Well-being of the elderly: linking objective and subjective dimensions in a wellness index

Haliza Mohd Riji*, S Tajuddin S Hasan
Department of Community Health, Faculty of Medicine and Health Sciences, Universiti Putra Malaysia

Abstract

In cognisance of the world's increase in elderly people, researchers in Malaysia are concerned with knowing what the needs of the elderly are and how can these be recognised. A wellness index is deemed timely and appropriate for measuring the improvement of an elderly person's well-being. This paper describes a process of understanding quality of life in older persons with the final goal of developing a wellness index for Malaysians aged 40 years and over. The rationale was to identify possible contributing factors to well-being, to consider models for discovering the relationships between factors and quality of life, and to suggest that both quantitative and qualitative research on the objective and subjective dimensions be performed for developing a wellness index. Over several months, internet searches for keywords conveying meaning of wellness, well-being, quality of life, life satisfaction, and terms to denote the aging population, such as "older persons, aging, elderly, old age, older people, midlife, and later life" were carried out. The entire process was guided by three research questions: 1) in which areas of health and social aspects of life are the term 'quality of life' used; 2) what objective and subjective dimensions are considered; 3) what possible models could be adopted and adapted for understanding a holistic approach to wellness. Over 80 articles (57 ScienceDirect; 23 Springerlink; seven BioMed Central; two PubMed), 21 books, and 14 internet sites were used as resources in this paper. Of the models reviewed, three were selected for further consideration. The authors note that the broad topics of wellness and well-being have drawn so much interest from varied and diverse fields, including: culture, health, gerontology, geriatric medicine, sports, society, economics, nursing, medicine (cancers, cardiology), psychology, ethics, morality, history, environment and occupation. The few related articles on the Malaysian situation were more concerned with characterization of wellness rather than its deliberation. The authors conclude that quality of life is a dynamic concept that contains a myriad meanings and interpretations. Objective and subjective dimensions interact forcefully or subtly in the process. The range and context have to be explored and understood before a holistic wellness index can be formulated.

Good health is only a part of what individuals can experience; they also can experience "wellness". Wellness can only be experienced by individuals, however, if they actively pattern their behavior and life style to suit their circumstances [1]

1. Viewing global and local concerns of elderly person's well-being

Over the last few decades the world's population has been marked by a gradual increase in the proportion of elderly. This has partly been due to the dramatic swing, from high birth and high death rates to low birth and low death rates. This transformation is spurred by social and community systems enhancement, cultural changes, and economic progress, and also by innovations in medical and health technology. In 10 years, persons aged 80 years or more are expected to be proportionally higher than today's total population [2].

Although having a disease appears to be less disabling than in the past, the aged faces continuing burden as most diseases occur in late life [3]. Malaysia emulates closely the global changing trend in the USA where the top five diseases for males 60 years and over are cardiovascular diseases, chronic respiratory diseases, cancer, infectious diseases, and digestive system disorders; for females they are cardiovascular diseases, infectious diseases, chronic respiratory diseases, cancer, and sense organ disorder

Corresponding author:
Assoc. Prof. Dr Haliza Mohd. Riji
Department of Community Health
Faculty of Medicine and Health Sciences
Universiti Putra Malaysia 43400 UPM Serdang
Email: liza.riji@gmail.com

[4]. While developed nations enjoy the gain of longevity among their people, and have put in place effective preventive measures, yet no matter how successful they can be, chronic diseases are inevitable among the elderly [5]. For a developing country like Malaysia the disease burden will undoubtedly exert more demands for economic, health and social life betterment [6].

Wealthy nations have the means and resources to ensure their citizens become healthier, but can money buy them happiness? Evidence [7] suggests that while economic growth has been achieved in the UK and other developed countries, people's satisfaction with their lives have not been concomitantly and correspondingly enhanced. Consequently, a well-being manifesto that focuses 'upon creating an economy based on social justice, environmental sustainability, and well-being' came into being in September 2004. In fact, wealthy nations are moving toward making their money more worthy of their existence. The New Economic Foundation (nef), in the UK has established a well-being programme that aims to find 'ways to promote policies and practical solutions that help people live more fulfilled lives.'

Another global trend is the paradigm change towards making people appreciate a more successful, productive, or active life as they age, hence the use of 'the new aging' terminology as the catch word [8]. As people are able to physically, mentally, spiritually and psychologically cope with chronic health problems and declining cognitive skills, they are encouraged to maximize desired outcomes and minimize undesired ones [9]. Hence governments and governing authorities rhetorically posit that the secret of healthy individuals and society is through empowering people, including the elderly, to take charge of their own life and health. As illustrated by Katz and Marshall [10], aging does not necessarily connote sexual decline; a newer meaning has been culturally created through market and consumer activities, hence promoting sexually active senior citizens. Obviously, this is easier said than done, especially so in many developing and poor countries [11].

It is also recognized that in defining, enumerating and assessing the criteria and parameters of successful aging, it is imperative to include the major domains of physical, cognitive, social, psychological and environmental functions; and within each domain the relevant array of determinants [12]. Having advanced knowledge and enlightened understanding of the mental, cognitive, and psychological faculties, it has been possible for the developed countries to transform knowledge fora into drivers of human learning process [13]. Their generally better research-enabled society is always enriched by newly-generated information, hence knowledge. Research and learning become an integral part of their society.

Malaysia is fortunate in many domains of its existence and development. It has in many ways keeps in tandem with and satisfies the 'modern goals and demands' of society and cultural setting [14]. Economically, it has moved itself from being greatly dependent on agricultural commodities to becoming a more diversified-economy-based nation, with particular strength in manufacturing and downstream plantation and agro-based industries. Hence its gross national income is derived not only from the agricultural sector but also from manufacturing, trading, and commercial activities. Politically, it has gained complete independence from British rule in 1957, which subsequently enables Malaysians to govern the country according to their own vision, capacity and capability. Culturally, the peaceful and dynamically adaptive coexistence of various ethnic groups has led to a harmonious relationship among the people [15]

On the health front, the country has overall been able to control communicable diseases such as those caused by mosquito-borne infections; for examples malaria, filariasis, and dengue, and nutrition-deficiency related diseases such as stunting and underweight disorder [16]. Such achievement has been made possible through well-organized disease control programs and health promotion strategies. Yet, despite obvious milestones in overall health improvement, there remain critical issues that relate to the health and well-being of the elderly. Malaysia would be hard pressed to sustain being a welfare-oriented state in view of rising medical costs. Living alone and weakening family support can add serious problems to the elderly if they are deficient in financial support. At the individual level, the elderly are experiencing biological problems due to indigestion, constipation, poor nutrition and gastritis. These can result from deteriorating oral health, lack of physical activity and bacterial infections [17]. These issues need to be addressed immediately.

In 1990, the Malaysian National Social Welfare Policy was introduced. Through this instrument the government hoped to safeguard the care of the aged by encouraging their family and the community to lend their support. Changing socio-economic situations in the years that follow led to the formulation and adoption in 1995 of the National Policy for the Elderlys. The policy mission statement contained within it was 'to develop a society of elderly people who are contented, with dignity and possess a high sense of self-worth by optimizing their self-potential and ensuring that they enjoy every opportunity as well as care and protection as members of their family, society and nation'.

In attempting to assess and contrast the variables and context of quality of life and their relationship to aging between developed, developing and poor countries, and their relevance to Malaysia, reference to selected articles was deemed necessary. Streib's [18] *Old Age in Sociocultural Context: China and the United States* critically looks at three main areas, i.e. economic development, traditional cultural patterns, and the polity. The two countries differ significantly in their ways of responding to their older members. Within the cultural context, gender difference is an important factor to consider. The issue of mobility impairment has also been examined [19]. Men perceived their impairment more negatively; thus their higher levels of distress. Religion (Islam) was a likely reason for viewing their physical impairment as limitations since Muslim men had to attend the Friday prayers at the mosque. In poor countries such as Cambodia, the major influencing factor is very much related to the economic and social status of the people [20]. For rural Cambodians, the economic status of the household is indicative of their well being than income. In a society much affected by civil strife and unfavorable living conditions, including poor health care facilities, there is marked association between wealth and health.

2. Framing well-being, quality of life, and healthy living

The term 'well-being' is often used interchangeably with 'quality of life' and 'wellness'. The term 'Quality of Life' can mean anything depending on the value and context a person or group is in. In its general context, it can refer to one's overall life satisfaction. The plethora of definitions is because "it is a problematic concept as different people value different things" [21]. According to Utian [22], the phrase "Quality of Life" (QOL) "is both an enigma and a cliché." It seems that people understand what it refers to yet there is always confusion about its meanings and how the domains can be measured. Interest in the subject of happiness and life satisfaction has grown internationally. Developed countries such as Denmark and Canada have funded national research to look at the quality of life of their citizens. Denmark set up a Quality of Life Research Centre in 1994, and in the UK there were projects supported by the Economic and Social Research Council to examine quality of life of elderly [23]. These researches examine comprehensive knowledge and skill domains, including those for generic assessment, disease-specific characterization, disease- specific measures, domain-specific evaluation, activities of daily living (ADL), and disability measuring tools [24].

Although generally, the term well-being connotes the physical, mental and psychological domains of life, the meaning appears to be more definitive within the health context. The health of women, for example, often make people think of their reproductive functions, hence their quality of life is determined by their ability to reproduce and to care for their children. Feminist researchers regard such biological perspective as only part of the women's overall functional ability across her life cycle. Well-being or the quality of life for the women increasingly takes account of their mental health issues as more women suffer from psychological stress due to their burden and responsibilities associated to their gender status [25].

It is increasingly evident that the concept of 'quality of life' entails both easily observable characteristics and those that require theoretical and empirical considerations. How do researchers differentiate questions like "how does quality of life affect old age?" and "how does old age affect quality of life?" and "how are the two affected by living in socially deprived areas?" [26]. Thus both tangible and intangible entities are intertwined in a life's wellness index.

Within the context of the Malaysian society, the term can mean everything desired by an old person – physi-

cal health, spiritual enlightenment, intellectual alertness, life satisfaction, well-being, happiness, family support, financial security, independence, self-worth, dignity, and so forth. While ageing is a natural biological process, being contented and feeling good about old age is the outcome of many objective and subjective interrelated factors. The nature and nurture elements are of central importance and the person's quality of life are bounded by his/her and society's spatial and temporal continuum [27]. Admittedly, there are factors outside of the individual self – the external factors that directly or indirectly influence and shape the person's behavior and existence. These include the physical structures (build) and facilities, resources and their accessibility (including health and other information), laws and policy, and the larger cultural environment matrix [28].

One meaning of well-being can be obtained from a look at historical development of the concept. Burns [29] notes that well-being can be explained in terms of adaptation of people and their environment. This is a very ecological approach in which life is framed in a dynamic and evolving interactive process of action and interaction [30]. Traditional views of shamans or medicine men have maintained that for achieving health the physical, emotional and spiritual well-being should form a holistic entity. Hence, the oneness or connectedness between person, ecology and cosmology should result in the right balance or well-being. This is the philosophy of Buddhism and of Tibetan medicine which stipulates 'a system of pscho-cosmo-physical healing'. Subsequently, Rene Descartes philosophized that mind and matter are vital constituents of well-being through a reductionistic approach, followed by Sigmund Freud's theory on the inner workings of the mind – the id, ego, and superego. The focus on the mind and its inner processes put a limit to the larger understanding of well-being. Theorists such as Burn are proposing that well-being is best understood if all information from both traditional and research laboratories are used together for the betterment of wellness of mankind [31].

Health is understood as a normal condition characterized by the absence of disease or disability affecting the body and mind. As many as there are factors that affect health, so are there factors that contribute to ill-health or disease. The term holistic health is more meaningful, hence the term wellness is reflective of the multidimensional nature of health to include the whole person's relation to the total environment and toward attaining optimal health. In fact, it is everything from visible correlates to cognitive processes. 'Wellness is the active, lifelong process of becoming aware of the different dimensions of your life and health, identifying the dimensions that need improvement, and making changes in lifestyle behaviors that help you attain the highest level of health and well-being possible for you' [32].

Both men and women enjoy a wide variety of life-sustaining and life-enhancing resources. Longevity does not necessarily follow a healthier life. Aging can be psychologically and socially fulfilling, yet it does increase the likelihood of having chronic diseases. The context of aging is gender-related. Women, in particular are more likely to spend their last years in poverty and loneliness. The media's images of the elderly more often than not portray women more than men as frail individuals, who are besieged with many problems. Ruta et al [33] have shown that using a definition on quality of life for patients with back pain through such terms as narrowing "the gap between a patient's hopes and expectations and what actually happens", has more "meaning and relevance in the context of their daily lives". There have been a number of attempts, usually theoretical, to formulate, conceptualize, and model well-being as a continuum of dynamic universe, comprising interacting and transacting-processes' life domains and constructs (physically, spiritually, mentally-cognitively-neurologically, behaviour-psychologically), and the bounding-frames of socio-economic-cultures [34;35].

Despite its inherent meaning, there are no universally accepted definition and no standard indicator of well-being. One suggestion is that [36], well-being can fall into three categories; subjective, psychological and objective well-being. While subjective well-being is concerned with how happy and how satisfied a person is with his/her life, the psychological well-being has to do with attitudinal or mental aspect of a person toward his/her life goal. The objective well-being can be determined by the measurement of physical characteristics or material parameters such as ownership of property or income.

Aging is a natural biological process. However, it carries different meanings to different cultures. Generally, however, aging is negatively perceived by society at large. So important is the issue related to bad image of old age that the year 1999 was named the International Year of Older Persons. The then UN Secretary-General, Kofi Annan, urged the world to promote "a society for all ages is one that does not caricature older persons as patients and pensioners" [37]. "Culturally, age is depicted as a dreaded and undesirable state. This is due to a number of factors - a youth oriented culture in a society that is given over to the "administration of life and consequently pathologizes age as a time of physical decline and ultimately death." [38].

Given the above precepts and the importance of understanding what is meant by well-being, initial conceptual framework was considered and discussed. The suitable model which needs to be developed would stipulate well-being as 'satisfaction with different aspects of life'; and incorporates sense of meaning as 'a sense of purpose in life' [39]. Such a view of life having a predetermined purpose aligns well with the philosophy of human life as predesigned entity [40]. It is expected that the model has to be refined or changed in due course as better understanding of the key concepts accrues. Nevertheless, it is visualised that this simple model encapsulates the fundamental elements of natural progression from input (external conditions) to output (sense of), through the processing entities (intraindividual conditions).

3. Some factors influencing well-being or quality of life

3.1 External conditions – environmental, sociocultural, biophysical

The traditional culture and social systems provide family-based and communal safety nets which enable elderly to cope with challenges and vagaries of life. Unfortunately there is a definite erosion of those traditional societal pillars of strength. In contrast, elderly people in developed countries are presented with many resources to enhance and maintain their well-being. It is common knowledge that the reading, writing, and inquisitive culture of developed countries, as compared with developing and poor countries, propel many enhanced researches, generate more new knowledge, and empowers more people including elderly to be more independent and take charge of their lives, hence their well-being [41]. As examples, there are books on various aspects of self-help and self-implement; self-improvement and self-implement e.g. on foods which can alleviate and even helps to obviate pain [42], on meanings of grief and grieving [43], and on understanding of head injury experience [44]. In line with optimizing of life's satisfaction and self empowerment, using knowledge and learning resources, our research project intends to measure the extent of using knowledge resources by elderly in their everyday life, which may enhance their well-being.

It is well acknowledged that a literate and a learned society produce well-informed communities. Governmental authorities and governing bodies always dream of empowering the people, including the elderly group, to manage and maintain their own health requirement, hence their well-being. It is logically expected that as a person's intellectual faculty increases, the domain of his or her well-being ecosystem expands to include "enlightened and luxury" constructs such as liberty, equality and fraternity entities [45]. In a fast developing country such as Malaysia, the broad-knowledge-based reading culture is still at a low level, especially among rural-based elderly. Nevertheless urban influences, especially ones with negative impacts e.g. smoking and low-imbalanced nutrient food regime, gain foothold easily, including among elderly.

The influence of culture on health and well-being is best observed in communities comprising ethnically, socio-economically, and culturally diverse and heterogeneous people. People's judgments are essentially their perceptions of what they regard as acceptable or unacceptable in their culture. For instance, in the case of mental illness, each culture has provided ways of determining whether one is mentally ill or not. In non-western societies, mental illness can be linked to factors, distinguishably different from western societies. It is usually linked to spirit possession and breaking of religious taboos [46]. Moreover cultural influences can also be observed across continents.

Changing cultural matrix with globalisation is due to a large extent on technology revolution which on wellness through health care and health promotion. Knowledge and information access and acquisition become spatially and

temporally borderless [47]. This mass democratization of knowledge, including health and well-being information, transforms decision making from being monopolised by the expert few to a larger community organization. This is a definitive trend across continents, with clear emphasis on prevention, rehabilitation, and chronic illness care [48]. Online knowledge gateways and repositories, e.g. URLs of the Communication Initiative, Global Knowledge Partnership, and the Global Alliance of Information Communication Technology for Development, enable free access to a wide domain of global information at anytime from anywhere. Consequently there emerged a global shared vision of building health and well-being communities culminating in the formation of for examples, the Healthy People 2010 documented project of the USA [49], which preliminarily defines generic wellness indicators [50]. It is common knowledge that in essence, the community decision-making culture is actually the traditional indigenous culture of many people across the world. Nevertheless, despite the evidently positive trend of community-based participation, in many aspects of socio-economy-health domain, an increasingly large gap exists between rich and poor nations [51]. Hence, domains of wellness for developed countries are not necessarily directly applicable to developing countries. Such scenario portends increasing disparity in achievement of health and well-being between rich and poor nations.

3.2 Intra-individual conditions – health, functional ability, coping mechanisms, personality

Within the health care system, concerns with the quality of life of elderly people are frequently drawn to aspects of their physical health status. Health care facilities are more particularly needed by the elderly since the group is prone to illnesses and disability due to old age and susceptibility to infections. For example, gut flora populations within the intestinal tract, are phenomenon which result from physiological changes among elderly [52]. Cardiovascular diseases are commonly suffered by the aged [53]. Apart from that impaired vision occurs most frequently among the elderly. In an early study by Chen in Malaysia [54], the rates of disabilities were 3.5 per 100,000 persons for those aged 60 to 64 years; the rate increased to 5.2 for those 65 to 69 years and 6.1 for those 70 years and above. Research findings have shown that decreasing quality of life is associated with increasing age, and its related factors; disability, discomfort, pain and immobility. Gender is one determining factor. More women are believed to report ill-health than do men. In a study to explain whether worse health-related quality of life scores among women were due to differential reporting patterns, it was concluded that the tendency for women to report worse health condition was really due their worse health status than men on the basis of higher prevalence of disability and chronic conditions [55]. Losing one's physical strength and overall fitness is associated with advancing age. Among many elderly, living with some kind of debilitating illness seems unavoidable [56]. Pain and long-term care can decrease the persons' quality of life. Having to experience rheumatoid arthritis and osteoarthritis, for example, often lead to changes in the individual's life [57].

Associated with the functional status of the elderly is their mental health status. Mental health is understood as the ability of the individual to deal with his total well-being and with others around him. In this regard, it is assumed that he or she should possess a sound mind to know what is good or bad for him or her respectively. In contrast a person is said to be having a mental health problem when he or she is not able to cope with life's situations, such as those caused by loss of loved one, or failures to accomplish something that is desired. Women particularly those in developing countries are faced with adverse life situations such as poverty, child-rearing responsibility and also caring for family members. Mental health disorders due to changes in brain function are more common among elderly people than young ones [58]. As women aged into later life, they then need carers to look after their physical and psychological needs. Lately, there has been evidence to indicate that the elderly, especially women, have been neglected by their children and left to fend for themselves. Nevertheless, there still exists evidence of the caring attitude among the extended families as shown in studies done by Universiti Utara Malaysia [59].

Aging is widely perceived with the loss of independence due to physiological changes and this can include one's mental alertness. As such life's activities will in time become imperatively reduced due to those changes. Nevertheless, in the USA, elderly are still allowed to drive and to travel in airplanes, provided they are healthy [60].

While on the one hand, the term 'quality of life' can apply to both the physical, mental and psychological domains of life; the meaning appears to be more definitive within the health context. The health of women, for example, often make people think of their reproductive functions, hence their quality of life is determined by their ability to reproduce and to care for their children. Feminist researchers regard such biological perspective as only partial of the women's overall functional ability across the life cycle. Well-being or the quality of life for the women has to take account of their mental health issues as more women suffer from psychological distress to their gender status.

It is increasingly evident that the concept 'quality of life' entails both easily observable characteristics and those that require theoretical and empirical considerations. How do researchers differentiate questions like "how does quality of life affect old age?" and "how does old age affect quality of life?" and "how are the two affected by living in socially deprived areas?" [61].

3.3 Sense of well-being: meaning, value

What do the elderly value in the remaining years of their life? An article by Chin Mui Yoon in the Star [62], lamented on one 68 year old woman's travel experience she had three years earlier. She felt special when people in New Zealand offered so much help when she fell down while crossing the road there. This could mean that she did not have the chance to 'feel like somebody special back in Malaysia.' The same article highlighted statements on the general population's attitudes toward aging. Evidently quality of life for the elderly has a lot to do with their psychological well-being – having enough money to maintain their livelihood, avoiding sickness, having comfortable housing, able to travel, and enjoying leisure.

Pain and long term care for disabled individuals [63] is a real central concern for elderly people. Associated with issues of caring, provision and achievement of structural target [64], e.g. caring environment and society, are of central and critical importance in elderly perceptions about wellness. In order to achieve a meaningful mental mechanism of coping psychologically with traumas and tribulation of life, the conceptual and operational meanings [65] of wellness and purpose of life take a central pivotal role. Once an individual, including an elderly, is able to mentally inculcate and mindfully acculturate the 'secret' purpose of life, positive outcome of negative circumstances can be achieved [66].

Embedded in the positive outlook of life is the feeling of happiness. Happiness may be an obvious outward indication or a consequence of life satisfaction. Contemporary measurement of happiness emphasizes very subjective aspects such as emotion, role, social and cognitive functioning [69]. As such, both intrinsic and extrinsic structures and processes are involved, and therefore these have to be included in the proposed study. Happiness, feeling of life's satisfaction, and emotive sense of good self-worth, are abstract constructs or concepts or domains. Measuring and evaluation are subjectively contextual within specified societal-environmental continuum. Individual's expectation and inclination, and societal norms and acculturation, permeate and design these domains. Every human being aims to be within spatial and temporal coordinates of these domains. Essentially these domains comprise the state of well-being. Consequently, the researchers/authors of this paper focused on intrinsic and intrinsic health factors in their deliberation to design the wellness research project. As individual ages, there will be accompanying changes in morphology, physiology, and psychology. It is a general norm that as one ages, say above 50 years, there will be a general decline in bodily functions and body metabolism. Nevertheless, authors of this paper are cognizant of intrinsic and extrinsic ageing [70]. Hence intrinsic and extrinsic components comprise essential entities in our study's conceptual frame.

4. Issues relating to validity, reliability, sensitivity and responsiveness of instruments

In order to ensure future applicability of the wellness index matrices, issues relating to validity, reliability, and sensitivity have to be addressed. The instruments to be used should be tested judiciously so that they correlate with other pertinent observable behavior. Local cultural context shall determine the morphology and taxonomy of the contents of measuring tools. The instruments should really measure the intended constructs. It is necessary to delineate and ensure acceptable levels of content validity, criterion validity, construct validity (convergent and discrimi-

nant validity) [71]. Possible flaws regarding reliability and its connection to validity and minimization also have to be considered. Potential significant differences which may arise and due change that could occur are mainly attributed to the sensitivity and responsiveness of respondents in a study. To address these crucial issues, a pilot study is deemed necessary.

As time progressed, it then became clear that the proposed research should adopt a model which would encompass both objective and subjective domains affecting both the individual's as well as group's quality of life. A wellness index is a measure which represents the degree of 'wellness' of a person. After viewing all available literature the authors chose to focus on an approach or model proposed by Costanza et al [72].

The key advantage of this model is that it provides the connections between opportunities that are provided to meet human needs and the available policy and culture which can be utilized for enhancing the opportunities. Four types of capital need to be in place – social capital, human capital, built capital, and natural capital. Deficiency of investment in these capitals needs to be addressed by nations, especially the third world countries. Failure to do so will definitely lead to an increasing larger divide in socio-economy and human wellness between developed and developing countries [73]. An important feature of this model is the integration of the objective dimensions and their measurements of QOL with the subjective dimensions and their indicators. Costanza et al. [74] believed that the above model of QOL is conceptualized as "the extent to which objective human needs are fulfilled in relation to personal or group perceptions of subjective well-being… 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". It is only through such integration that 'health' and 'non-health' determinants can be linked quantitatively in order to develop population health indicators [75], including those of the elderly [76). Thus, the broader enveloping frame of community-based approach and policy-driven imperative on wellness achievement portends a brighter prospect to an overall wellness of a nation [77].

5. Conclusions

In essence this paper conjures visioning ideas, actions, and tribulation; comprising initial preparations, planning of strategies - brainstorming on conceptual blueprint, concept papers, concept analysis [78], content analysis [79], stakeholders buy-in, conscripting players and soothsayers, and tackling bureaucracy. We had mapped out structurally [80] the imperatives and drivers for actioning the research processes. We emphasized the need for sampling the broadest range of healthy, disabled, and morbid old persons, including patients and carers of cognitively-impaired condition [81].

Indices are measurable indicators of a phenomenon. Hence, wellness index is a measure of indicator of wellness of people, community, and a nation. Quantitative measures are essential for many utilitarian purposes, including future quality improvement, aid in policy decision-making, comparative analysis for strategic social-health management, and in-built content package for an e-Health [82] delivery collaborative and distributive knowledge and information system [83]. The authors therefore posit a synthesis of a time-based and spatially-coordinated measured entity which can indicate the health of a nation.

Suitable and appropriate instruments for local cultural context are to be selected. All activities are planned to ensure a reasonably seamless process in transforming data into information, subsequently into knowledge-base and skill-base, and ultimately into a strategic and critical application. The central underlying premise to this project is an integrated approach to ensure that researchers can untangle and define the meaning of life, within the context of enhancing and augmenting wellness in the elderly. Given current knowledge relating to the topic, the researchers believe that a holistic approach is the only meaningful way of understanding wellness, hence enabling the elderly to achieve a dignified and fruitful productive life. A firm conviction - one that will not succumb to reticence is upheld, and the approach to be adopted is holistic and synthetic as a measure to unravel the meaning of the concept of well-being as precondition to formulating the wellness index.

The authors' review of more than 80 articles (57 ScienceDirect; 23 Springerlink; 2 BioMed Central), 21 books, and 14 internet sites reveal that the topic on quality of life in the elderly spread over many disciplines and interests - culture, gerontology, geriatric, sports, social, economics, nursing, medicine (cancers, cardiology), psychology, ethics and moral, history, environment, occupation. The bulk of studies are from European (including Russia) countries, the USA, Japan, Korea and Hong Kong. The few related articles from Malaysia [84;85;86] dealt mainly with characteristics such prevalence of diseases, and none was found on wellness index. Of the models reviewed, three were selected for further consideration; Perry [87] Sarvimaki & Stenbock-Hult, and Costanza et al. However, the model by Felce and Perry, though intricate, would pose greater challenge if adopted, hence avoided. The two latter models are considered most appropriate as they contain essential objective and subjective dimensions. The pertinent breadth and depth of context, within both global and local perspectives, have to be explored and understood before a holistic wellness index can be formulated. Designed models would conform to local context and contents. Studies, especially in developed countries, strengthen our conviction that measurement of wellness index is essential to gauge the overall health of a nation. The authors conclude that quality of life is a dynamic concept that contains a myriad of meaning and interpretations. Both objective and subjective dimensions interact forcefully and subtly in the process.

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