). Cronbach alphas value showed good internal consistency of the instrument (r = 0.94).

Of the 310 patients, 173 (55.8%) were male with an overall mean age of 36.92±5.64 years.

According to the Eigenvalue (EV 1), 10 factors with 66.548% of total variances were retained. But based on the Scree test, 3 factors were retained as valuable factors which had 53.589% of total variances in which Eigenvalues were plotted and visually inspected to find the "point of inflection".

Exploratory factor analysis indicated three factors and, as such, three subscales were constructed.

Factor 1 as the main factor with 40.403 % of variance contained 17 items indicating sacred communication with Creator and self (Table-2).

Factor 2 had 8.342% variance, including 10 items, indicating that patients try to act rightfully and lovely at all of the activities based on Allah's command and respect (Table-3).

Factor 3 with 4.844 % of variance consisted of 5 items. This factor means that patients try to acquire more knowledge about Creator, self and the meaning of illness in the light of Islamic thoughts and considering as role model (Table-4).

Cronbach alpha of 0.94 for the revised ISHS after computing construct validation indicated a high correlation between items and questionnaire.

Table-1: CVI, CVR and Impact Score for each item.

Item	CVI	CVR	Impact Score		item	CVI	CVR	Impact Score	
1	1	1	5	retain	42	1	1	5	retain
2	0.9	0.6	2.88	decided in later stages	43	1	0.8	4.9	retain
3	1	1	5	retain	44	1	0.6	4.9	decided in later stages
4	0.8	0.4	3.36	delete	45	1	1	4.9	retain
5	0.9	0.2	3.43	delete	46	1	1	4.32	retain
6	1	1	4.9	retain	47	1	0.6	5	decided in later stages
7	0.8	0	4.9	delete	48	1	0.8	3.87	retain
8	1	1	4.9	retain	49	0.8	0.4	4.9	delete
9	1	1	4.23	retain	50	0.7	0.2	3.44	delete
10	0.8	0.2	4.6	delete	51	0.9	0.6	5	decided in later stages
11	0.8	0.8	4.14	retain	52	0.9	0.8	3.93	retain
12	0.9	0.6	4.05	decided in later stages	53	0.9	0.8	4.9	retain
13	0.8	0	2.59	delete	54	0.9	0.8	4.41	retain
14	0.8	0	3.28	delete	55	0.9	1	4.05	retain
15	1	1	3.92	retain	56	0.9	0.6	4.32	decided in later stages
16	1	1	4.9	retain	57	1	1	4.32	retain
17	1	0.8	5	retain	58	1	0.8	4.32	retain
18	1	0.4	5	delete	59	1	0.8	4.32	retain
19	0.9	0.6	4.05	decided in later stages	60	0.9	0.6	3.36	decided in later stages
20	1	0.8	3.96	retain	61	0.8	0.6	4.14	retain
21	1	0.8	4.9	retain	62	1	1	3.6	retain
22	1	1	4.8	retain	63	0.9	0.8	4.05	retain
23	0.9	0.8	5	retain	64	0.8	0.6	4.70	decided in later stages
24	0.9	0	5	delete	65	0.8	0.8	4.9	retain
25	0.9	0.8	4.14		66	0.7	0.4	4.6	delete
26	0.9	.2	3.2	delete	67	1	0.8	3.36	retain
27	1	0.8	2.94	retain	68	1	0.6	3.69	decided in later stages
28	0.9	0.4	3.28	delete	69	0.9	0.2	3.44	delete
29	0.7	0.4	3.12	delete	70	1	0.8	4.7	retain
30	0.9	1	2.88	retain	71	1	0.6	4.23	decided in later stages
31	1	1	5	retain	72	1	1	3.96	retain
32	0.9	0.4	4.9	retain	73	0.9	0.8	3.6	retain
33	1	0.8	5	delete	74	0.9	0.2	3.87	delete
34	0.9	1	4.9	retain	75	0.8	0.4	3.52	delete
35	0.9	0.6	4.9	decided in later stages	76	1	1	4.8	retain
36	0.9	0.8	5	retain	77	0.9	0.8	4.9	retain
37	0.9	0.6	5	decided in later stages	78	0.9	0.6	5	decided in later stages
38	0.6	0.4	4.8	delete	79	0.9	0.6	4.9	decided in later stages
39	0.9	0.6	3.36	retain	80	0.8	0.4	4.15	delete
40	1	1	3.87	retain	81	0.7	0	3.42	delete
41	1	0.8	4.9	retain	82	0.7	0.6	3.78	decided in later stages

CVR: Content validity ratio

CVI: Content validity index.

Table-2: Rotated Component Matrix for factor 1.

	Empirical referents	Item content	Factor Loading
1	Worship of creator	A1: I believe in one who creates me and all others in the world	0.649
2	Almighty	A3: Doctors and nurses aren't healers. My God has the essential role for healing.	0.608
3	Love of Creator	A5: During sickness, I enjoy listening to the Quran or reading it.	0.612
4	supporter	A8: During disastrous times, I feel God supports me.	0.684
5	supporter	A9: When I feel God is close to me, I no more fear anything.	0.779
6	Fatalism	A10: During sickness, it is creator's wills which will happen.	0.776
7	Fatalism	A11: During sickness, I put myself in the hands of God.	0.706
8	Satisfaction of creator	A16: During sickness, I like to behave in a way that pleases God.	0.523
9	Seeking calm with creator	A21: During sickness, Thinking to and talking with God alleviates all pains.	0.692
10	Seeking calm with creator	A22: During sickness, I find comfort when I feel God is there.	0.732
11	Without any psychological illness	A23: I have never felt anxious or depressed because God manages all events.	0.504
12	Identity: continuous communication with creator	A29: when I connect with God I feel great.	0.644
13	Identity: continuous communication with creator	A30: When I connect with the Creator, I know myself better.	0.596
14	Purposeful and intelligent all thing	A40: I feel everything happened to me, even my illness, is not without purpose or reasons.	0.618
15	Purposeful and intelligent all thing	A41: My body is very orderly. It is a sign of greatness of God	0.637
16	Eternal life	A42: This world is going to end. It is important how you prepare for afterlife. Afterlife is eternal.	0.701
17	Eternal life	A43: This world is transitory. Afterlife is the main life and is real.	0.614

Table-3: Rotated Component Matrix for factor 2.

	Empirical referents	Item content	Factor Loading
1	seeking help of religious leaders	A45: I ask religious leaders or Imams to help me and heal my illness with Allah's permission.	0.450
2	personality balance	A46: During sickness, I try to be patient.	0.680
3	Attention to Satisfaction of creator in act	A50: I try to do all my work with attention to God's approval and satisfaction.	0.723
4	No harm to others	A51: I try to respect the rights of those I communicate with.	0.808
5	Upset with the pain of others	A53: I feel very sad when others are in pain or suffer from something.	0.636
6	Prayer for health of others	A54: I pray for others to recover from illness.	0.822
7	Closeness to Allah	A55:I try to get closer to God.	0.612
8	Self- appraisal	A56: During sickness, I wonder if I have done something wrong.	0.548
9	Balance in all dimension of mankind	A59: I pay attention to the health of my body and spirit.	0.663
10	Doing religious duties	A60: During sickness, I try not to forget my prayers.	0.530

Table-4: Rotated Component Matrix for factor 3.

	Empirical referents	Item content	Factor Loading
1	Following Devine models	A12: I recall the hardships of the Devine models in the world to seek comfort and tolerate the pain of the disease.	0.581
2	spiritual self- awareness	A25: During sickness, I am closer to God and feel more mature.	0.660
3	Inner self- esteem	A26: During sickness, I can be the best person.	0.572
4	Seeking progressive and useful knowledge	A33: During sickness, I enjoy reading religious books more.	0.757
5	Seeking progressive and useful knowledge	A34: I have learned very important things based on religious lectures and mourning.	0.508

The final ISHS included 3 subscales with 32 items on a 4-point Likert-type scale as strongly disagree=1, disagree=2, agree=3, and strongly agree=4.

Discussion

The ISHS was evaluated according to several criteria, most notably by the degree of validity and reliability. It got a very good reliability with good internal consistency using coefficient α and test-retest. The high internal consistency suggests that the items function together in order to consistently measure the spiritual health in light of Islamic doctrine.

The factoring procedure suggested that a three factor-based model would fit the data set. Problems originated when naming each of the factors trying to present theoretical reasons for why the variables had grouped around each of the individual factors. Of the available

instruments to measure various dimensions of spiritual health, there are 3 components for humanity based on Islam: love, science and act that are valuable only in the light of believing in Creator/ Allah. In Islam, each human being is a unique being composed of body and spirit (as against the Western culture that mentions three components as body, mind and spirit) that are inseparably interrelated. Thus, a change in any of these dimensions affects the others. The spiritual dimension plays a specific important role, because it allows a mechanism of compensatory function to take place when an individual experiences physical and psychological turmoil or threat. The spirit consists of mind, wisdom and heart. Mind is act of spirit, wisdom leads to science and heart is a means for being in love.[15] According to our results, there are 3 components of spiritual health that we have named as: sacred love, sacred act, and sacred science. Sacred means everything is valuable if it is related to the Creator. Similar to this, a study stated that spirituality is the sacredness of everything.[21]

In contrast with the present study, the Spiritual Health Inventory (SHI) has been confirmed for psychometrically reliable and valid for the measurement of spirituality within three dimensions (Spiritual Experience, Spiritual Locus of Control, and Spiritual Well-Being). The scale assesses a person's spirituality in terms of three important dimensions of spiritual health: (1) the extent to which a person experiences the presence of a Higher Power in his or her life and a person's perception of the value of meaning of those experiences; (2) the degree to which a person perceives his or her experience as a product of luck, fate, or powerful others versus that of his or her own actions and decisions; and (3) how strongly a person may experience a sense of harmony with the world and how much purpose and meaning a person attributes to his or her life.[22] Also, one study stated that using a measure of spirituality must address awareness of spiritual aspects of reality, perception/awareness of God, belief that God mediates outcomes in everyday life, a personal spiritual experience determines interactions with God, perception of characteristics and quality of interaction with God, a relationship with God that produces positive attributes in emotion, cognitions, and behaviours related to self, others, and the world, and a relationship with God that produces a sense of well-being.[23]

An analysis of the 17 items which had grouped around Factor 1 suggested that this factor was measuring an underlying association addressing the communication with the Creator and self. The items 1-11 and 14-17 were related to communicating with the Creator and the items 12-13 were related to communicating with self. All of them represent a cognitive domain. It appeared that Factor I was concerned with the theoretical issues surrounding love of Creator and self. Thus, the main concept that emerged was sacred love for the essence of spiritual health. The present study has indicated that love is a fundamental concept for spiritual health. It is similar to a study which stated that the core energy of the harmonious interconnectedness is love.[10] Several nursing scholars have recognised that love is a part of spirituality.[24] According to Islamic view, another interpretation could be that the spirit of human belongs to the Creator/ It looks like it is the reason why the items about communicating with self and the Creator came together in a single component. We named this factor as "sacred love" because it implies the love which is valuable in the light of communication with God. Even if one communicates with himself, it takes one on the way to Allah/ the Creator. This approach would fit the definition developed in 1989 which was in agreement with the other nursing work.[20,25] It identified that patients are able to rise above or transcend self from physical conditions, as well as to experience the meaning of their disease due to the spiritual health as well as transformed to be more the same of their Creator. In parallel to the present study, Taylor described seven principles of spirituality. According to her, spirituality is finding oneself creativity.[26] Self-reflection has been ultimately stated in all studies about spirituality and spiritual health. Although they have mentioned it with different words such as inner resources,[27] unifying interconnectedness,[28] self-awareness and self-knowledge,[29] self- relationship, self-discovery,[30] but, according to Islam, this self-finding must be in the light of knowing about the Creator/Allah and lead to the awareness of characteristics of the Creator and Allah-dependency. We prefer to use Creator instead of Allah or God, because it focusses on the fact that only Creator of humans and everything must be a higher power. Mitroff and Denton said that spirituality is the basic belief that there is a supreme power, a being, and a force, whatever you call it, that governs the entire universe.[31] Briefly, In Islam, the essence of correct spirituality is only belief on the Creator who has created the whole world, and guides it to the best situation.

A theme labelled as "sacred act" described that patients try to act rightfully and truthfully at all of the activities based on Allah's command and respect. This label was applied to data that described and supported more than a cognitive interaction between patient and God. This factor consists of actual, observational, objective and an aterial manifestation of conditions of spirit in relationship to Creator, self and others. These items imply the mind to be an objective component of spirit. These are

psychomotor items. In Islam, spirituality is beyond of religion, but only through religious activities one can acquire correct spirituality. Because spirituality is not just cognitive dimension, but multi-dimensional: cognitive, psychomotor and affective. Spiritual health in Muslims must be clear and observable in all activities of life. It is the other main difference between ISHS and other spiritual health scales that focus on cognitive items such as I feel/ I believe/ I think, etc. McGinn stated that spirituality/ spiritual scales should attempt to measure experience rather than particular beliefs or behaviours in daily life.[32] The Spirituality Questionnaire (SQ) developed by Parsian consists of spiritual practice: "I become involved in environmental programmes, I read books about spirituality, I meditate to achieve inner peace, I try to live in harmony with nature, I try to find any opportunity to enhance spirituality, I use silence to get in touch with myself."[33] Psychological balance in activities has been implied in spiritual practice of SQ and sacred act of ISHS. But in ISHS, communication with others instead of communication with nature of SQ has been imbedded. Another important different between these two scales is communication with the Creator that must be integrated with performance, not just stay in belief or thought. It is not surprising because Parsian stated that SQ is a non-religion scale. There is religious practice in ISHS because every Muslim believes that spiritual health is based on religious activities. Similar to ISHS, in Delaney's spirituality scale, there is an item about religious activity: prayer is an integral part of my spiritual nature.[30]

The third factor is sacred science. It implies that patients try to acquire more knowledge about the Creator, self and the meaning of illness in light of Islamic teaching and modelling of Imams/ priests. It refers to use the best resource for learning. In addition to the sacred way of learning, the purpose of this learning is sacred. This purpose is to get close to the Creator and feel development more and more. The factor indicates wisdom in spiritual health.

The present study had several limitations. We did not analyse or report normative data about the ISHS. The study population consisted of hospitalised patients in two Iranian cities, and it is uncertain whether the study findings can be generalised to all other populations. But item construction from qualitative research, a high coefficient α, and factor analysis support the validity and reliability of the scale.

Another limitation is that ISHS has been developed based on Islamic teachings and it is not general to compass all people according to its conceptual framework. Thus, it seems that no-generality of ISHS is not a pure limitation. The halo effect was a possible limitation of the self- report study.[34] ISHS is a self-report scale. However, an assumption of the study was that participants would report their perceptions and experience truthfully. There is a possibility that responses reflected socially desirable responses rather than actual responses.

The current study has implications for nursing education. Due to inadequate academic preparation, the conceptual map of Islamic spiritual health will resolve the conceptual gap in professional nursing knowledge in Iran. It can promote nursing science related to Iranian culture at the national level. At the international level, providing proper knowledge about Islamic spiritual health will establish broad and rich nursing science. Thus the Islamic spiritual concept map of the present study can be used in nursing curriculum to teach nursing students about the concept of spiritual health based on Islamic teachings. When nursing students learn more about it, then they can take more suitable care of Muslim patients.

Another application of the finding of the current study is that assessing spiritual health of Muslim patients as a part of nursing planning by appropriate scale (ISHS) can lead to proper nursing services and to promotion of health outcomes. The ISHS is user-friendly format with 32 items that are very easy to understand. Possible scoring on the 32-item ISHS ranged from 0-96. Scores indicate what extent the phenomenon of spiritual health is. It was theorised that scores between 0 and 32 indicated low levels of spiritual health and corresponded with the nursing diagnosis of spiritual disease, 33-64 indicated moderate spiritual health and corresponded with the nursing diagnosis of potential for spiritual disease, 65-96 indicated high levels of spiritual health. Spiritual nursing care can be guided by both overall score and scores on the three subscales. Nurses in practice can provide generalised spiritual care and plan intervention specific to a certain domain of spiritual health. Thus, different approaches can be utilised to individualise spiritual health interventions.

Nursing administration can also use ISHS to supervise and control spiritual health of diverse patients and tracking its level. They can assess spiritual health outcome using ISHS by comparing it at admission and discharge time.

Nursing scholars can provide further examination for reliability and validity of the ISHS with diverse Muslim patient populations in other countries and other regions in Iran. Concurrent validity of the ISHS with other instruments to assess spiritual health or spiritual well-being may also be explored. Confirmatory factor analysis research of the three domains of the ISHS and item

response theory analysis for further analysis of construct of spiritual health is also a possible target for further research.

Conclusion

ISHS measures identified and scored attributes associated with the possession of the essence of spiritual health within the Iranian culture and these domains were appropriate indicators of it. Efforts were made to ensure that there was a differentiation for spiritual health between Iranian culture and other cultures. Also, we mentioned test measures that have been specifically designed to address the concept of spiritual health as it relates to the Islamic Iranian culture.

Disclaimer: None.

Conflict of Interest: None.

Source of Funding: The study was supported in part by a Mashhad University of Medical Sciences grant.

References

1. Dhamani K, Pual P, Olson J. Tanzanian nurses understanding and practice of spritual care. ISRN Nurs. 2011; 2011:534803.
2. Underwood LG, Teresi JA. The daily spiritual experience scale: Development, theoretical description, reliability, exploratory factor analysis, and preliminary construct validity using health-related data. Ann Behav Med. 2002; 24:22-33.
3. Diddle G, Denham SA. Spirituality and its relationships with the health and illness of Appalachian people. J Transcul Nurs. 2010; 21:175-82.
4. Sadler JJ. Analysis and observation of the concept of caring in nursing. USA: The university of Wisconsin- Milwaukee, 1995.
5. Harris YJ. Spiritual Health Identity: A Thematic Analysis of Experiences of Black Women in the Black Church: Howard University. 2013; 126:3592967.
6. Yousofi H. Human health and religious practices in Quraan. Procedia-Soc Behav Sci. 2011; 30:2487-90.
7. Abbaszadeh A, Borhani F, Abbasi M. Spiritual health, a model for use in nursing. J Med Ethics. 2014; 8:57-77.
8. Dhar N, Chaturvedi S, Nandan D. Spiritual Health Scale 2011: Defining and Measuring 4th Dimension of Health. Ind J Comm Med. 2011; 36:275-84.
9. Bansal R, Maroof KA, Parashar P, Pant B. Spirituality and health: A knowledge, attitude and practice study among doctors of North India. Spirit Health Inter. 2008; 9:263-9.
10. Oh P, Kang K. Spirituality: concept analysis based on a hybrid model. Taehan Kanho Hakhoe Chi. 2005; 35:709-20.
11. Carr EW, Morris T. Spirituality and patients with advanced cancer: A social work response. J Psych Oncol. 1996; 14:71-81.
12. Gray J. Measuring Spirituality: Conceptual and Methodological Considerations. J Theory Construct Test. 2006; 10:58-64.
13. Kearn RL, Girvan JT, McAleese WJ. Differences in the self- reported spiritual health of male Juvenile offenders and non- offenders. Amer J Health Studies. 1998; 14:113-20.
14. Heydari A, Khorashadizadeh F, HeshmatiNabavi F, Mazlom SR. Spiritual health in nursing based on Islam view. J Iranina Redcresent. 2015.
15. Heydari A, Khorashadizadeh F, Nabavi FH, Mazlom SR. Spiritual health in nursing based on Islam view. J Irani Redcresent. 2015.
16. Rodgers B. Philosophical foundations of concept development. Philadelphia: PWBSP, 2004.
17. Earp MS. Development and Validation of the Statistics Anxiety Measure: the College of Education University of Denver, 2007.
18. Clark LA, Watson D. Constructing validity: basic issues in objective scale development. Psycho Assess. 1995; 7:309-19.
19. Delvis RF. Scale development, theory and applications. J Edu Measur. 1994; 1:79-82.
20. McSherry W. Nurses perceptions of spirituality and spiritual care. Nurs Standard. 1998; 13:36-40.
21. Thompson I. Mental health and spiritual care. Nurs Standard. 2002; 17:33-8.
22. Shorkey C, Uebel C, Windsor L. Measuring dimensions of spirituality in chemical dependence treatment and recovery: Research and practice. Inter J Ment Health Addic. 2008; 6:286-305.
23. Gray MA. Spiritual health inventory score and abstinence. USA: Argosy University Campus; 2010.
24. Aghebati N, Mohammadi E, Ahmadi F. The concept of nursing in holistic theories: An integrative review. Evidence base journal. 2012; 2:67-83.
25. Swinton J. Identity and resistance: why spiritual care needs 'enemies'. J Clin Nurs. 2006; 15:918-28.
26. Riley-Taylor E. Ecology, Spirituality, and Education, Curriculum for Relational Knowing. New York: Oxford, 2002.
27. Burkhardt MA, Nagai-Jacobson MG. Spirituality: Living our connectedness. Albany: Delmar; 2002.
28. Howden J. Development and psychometric characteristics of the Spirituality Assessment Scale. [Online] [cited 1992 December 30]..Available from: URL: http://hdl.handle.net/11274/187
29. Lauterbach SS, Becker PH. Caring for self: Becoming a self-reflective nurse. Holist Nurs Pract. 1996; 10:57-68.
30. Delaney C. The spiritulaity scale: Development, refinement and psychometric testing of an instument to assess the human spiritual dimension: J Holist Nurs. 2005; 23:145-67.
31. Mitroff II, Mitroff I, Denton EA. Jossey-Bass; 1999. NOT FOUND
32. McGinn B. The letter and the spirit: spirituality as an academic discipline. Christian Spirituality Bulletin. 1993;1:2-9.
33. Parsian N, Dunning AMT. Developing and validating a questionnaire to measure spirituality: a psychometric process. Parsian. 2009; 1.
34. Nursing Research. Generating and assessing evidence for nursing practice. Lippincott Williams & wilkins; 2008.