The Needs of Islamic Health-Related Quality of Life Instrument: A Review

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ABSTRACT

One of the best ways to evaluate persons' health quality is through measuring their Quality of Life (QoL). The QoL concept gained rapid popularity over the last four decades in assessing health. It has been used as the sole endpoint in studies designed specifically to develop a positive physical or mental well-being of sick people. The purpose of this review is to address the needs of a new Islam-specific health-related QoL instruments for Muslim patients. A literature search was conducted using electronic databases. For the purpose of the review, QoL domains from WHOQOL SRPB instrument was referred. The identified QoL instruments were then reviewed for their domains and dimensions included in it. At present, there is no specific QoL instrument to assess health-related QoL among Muslim patients' despite being fastest-growing religion and contribute 23% of the world population. Muslims believes that Islam is a comprehensive way of life which puts religiosity and spirituality as an essential part of life. In addition, QoL is regarded as an important aspect in health care by the World Health Organization (WHO) and spiritual well-being is one of the WHO QoL dimensions. To date, no instrument has been developed to measure QoL specifically according to Islamic perspective. Hence a specific assessment tool of health-related QoL for this growing world population is highly needed. Islam is not only a religion but it's a way of life and QoL should be beyond the religion perspectives. Therefore, this paper will present the gap found in the review of the existing QoL instruments. Identifying this gap will enable us to develop a tool which is more sensitive to the Muslim population.

KEYWORDS: Health-related Quality of Life, Quality of Life, Islam-specific Health-related Quality of Life, Instruments

INTRODUCTION

Quality of Life (QoL) has been used as the sole endpoint in studies designed specifically to develop a positive physical or mental well-being of ill people.[1] Additionally, the World Health Organization (WHO)[2] pointed out that QoL is agreed upon as an important aspect in health care while spiritual well-being has been accepted as one of the vital component in health. Besides, spirituality is associated with greater QoL for patients with any diseases.[3,4] Studies showed that 50% to 85% of patients want physicians to address their spiritual needs and incorporate these needs into treatment. It is because spiritual help may increase trust, helps the healthcare providers to understand patients better, patients feel listened to and cared for, helps with the treatment plans, provide compassionate care, and helps to encourage a realistic hope.[4] In addition, spiritual aspects are also vital when a person is dying, just diagnosed with serious illness, facing through chronic illness, admitted to a hospital, or grieving from loss.[5]

Furthermore, studies found that the QoL of individuals with cancer may improve through spiritual therapy.[6-8] However, despite these promising findings, a systemic review of studies on QoL measurement in long-term breast cancer survivors reported only a quarter of studies reviewed have applied QoL measurement which include the spiritual domain in their studies even though all of them provide evidence that spiritual domain has significant effect on the QoL.[9] Although spiritual well-being has been accepted in defining a good health state, still, it has not been extensively applied to the population. Therefore, a focus on spiritual or religious specific issues based on the Islamic perspective in health-related QoL assessment should be considered when developing a new QoL instrument.

From the authors' limited investigation, there is no

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Islamic-specific health-related QoL instrument found. Additionally, the spiritual application included in some QoL instruments (e.g.: World Health Organization QoL – Spiritual, Religious, Personal Beliefs (WHOQOL-SRPB)[10], QoL-Cancer Survivor (QOL-CS)[11], Ferrans and Powers's QoL Index -Cancer Version (QLI-CV)[12] are very general and non-religion specific. These measurement tools were previously developed by the Western counterparts which may lead to the instrument's development being influenced by Western values and approaches. This suggests a need for development of new health-related QoL measurement tool based on the Islamic perspective for Muslim populations to study the influence of this religion on the QoL of Muslim patients. Thus, the purpose of this review is to address the needs of a new Islam-specific health-related QoL instruments for Muslim patients.

Muslim populations

Globally, more than eighty percent (80%) people claim themselves with a religious group. There are 5.8 billion religiously affiliated adults and children around the globe were estimated by The Pew Research Center's Forum on Religion & Public Life, representing 84% of the 2010 world population of 6.9 billion from a comprehensive demographic study of more than 230 countries and territories.[13]

Based on analysis of more than 2,500 censuses, surveys and population registers, a demographic study, it has been reported that there are 2.2 billion Christians (32% of the world's population), 1.6 billion Muslims (23%), 1 billion Hindus (15%), nearly 500 million Buddhists (7%) and 14 million Jews (0.2%) around the world in 2010. Besides, 6% of them (more than 400 million people) practice various folk or traditional religions, including African traditional religions, Chinese folk religions, Native American religions and Australian aboriginal religions. Additionally, slightly less than 1% of the global population belong to other religions, including the Baha'i faith, Jainism, Sikhism, Shintoism, Taoism, etc.[13]

In year 2003, the Guinness World Records stated that Islam is the world's fastest-growing religion by number of conversions each year. This statement is supported by a recent study which pointed out the most striking finding projecting the future of religious groups around the world are expected to be the growth of Islam. "Indeed, Muslims will grow more than twice as fast as the overall world population between 2010 and 2050 and, in the second half of this century".[14(p.1)]

Muslims have the highest fertility rate which is well above the minimum level (2.1) typically needed to maintain a stable population with an average of 3.1 children per woman.[13] Furthermore, the current age distribution of each religious group is another important determinant of growth. At age of 23, Muslims spotted to be the youngest median age of all major religious groups.[14] When people begin having children, the share of Muslims will soon be at greater numbers. It will accelerate Muslim population growth when this, combined with high fertility rates. Figure 1 below illustrates the estimated change in population size, from the year 2010 to 2050.[14]

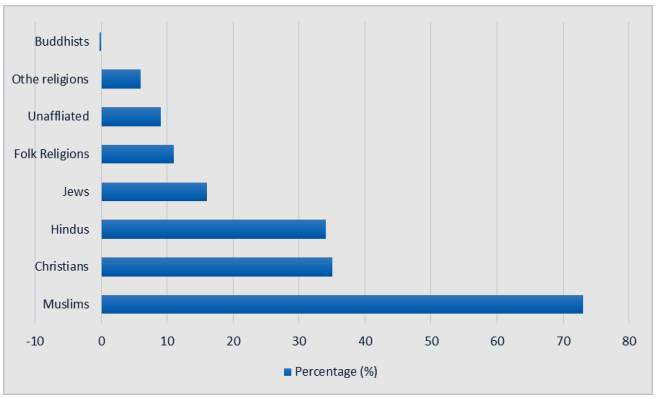

Figure 1: Estimated change in population size, 2010-2050[14]

Health

The World Health Organization (WHO) in 1948 declaration defines health as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity".[2(p.2)] In 1995, the WHO made an amendment to health definition which includes spiritual well-being domain. As a result, health is redefined as "a state of complete physical, mental, social and spiritual well-being and not merely the absence of disease or infirmity".[2(p.2)]

This concept of health has been widely used and applied in health care systems all over the world including in Islamic countries. However, this health concept only focused on the human physical health without discussing the spiritual element. The Western societies tend to believe in the non-existence of the soul thus giving less attention to spiritual health.[15]

In the past few decades, the Western scholars agreed that the measurement of an individual health status is quantifiable by using established QoL inventories which are generally available in almost every health-related discipline.[9] However, to date, most of the QoL instruments have fallen under the rubric of Christianity and the study of Christian population. Hence, several scholars have argued about the effectiveness of the Western-developed-instrument among the Non-Western populations. The authors' view and foundation on their developed instruments are major considerations which make it less sensitive to other cultures, races and religions.[16]

HEALTH FROM ISLAMIC PERSPECTIVES

There are differences on the conceptual definition of health in Islam as compared to the WHO definition of health. Islam is a religion that emphasizes on the mind, body and soul. A person is

considered healthy in this world if he or she is clean from all sorts of worldly diseases which are connected to a person's heart and body. Besides, health in the hereafter refers to purity of the heart from sickness such as envy, disbelief, hypocrisy etc. For that reason, health from the Islamic perspectives covers health in this world and in the afterlife.[15] Furthermore, this definition was also supported in a book entitled "*Fikah Perubatan*" which explains in Islam, good health can be defined as similar to WHO's definition of health but the elements of *tawhid* and belief to the Almighty Allah as well as the focus on the afterlife attainments must be added.[17] These three important elements will later make a person a pious Muslim with an aim to worship Allah in accordance with the *amal ma'ruf nahi mungkar* concept.Thus, the Islamic perspective of health can be considered more holistic as compared to the definition given by WHO which resonates more with the Western paradigm.

QUALITY OF LIFE (QOL)

Conceptual definition of QoL

The QoL concept gained rapid popularity over the last four decades. Millions of articles appear in Google Scholar while searching for the "QoL" reference keyword. In general, QoL can be categorized within five dimensions which are (1) physical wellbeing, (2) material wellbeing, (3) social wellbeing, (4) emotional wellbeing, and (5) development and activity.[18] Costanza and colleagues[19] further describes the general concept of QoL as follows:

QoL is the extent to which objective human needs are fulfilled in relation to personal or group perceptions of subjective well-being. Human needs are basic needs for subsistence, reproduction, security, affection, etc. Subjective well-being is assessed by individuals' or groups' responses to questions about happiness, life satisfaction, utility, or welfare. The relation between specific human needs and perceived satisfaction with each of them can be affected by mental capacity, cultural context, information, education, temperament, and the like, often in quite complex ways. Moreover, the relation between the fulfilment of human needs and overall subjective well-being is affected by the (time-varying) weights individuals, groups, and cultures give to fulfilling each of the human needs relative to the others.[19(p.18)]

The above statement defines the general concept of QoL without specifying it to any subject or conditions. As in health-related issues, QoL becomes prominent owing to the developments in disease treatment leading to the chance of longer disease survival.[20] This statement confirms why millions of scholarly articles pop-out while searching for the "QoL" keyword.

The term QoL in the context of health is also referred to health-related QoL which often used interchangeably with the term QoL in most research articles in health areas. According to Ashing-Giwa and Lim[21], health-related QoL is "a crucial component of assessing and managing disease outcome".[21(p.216)] Besides, they support the use of health-related QoL with the more widely used QoL concept which has been defined by several authors[21-22] as "a multidimensional construct, usually conceptualized and measured by the aggregation of survivor's physical, psychological, functional, and social/familial experiences".[22(p.2)] For that reason, there should be no term-related issues regarding the utilization of health-related QoL or QoL phrase in disease-concerned QoL research.

In summary, in health-related issues, QoL concept refers to the reflections of one's desired conditions of living related to several dimensions of health matters. The following sub-topic further explores the dimensions of QoL.

Dimensions of QoL

In the past decades, QoL among health-related areas and the means to precisely measure QoL have attained greater popularity and attention[23,24], due to immensely improved medical treatment and supportive care which have led to prolonged maintenance of well-being.[11] Currently, there is still no gold standard of measuring QoL in cancer patients although there is much interests in QoL research. Most of the concept of health-related QoL is defined by the researchers in various examples through domains or dimensions used as the concept measurement.[25] Table 1 illustrates several QoL dimensions/ domains reviewed.

Table I: QoL dimensions/domains

Author	Dimensions/ Domains	Details
Flanagan (1978)[26]	5 core domains	**Physical and material well-being** • Material well-being and financial security • Health and personal safety **Relations with other people** • Relations with spouse • Having and raising children • Relations with parents, siblings or other relatives • Relations with friends **Social, community and civic activities** • Activities related to helping or encouraging other people • Activities relating to local and national governments

Author	Dimensions/ Domains	Details
		Personal development and fulfilment • Intellectual development • Personal understanding and planning • Occupational role • Creativity and personal expression **Recreation** • Socializing • Passive and observational recreational activities • Active and participatory recreational activities
Cella et al., (1993)[22]	4 core domains	**Physical well-being** • Fatigue • Nausea • Pain **Social well-being** • Relationship with partner, family and friends **Emotional well-being** • Mental state • Mood **Functional well-being** • Normal functioning in daily life
Wilson and Cleary (1995)[27]	5 core domains	**Biological function** • Effects of individual characteristics on biological function • Effects of environmental characteristics on biological function • Effects of interactions between individual and environment **Symptoms** • Perception of an abnormal physical, emotional or cognitive state **Functional status** • Ability to perform tasks (physical function, social function, psychological function) **General health perceptions** • They integrate all the components that come earlier in the model • They are subjective in nature **Overall QoL** • Subjective well-being related to how happy or satisfied someone is with his life as a whole
Felce and Perry (1995)[18]	6 core domains	**Physical well-being** • Health • Nutrition • Fitness • Mobility • Personal safety **Material well-being** • Wealth /Ownership • Housing quality • Transport **Social well-being** • Interpersonal relationships • Community involvement **Productive well-being** • Personal development • Choice control • Constructive activity **Emotional well-being** • Happiness • Contentment • Mental health

		• Sexuality • Freedom from stress • Religious belief • Self-esteem **Civic well-being** • Privacy • Protection under law • Voting • Civic roles and responsibilities • State of the nation
Ferrell et al., (1995)[11]	4 core domains	**Physical well-being** • Functional ability • Fatigue/vitality • Sleep • Overall Physical Health • Fertility/bone loss • Aches/pain • Swelling of arms • Weight gain **Psychological well-being** • Interpersonal factors • Uncertainty • Anxiety/depression • Fear of Recurrence • Pain Distress • Distress from diagnosis and treatment • Emotional support **Social well-being** • Family • Roles and Relationships • Affection/sexual function • Self-concept/appearance • Enjoyment/leisure • Isolation/abandonment • Financial concerns/employment **Spiritual well-being** • Meaning of Illness • Religiosity • Transcendence • Hope • Inner strength
Ferrans et al., (2005)[28]	7 core domains	**Biological function** • Effects of individual characteristics on biological function (e.g.: self-efficacy for exercise influences exercise behaviour) • Effects of environmental characteristics on biological function (e.g.: exposure to pathogens from environment can cause infectious disease) • Effects of interactions between individual and environment (e.g.: because the genetic characteristics cannot be altered, clinical interventions are directed toward modifying behaviours to reduce the risk of disease) **Symptoms** • Perception of an abnormal physical, emotional or cognitive state **Functional status** • Ability to perform tasks (physical function, social function, psychological function) **General health perceptions** • They integrate all the components that come earlier in the model • They are subjective in nature **Overall QoL** • Subjective well-being related to how happy or satisfied someone is with his life as a whole

		Characteristics of the individual • Demographic, developmental, psychological, and biological factors that influence health outcomes **Characteristics of the environment** • Physical environment (home, neighborhood, workplace) • Social environment (family, friends, healthcare providers)
WHOQOL SRPB Group (2006)[10]	6 core domains	**Physical health** • Energy and fatigue • Pain and discomfort • Sleep and rest **Psychological** • Bodily image and appearance • Negative and positive feelings • Self-esteem • Thinking, learning, memory and concerntration **Level of independence** • Mobility • Activities of daily living • Dependence on medicinal substances and medical aids • Work capacity **Social relationships** • Personal relationships • Social support • Sexual activity **Environment** • Financial resources • Freedom, physical safety and security • Health and social care: accessibility and quality • Home environment • Opportunities for acquiring new information and skills • Participation in and opportunities for recreation/ leisure • Physical environment (pollution/ noise/ traffic/ climate) • Transport **Spirituality, religion and personal beliefs (SRPB)** • Spirituality • Connection • Meaning • Awe • Wholeness • Strength • Peace • Hope • Faith

In summary, the authors agreed on WHOQOL SRPB Group's[10] definition in which conceptualizes QoL into six core dimensions. The dimensions include physical health, psychological, level of independence, social relationships, environment and spiritual/ religion/ personal beliefs. Their QoL dimensions can be applied to measure health-related QoL to general patients with any acute or chronic illnesses.

QoL instruments

There are various instruments that can be applied to measure QoL. The examples of these instruments will be discussed in this section. In general, the three (3) types of QoL instruments in measuring QoL are general, disease-specific, and condition-specific administration[9].

General QoL instruments

The general instruments are designed to measure the complete range of disease in various populations and are useful in comparing QoL changes across different disease[9]. Example of general measures of QoL instrument which can be applied to medically ill population as well as healthy population are Medical Outcomes Study Short Form-36 (SF-36)[29], WHOQOL Spirituality, Religiousness and Personal Beliefs (SRPB) Field-test Instrument (WHOQOL-SRPB)[10], and World Health Organization QoL Assessment Instrument (WHOQOL-100)[30].

General QoL instrument referred by the authors

WHOQOL instrument

The WHOQOL is a generic instrument, divided into 6 core domains that covers 25 aspects of QoL: physical, psychological, independence, social, environmental and spirituality. Different components of QoL assessed which are included in the domains include; pain, positive feelings, self-esteem, energy, work capacity, social support, health and social care, and leisure activities. In addition, there are four items that ask about general aspects of QoL (two items) and health (two items); e.g.: ''How satisfied are you with your health?'' and ''How would you rate your quality of life?'' are added to

the six core domains. Each of the 25 aspects of the WHOQOL-l00 contain four items, which are rated on a 5-point scale where 1 indicates low, negative perceptions and 5 indicates high, positive perceptions[30].

Development of the WHOQOL SRPB instrument

The WHOQOL SRPB[10] instrument is created from on the generic WHOQOL-100[30]. How the WHOQOL SRPB instrument was developed is further explained in Table 2 below.

Table II: Development of the WHOQOL SRPB instrument

The WHOQOL SRPB instrument
• The spirituality domain covered one aspect which contains four items. The meaning of life and personal beliefs termed ''spirituality'' in the WHOQOL-100 are among the addressed issues. • A common protocol that was agreed through international consensus (WHOQOL Group, 1993, 1994, 1995, 1996) followed the WHOQOL methodology. At each stage along the development of an expanded spirituality domain, centres carried out the work simultaneously. • An international consultation of experts summarised this work briefly and suggested aspects related to SRPB. A total of 92 focus groups in 15 countries, across four religions; the Americas (Argentina, Brazil, Uruguay), the Middle East (Egypt and Israel), Europe (Italy, Lithuania, Spain, Turkey, UK), and Asia (China, India, Japan, Malaysia, Thailand) subsequently reviewed it. • The focus groups have reviewed the importance of the aspects and suggested items for inclusion in the questionnaire. • A total of 15 aspects were confirmed to be relevant and pilot tested with the WHOQOL-100 (based on the qualitative data and the quantitative importance ratings). Items in the SRPB instrument were worded in the same manner as the WHOQOL-100 and had corresponding scales. • These questions are designed to be applicable to people coming from many different cultures and holding a variety of spiritual, religious or personal beliefs. You will probably answer the following questions with your religious beliefs in mind if you believe in a religion, such as Judaism, Hinduism, Christianity, Islam or Buddhism. However, if you do not follow a particular religion, but still believe that something higher and more powerful exists beyond the physical and material world, you may answer the following questions from that perspective. • Upon administering the WHOQOL, the standard demographic information (age, sex, education, health status) were collected. The extent of participants' religious, spiritual or personal belief were addressed and included in four questions. • To select the best items and aspects for inclusion, a series of analyses including inter-item correlations and factor analysis were conducted. • The 8 main aspects are represented in a total of 32 additional items. Scores for all negatively phrased items were reversed so that high scores represented a better QoL. • Domain scores and means were calculated for the WHOQOL-100 instrument.

Source: WHOQOL SRPB Group (1996)[10]

Disease-specific instruments

In measuring the domains of QoL specific to a disease, the disease-specific instruments are applied[9]. The disease-specific instruments are the most common QoL instruments used among researchers. Few of the examples of disease-specific instrument are Functional Assessment of Cancer Therapy-Breast (FACT-B)[25]. Cancer Rehabilitation Evaluation System-Short Form (CARES-SF)[31], Kidney Disease Quality of Life (KDQOL-36)[32], Asthma Quality of Life Questionnaire (AQLQ)[33] and European Organization for Research and Treatment of Cancer (EORTC QLQ-C30)[34].

Condition-specific instruments

Change in specific conditions related to a disease, such as fatigue are measure from the condition-

specific instruments[9]. One of them is Fatigue Symptom Inventory (FSI). The instrument only measures fatigue which covers solely on physical functioning[35].

ISLAMIC WORLDVIEW

The term worldview is a conceptual scheme and a value system shared by a community or group of people by whom they interpret reality, organize it and live in coherence and stability[36]. Besides, the worldview has many purposes among which; (1) it equips man with insight and vision that way him to recognize, explain and deal with the diverse element of the world in the universe, (2) it gives meaning to life, (3) it promotes mutual understanding and responsibility among people and leads to coherence and stability, (4) the worldview eliminates or avoids ambiguity, (5) it serves a basis for one's philosophy and outlook of life[36].

There are various concepts towards understanding Islamic worldview from different Muslim scholars. According to Qutb[37], Islamic worldview is "the comprehensive conception of the universe and man relation to it. It comes from the fundamental belief that life and existence come into being because of the Will, Desire and Design of Allah, who is the Creator and Sustainer"[37(p.16)]. It involves the Muslim view of the physical world and historical, social, political and cultural aspects.

There are three main characteristics of Islamic worldview from Qutb[37] namely; Tawhidic (Monotheism), Comprehensiveness and Realistic. Table 3 below describes each of the stated characteristics of Islamic worldview.

Table III: The characteristics of Islamic worldview

No.	Characteristics	Descriptions
1	Tawhidic (Monothesim)	• The fundamental issue in Islamic worldview • Has been presented in the purest manner in the Quran and in the tradition (sunnah/ hadith) of the prophet Muhamammad SAW • Allah SWT has described Himself in the Quran as one and has no peers (Assyura: 12) • A religious and ethical worldview whereby the universe and nature have been made to subservient man to do good and avoid corruption • Distinguishing the Islamic worldview from the other worldviews and logic, science and reason • It gives spiritual meaning and aim to life
2	Comprehensiveness	• Includes everything (worldview as well as the Hereafter) • It observes material and spiritual aspect, physical and metaphysical, seen and unseen matters • It provides humans especially the Muslims with the conception of the universe and the relationship between its difference parts or elements
3	Realistic	• Islam believes in Truth, reality and rejects blind imitation, selfishness and fanaticism • A real Muslim did not leave this worldly life to the Hereafter or vice versa • Islam explains things based on fact, reason, and *Shariah* rather than on sentiment • It provides Muslims with a moderate and balanced view that can be brought into practice to look at the world of things and ideas in a realistic manner

Source: Qutb (1984)[37]

The characteristics of the Islamic worldview are not limited to al-Tawhid, comprehensiveness and realistic as stated above. For instance, Al-Mawdudi justified[38] "Islamic worldview begins with the concept of the Oneness of God as man recites *as-Syahadah* (kalima) that carries over to the whole life in the world"[38(p.7)]. He further stated that "this universe is the creation of God Who is One. He created it and He alone is its unrivalled Master, Sovereign and Sustainer. The whole universe is functioning under His Divine Command. He is All-Wise, All-Powerful and Omniscient"[38(p.7)]. In addition, another Muslim scholars Al-Attas pointed out the fundamentals of Islamic worldview into a number of elements which consists of "(1) the nature of God, (2) the nature of revelation based on the Holy Quran and Sunnah, (3) the nature of human soul, (4) the concept of happiness, (5) the nature of existence and (6) the nature of knowledge"[39(p.23)]. Different scholars may have different views,

understandings, principles, characteristics or elements on Islamic worldview. However, all of them have agreed with the concept of al-*Tawhid* or the Oneness of God as the main fundamental element of Islamic worldview.

METHODOLOGY

A literature search using electronic databases was conducted. For the purpose of this review, the QoL domains from WHOQOL SRPB instrument[10] were referred. There are 6 QoL domains; physical health, psychological, independence, social support, environment, SRPB (spiritual, religion, personal beliefs). The domains and dimensions included in the QoL instruments used in this review were identified and were then reviewed.

RESULTS

A total of 13 health-related QoL instruments were reviewed (Group, 1998[30]; Ware et al., 1994[29]; WHOQoL SRPB Group, 2006[10]; Ferrell et al., 1995[11]; Hays et al., 1994[32]; Avis et al., 2006[40]; Juniper et al., 1993[33]; Ferrans, 1989[12]; Brady et al., 1997[25]; Schag et al., 1991[31]; Peterman et al., 2002[41]; Aaronson et al., 1993[34]; Han net al., 1998[35]). The instruments were further classified into general instruments, disease-specific instruments and condition-specific instruments. There are 3 general instruments included in this review; (1) Medical Outcomes Study Short Form-36 (SF-36)[29], (2) World Health Organization QoL Assessment Instrument (WHOQOL-100)[30] and (3) WHOQOL Spirituality, Religiousness and Personal Beliefs (SRPB) Field-test Instrument (WHOQOL-SRPB)[10]. WHOQOL-100 and WHOQOL-SRPB instruments measure all 6 core domains while SF-36 measure only four out of six domains assessed. The general instruments are useful in comparing QoL changes across different disease as well as to measure the complete range of disease in various populations[9].

There are 9 disease-specific instruments included in this review which are Functional Assessment of Cancer Therapy-Breast (FACT-B)[25], Functional Assessment of Chronic Illness Therapy – Spiritual Well-being Scale (FACIT-Sp)[41], Cancer Rehabilitation Evaluation System-Short Form (CARES-SF)[31], European Organization for Research and Treatment of Cancer (EORTC QLQ-C30)[34], Ferrans and Powers's QoL Index-Cancer Version (QLI-CV)[12], QoL-Cancer Survivor (QOL-CS)[11], Kidney Disease Quality of Life (KDQOL-36)[32], Asthma Quality of Life Questionnaire (AQLQ)[33] and QoL in Adult Cancer Survivors Scale (QLACS)[40]. Among the stated instruments, five of them (QLACS, CARES-SF, FACT-B, EORTC, QLQ-C30) evaluated three dimensions of QoL (physical, psychological and social). Three of the instruments (QOL-CS, FACIT-Sp, QLI-C) assessed four dimensions of QoL which were physical, psychological, social and SRPB domains. AQLQ also assessed four domains; physical, psychological, independence and environment while KDQOL-36 assessed four domains too; physical, psychological, independence and social). All stated instruments were self-administered instruments.

The one and only condition-specific instrument which was included in this review is Fatigue Symptom Inventory (FSI)[35]. The instrument only measures fatigue which covers solely physical functioning. This instrument is a self-administered instrument. Table 4 summarizes the reviewed QoL instruments and their domains assessed as per WHOQOL SRPB Group[10].

Table IV: QoL instruments and dimensions assessed as per WHOQOL SRPB Group[10]

Instrument	Author	Domains assessed					
		Physical health	Psychological	Independence	Social support	Environment	SRPB
General instruments							
World Health Organization QoL Assessment (WHOQOL100)	Group (1998)[30]	✓	✓	✓	✓	✓	✓
Medical Outcomes Study Short Form- 36 (SF-36)	Ware et al., (1994)[29]	✓	✓		✓	✓	✓
WHOQOL Spirituality, Religiousness and Personal Beliefs (SRPB) Field-test Instrument (WHOQOL-SRPB)	WHOQOL SRPB Group (2006)[10]	✓	✓	✓	✓	✓	✓

Instrument	Author	Domains assessed					
		Physical health	Psychological	Independence	Social support	Environment	SRPB
Disease-specific instruments							
QoL-Cancer Survivor (QOL-CS)	Ferrell et al., (1995)[11]	✓	✓	✓			✓
Kidney Disease Quality of Life (KDQOL-36)	Hays et al., (1994)[32]	✓	✓	✓	✓		
QoL in Adult Cancer Survivors Scale (QLACS)	Avis et al., (2006)[40]	✓	✓	✓			
Asthma Quality of Life Questionnaire (AQLQ)	Juniper et al., (1994)[33]	✓	✓	✓		✓	
Ferrans and Powers'sQoL Index-Cancer Version (QLI-CV)	Ferrans (1989)[12]	✓	✓	✓			✓
Functional Assessment of Cancer Therapy-Breast (FACT-B)	Brady et al., (1997)[25]	✓	✓	✓			
Cancer Rehabilitation Evaluation System-Short Form (CARES-SF)	Schag, et al., (1991)[31]	✓	✓	✓			
Functional Assessment of Chronic Illness Therapy – Spiritual Well-being Scale (FACIT-Sp)	Peterman et al., (2002)[41]	✓	✓	✓			✓
European Organization for Research and Treatment of Cancer (EORTC QLQ-C30)	Aaronson et al., (1993)[34]	✓	✓	✓			
Condition-specific instruments							
Fatigue Symptom Inventory (FSI)	Hann et al., (1998)[35]	✓					

In summary, SRPB domain is rarely assessed in QoL measurement although spiritual issues are considered as important aspects for patients facing illnesses[42]. As pertaining to instruments reviewed, five instruments contain a domain which measures spirituality; (1) WHOQOL100, (2) WHOQOL-SRPB, (3) QOL-CS, (4) QLI-CV, and (5) FACIT-Sp.

DISCUSSION

The aim of this review is to address the need for an Islamic-specific health-related QoL instrument for Muslim patients. Muslims believes that Islam is a comprehensive way of life which puts religiosity and spirituality as an essential part of life. Furthermore, spiritual issue is agreed as an important aspect for patients facing illnesses[42]. In addition, "illness is also a spiritual event. Illness grasps persons by the soul and by the body and disturbs them both"[43(p.26)]. Therefore, there has been growing agreement about the role played by spiritual element in recent years especially in assessment of people with diseases[11,25,44]. Thus, there is an appealing need to understand and

monitor the Muslims' QoL using a specific Islamic based health-related QoL instrument to capture their spiritual concerns and to convey the information to healthcare decision-makers who can use it to create patient-centred solutions.

To date, health-related QoL assessments that assessed different QoL dimensions in patients have employed several valid instruments[9]. As indicated by the WHOQOL SRPB Group[10], the essential considerations in understanding patients with certain diseases comprise of physical health, psychological, independence, social support, environment and SRPB aspects. The QoL instrument developed by the WHOQOL SRPB Group targeted the general world population. Furthermore, "these questions were designed to be applicable to people coming from many different cultures and holding a variety of spiritual, religious or personal beliefs"[10(p.3)]. These generalizations may encounter diverse results when the respondents are from a certain spiritual and religious beliefs. The uniqueness in Islamic belief and lifestyle may give different impact on Muslims health-related QoL assessments.

In this review, there are five instruments measures spirituality dimension; (1) World Health Organization QoL Assessment (WHOQOL100), (2) WHOQOL Spirituality, Religiousness and Personal Beliefs (SRPB) Field-test Instrument (WHOQOL-SRPB), (3) Functional Assessment of Chronic Illness Therapy – Spiritual Well-being Scale (FACIT-Sp), (4) Ferrans and Powers's QoL Index-Cancer Version (QLI-CV), and (5) QoL-Cancer Survivor (QOL-CS). However, none of these instruments referred specifically to any religion. The spiritual items included only touched on the individual's general beliefs and faiths to account for the application of it to the general population. Correspondingly, these QoL instruments have fallen under the rubric of Western counterparts as most of the authors originated from there. Moreover, the effectiveness of the Western-developed-instrument application on the Non-Western populations has been argued[16]. They further stated that the authors' view and foundation on their developed instruments is major considerations which make it less sensitive to other cultures, races and religions.

As scholars agreed that the measurement of individuals' health status is quantifiable by using QoL inventories, their backgrounds, cultures, races and most importantly their religions plays a vital role in QoL evaluations[9]. Islam is a religion that emphasizes on the mind, body and soul. Additionally, a person is considered healthy in this world means he or she is clean from all sought of worldly diseases which are connected to a person's heart and body. Besides, healthy in the afterlife means the person is free from being tortured in the afterlife[15]. For that reason, health from the Islamic perspectives covers health in this world and in the afterlife[17,45]. This led to the existing health-related QoL instruments to be less effective for Muslim patients since the current available tools are lacking the spiritual concept of Islam.

CONCLUSION

There is the need to develop a religion-specific health-related QoL instrument, specifically from the Islamic perspectives to measure Muslim patients' QoL. The existing QoL instruments while covering the spiritual and religious aspect are still considered lacking since it covers the item only in general terms. The authors believe that based on research done above, a specific QoL instrument created for Muslim patients will provide a holistic and better assessment to the patient's overall well-being.

REFERENCES

1. Jacobsen PB, Jim HS. Consideration of quality of life in cancer survivorship research. Cancer Epidemiology and Prevention Biomarkers. 2011 Oct 1;20(10):2035-41.
2. Whoqol Group. The World Health Organization quality of life assessment (WHOQOL): position paper from the World Health Organization. Social science & medicine. 1995 Nov 1;41 (10):1403-9.
3. Robin Cohen S, Mount BM, Bruera E, Provost M, Rowe J, Tong K. Validity of the McGill Quality of Life Questionnaire in the palliative care setting: a multi-centre Canadian study demonstrating the importance of the existential domain. Palliative medicine. 1997 Jan;11(1):3-20.
4. Puchalski CM, Ferrell B, and O'Donnell E. Spiritual issues in palliative care. Oxford American Handbook of Hospice and Palliative Medicine, New York: Oxford University Press. Inc, 2011.
5. McCord G, Gilchrist VJ, Grossman SD, et al. Discussing spirituality with patients: a rational and ethical approach. The Annals of Family Medicine. 2004 Jul 1;2(4):356-61.
6. Bredle JM, Salsman JM, Debb SM, Arnold BJ, Cella D. Spiritual well-being as a component of health-related quality of life: the functional assessment of chronic illness therapy—spiritual well-being scale (FACIT-Sp). Religions. 2011 Mar 15;2(1):77-94.
7. Corwin D, Wall K, Koopman C. Psycho-spiritual integrative therapy: Psychological intervention for women with breast cancer. The Journal for Specialists in Group Work. 2012 Sep 1;37 (3):252-73.
8. Jafari N, Zamani A, Farajzadegan Z, Bahrami F, Emami H, Loghmani A. The effect of spiritual therapy for improving the quality of life of women with breast cancer: a randomized controlled trial. Psychology, health & medicine. 2013 Jan 1;18(1):56-69.
9. Chopra I, Kamal KM. A systematic review of quality of life instruments in long-term breast cancer survivors. Health and quality of life outcomes. 2012 Jan 31;10(1):14.
10. WHOQoL SRPB Group. A cross-cultural study of

spirituality, religion, and personal beliefs as components of quality of life. Social science & medicine. 2006 Mar 31;62(6):1486-97.
11. Ferrell BR, Dow KH, Grant M. Measurement of the quality of life in cancer survivors. Quality of life Research. 1995 Dec 1;4(6):523-31.
12. Ferrans CE. Development of a quality of life index for patients with cancer. InOncology nursing forum 1990 (Vol. 17, No. 3 Suppl, pp. 15-9).
13. Pew Research Centre. Religion and Public Life: The Global Religious Landscape [Internet]; 2012 [cited 2016 May 12]. Available from http://www.pewforum.org/2012/12/18/global-religious-landscape-exec/
14. Pew Research Centre. Religion and Public Life: The Future of World Religions - Population Growth Projections, 2010-2050 [Internet]; 2015 [cited 2016 May 12]. Available from http://www.pewforum.org/2015/04/02/religious-projections-2010-2050/
15. Taha A. Kedoktoran Islam. Kuala Lumpur: Dewan Bahasa dan Pustaka [Malay], 1992.
16. Hamzah A, Krauss SE, Mohd Noah S, Suandi T, Juhari R, Manap J, Mastor KA, Mahmoud A, Kassan H. Muslim Religiosity and Personality Assessment: Prototype for Nation Building. 2nd ed. Kuala Lumpur: Ampang Press Sdn. Bhd., 2007.
17. Harmy MY, Shamsul Kamal A, Rosediani M, Wan NorAinon WM. Fikah Perubatan. 3rd ed. Kuala Lumpur: PTS Publishing House [Malay], 2013.
18. Felce D, Perry J. Quality of life: Its definition and measurement. Research in developmental disabilities. 1995 Feb 28;16(1):51-74.
19. Costanza R, Fisher B, Ali S, et al. An integrative approach to quality of life measurement, research, and policy. SAPI EN. S. Surveys and Perspectives Integrating Environment and Society. 2008 Nov 26(1.1).
20. Karakoyun-Celik O, Gorken I, Sahin S, Orcin E, Alanyali H, Kinay M. Depression and anxiety levels in woman under follow-up for breast cancer: relationship to coping with cancer and quality of life. Medical Oncology. 2010 Mar 1;27(1):108-13.
21. Ashing-Giwa KT, Lim JW. Predicting physical quality of life among a multiethnic sample of breast cancer survivors. Quality of Life Research. 2010 Aug 1;19(6):789-802.
22. Cella DF, Tulsky DS, Gray G, et al. The Functional Assessment of Cancer Therapy scale: development and validation of the general measure. Journal of clinical oncology. 1993 Mar;11(3):570-9.
23. Gill TM, Feinstein AR. A critical appraisal of the quality of quality-of-life measurements. Jama. 1994 Aug 24;272(8):619-26.
24. McQuellon RP, Kimmick G, Hurt GJ. Quality-of-Life Measurement in Women with Breast Cancer. The Breast Journal. 1997 Jul 1;3 (4):178-86.
25. Brady MJ, Cella DF, Mo F, et al. Reliability and validity of the Functional Assessment of Cancer Therapy-Breast quality-of-life instrument. Journal of Clinical Oncology. 1997 Mar;15(3):974-86.
26. Flanagan JC. A research approach to improving our quality of life. American psychologist. 1978 Feb;33(2):138.
27. Wilson IB, Cleary PD. Linking clinical variables with health-related quality of life: a conceptual model of patient outcomes. Jama. 1995 Jan 4;273(1):59-65.
28. Ferrans CE, Zerwic JJ, Wilbur JE, Larson JL. Conceptual model of health-related quality of life. Journal of Nursing Scholarship. 2005 Dec 1;37(4):336-42.
29. Ware JE, Kosinski M, Keller SD. Physical and mental health summary scales-a user's manual. New England Medical Center. The Health Institute, Boston, MA. 1994.
30. Group TW. The World Health Organization quality of life assessment (WHOQOL): development and general psychometric properties. Social science & medicine. 1998 Jun 15;46(12):1569-85.
31. Schag C, Ganz PA, Heinrich RL. Cancer rehabilitation evaluation system–short form (CARES-SF). A cancer specific rehabilitation and quality of life instrument. Cancer. 1991 Sep 15;68(6):1406-13.
32. Hays RD, Kallich JD, Mapes DL, Coons SJ, Carter WB. Development of the kidney disease quality of life (KDQOL™) instrument. Quality of Life Research. 1994 Oct 1:329-38.
33. Juniper EF, Guyatt GH, Ferrie PJ, Griffith LE. Measuring quality of life in asthma. American Review of Respiratory Disease. 1993 Apr 1;147:832-832.
34. Aaronson NK, Ahmedzai S, Bergman B, et al. The European Organization for Research and Treatment of Cancer QLQ-C30: a quality-of-life instrument for use in international clinical trials in oncology. JNCI: Journal of the National Cancer Institute. 1993 Mar 3;85 (5):365-76.
35. Hann DM, Jacobsen PB, Azzarello LM, et al. Measurement of fatigue in cancer patients: development and validation of the Fatigue Symptom Inventory. Quality of Life Research. 1998 May 1;7(4):301-10.
36. Mutahhari AM [translated by Campbell R]. Fundamentals of Islamic Thought: God, Man, and The Universe, [Persian], 1985. Available at https://www.alislam.org/printpdf/book/export/html/34917.
37. Qutb S. The Characteristics of the Islamic Concept. Hindustan, Delhi, 1984.
38. Al-Mawdudi AA. Islamic Way of Life [online], 1967. Available at https://books.google.com.my/books?id=FO5Y1umGZgC&printsec=frontcover&source=gbs_ge_summary_r&cad=0#v=onepage&q&f=false.
39. Al-Attas SMN. Prolegomena to the Metaphysics of Islam. London: ISTAC, 1995.
40. Avis NE, Ip E, Foley KL. Evaluation of the Quality of Life in Adult Cancer Survivors

(QLACS) scale for long-term cancer survivors in a sample of breast cancer survivors. Health and quality of life outcomes. 2006 Dec 1;4 (1):92.
41. Peterman AH, Fitchett G, Brady MJ, Hernandez L, Cella D. Measuring spiritual well-being in people with cancer: the functional assessment of chronic illness therapy—Spiritual Well-being Scale (FACIT-Sp). Annals of behavioral medicine. 2002 Feb 1;24(1):49-58.
42. Johnson KS, Elbert-Avila KI, Tulsky JA. The influence of spiritual beliefs and practices on the treatment preferences of African Americans: a review of the literature. Journal of the American Geriatrics Society. 2005 Apr 1;53(4):711-9.
43. Sulmasy DP. A biopsychosocial-spiritual model for the care of patients at the end of life. The gerontologist. 2002 Oct 1;42(suppl_3):24-33.
44. Cotton SP, Levine EG, Fitzpatrick CM, Dold KH, Targ E. Exploring the relationships among spiritual well-being, quality of life, and psychological adjustment in women with breast cancer. Psycho-Oncology. 1999 Sep 1;8 (5):429-38.
45. Mohamad M, Mat Ali NA. Quality of Life Maqasid Syariah Approach, Terengganu: Penerbit UniSZA, 2016.