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Original Article

The Quality of Life - A Systematic Review Orientation to Establish Utility Score in Vietnam

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ABSTRACT

Background: Systematic review of outcome measurement instrument is a method for choosing researches and articles for our research and practice. Our purpose was defined the status of using quality of life or health-related quality of life instruments and to find out which articles can be applied to process of establishing utility score in Vietnam. **Method:** A systematic literature search was conducted in MEDLINE, SCOPUS, COCHRANCE, and GOOGLE SCHOLAR database at November 2016. The quality of reviews was assessed by using a specific checklist. **Results:** A total of 27 articles were included. Almost articles was conducted in the last 5-year. The instruments were used almost come from World Health Organization (WHOQOL instrument) and Euroqol (EQ-5D instrument). Only five articles mentioned using EQ-5D questionnaire as an instrument to interview participants. Two of them had assessed about the quality of life, and three remain articles used it as application into costing studies. **Conclusion:** Although instruments using to evaluation quality of life or health-related quality of life are not the same, but this area is paid attention of the researchers. Less articles use EQ-5D as an instruments and none of them could be representative for whole Vietnamese population.

Key words: EQ-5D, Euroqol, Health-related quality of life, Quality of life, Systematic review, Utility, Vietnam.

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INTRODUCTION

At present, the improvement in the quality of life of the population has become at the forefront of national policies globally. With the growth of population in Vietnam growing speedily, there are many challenges. Although the average age in Vietnam is higher than other countries of similar income levels but the quality of the population is below average. Vietnam is ranked 105 of 117 in terms of the Human Development Index (HDI).[1,2] While the average life expectancy was relatively high at 72.8 years in 2009, but the average number of healthy life years of the Vietnam was low at 58.2 years.[3]

Within the past few decades, an increase in the number of population has posed a challenges worldwide, especially elderly increasing. In the middle of 20th century, only 4 percent of the population in developing countries was 65 years old and above.[4] The proportion of elderly people in Vietnam increased rapidly. The percentage of citizens aged 60 and above increased from 6.7 percent in 1979 to 9.2 percent in 2009. The majority of people in Vietnam lives in rural areas-72.9 percent - with inconvenient living conditions.[5] Parallel with the increasing of the number of elderly, the crisis in national economic combine with lacking of standard living conditions, the quality of life of Vietnamese population was affected.

In Vietnam, there has been some research on the quality of life, but most of them focus on the health, disease patterns, and health management only. There is little in-depth research regarding quality of life of the population in Vietnam. The purpose of this study is to determine the status of health-related quality of life outcome of population in Vietnam through evaluation instruments.

METHODS

The systematic searching was conducted on November 15th, 2015, in MEDLINE (using PubMed), Scopus (using www.scopus.com), Google Scholar (using www.scholar.google.com), and Cochrance (using www.cochrance.org) to identify all articles of health-related quality of life outcome published from previous to November, 2015. We aimed to identify all articles using quality of life or health-related quality of life instruments as a questionnaire in their researches to make a comparison these studies together.

The search method consisted of search terms for systematic reviews, search terms for measurement instrument, and a validated methodological search filter for measurement properties.[6] References of included articles were checked again for additional relevant studies in case they are necessary. The boolean word (AND, OR), field specification (Title, Abstract, All fields), checking duplication, comparison between articles and criteria also were used as technique in searching progress. The full syntax was use in this study is: (((((((*Health-related quality of life*) **OR** *HRQOL*) **OR** *HRQoL*) **OR** *HRQL*)) **OR** (((*Quality of Life*) **OR** *QOL*) **OR** *QoL*))) **AND** *Viet*[Title/Abstract]*.

The following inclusion criteria were used in studies on quality of life or health-related quality of life area were conducted in population in Vietnam. These studies were used quality of life or health-related quality of life questionnaire as an instrument in their researches. On the other hand, the exclusion criteria were used:[1] the studies were conducted in Vietnamese population but they do not evaluate the quality of life or health-related quality of life of human;[2] the quality of life or health-related quality of life Vietnamese population living overseas were not excepted;[3] the publications were published on non-English journals also were not included.

The results of the study were compared together, which used the similar instrument to assessment the quality of life or health-related quality of life. We concern about the quality of life of population; what instrument is used; when the study was conducted; and what function the authors were mentioned. The searching progress based on the abstracts and article selection is provided in Figure 1.

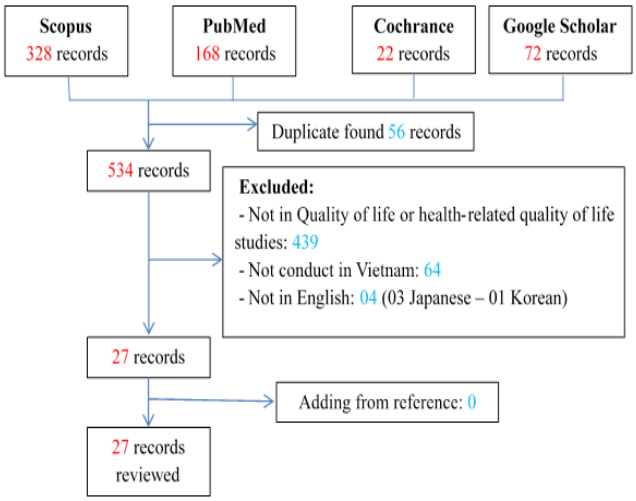

Figure 1: Flow chart of abstract and article selection.

RESULTS

The review was conducted on November 2015. Through the searching syntax as above, we apply it into searching progress in the databases. 168 articles were identified from PubMed database and 328 articles were identified from Scopus by search terms. Besides that, 22 articles in Cochrane and 72 articles in Google Scholar also were found.

To combine these studies together, 56 articles were duplicated. In there, 504 articles were excluded because of criteria selection. They are not in quality of life or health-related quality of life (439 articles); they did not conduct in Vietnam (64 articles) and four articles were written by Japanese and Korean. In conclusion, twenty-seven articles were reviewed based on the review progress.

The first quality of life article were conducted in Vietnam start from 1999.[7] We can see it as a background or evidence-based to develop the method to evaluate quality of life of human living in Vietnam. But for a long time, the quality of life or health-related quality of life is not concerned in Vietnam, so no article about quality of life is conducted as we can see in the Table 1. From 2005, this topic was concerned again with three articles.[8-10] And the studies related with this topic were being conducted continuously. 2012 is the year when most of articles were conducted (ten articles).[11-18]

Table 1: Summary the articles through year by year

Years	1999	2005	2008	2010	2011	2012	2014	2015
Number of publications	1	3	1	3	2	10	5	2
Participants	Under 200			200-400			Over 1000	
Number of publications	3			9			15	
Target samples	HIV patients			Elderly			Others	
Number of publications	8			10			9	

The number of participant also is calculated in this review in. Over a half of articles were conducted with the subjects more than 1000 people, nine articles were conduct with around from 200 to 400 participants. For other articles, the number of participants less than 200 people. On the other hand, the target subjects of the studies is limited in two main group as HIV patients and elderly. For the other subject, it only focuses on minority subject in the whole population.

Among these articles, many instruments were used to evaluate the quality of life or health-related quality of life of population living in Vietnam. All instruments are listed in Table 2. WHOQOL questionnaire and EQ-5D are instruments were used to much, 13 times[7,8,10-14,16,18-20] and six time,[17,21-25] respectively. Besides that, some other instruments also are used, such as: SF questionnaire,[26,27] Vision-related Quality of life-VRQOL questionnaire,[27-29] Adolescent Duke Health Profile-ADHP questionnaire.[8,21]

Table 2: Summary the instruments are used in articles

Instrument	Number of publications	Questionnaire
EQ-5D	6	1 EQ-5D-5L
		4 EQ-5D-3L
		1 EQ-6D-3L
WHOQOL	13	4 WHOQOL-SAGE
		9 WHOQOL-BREF
SF	2	1 SF-12
		1 SF-36
VRQOL	3	Vision-related Quality of life (VRQOL)
Others	3	2 Adolescent Duke Health Profile (ADHP)
		1 Qualitative research

In this review, the studies which used EQ-5D questionnaire as an instrument in their researches were selected. This instrument is selected because it can convert into the utility index–one of key factor to calculate the quality of life index, also in calculating the cost of utility. The results of these articles using this instrument are summarized in the Table 3.

Among six articles, only two articles mention in quality of life index. In these papers, one paper mentions the quality of life of elderly living in rural area in Northern Vietnam with 0.876 (rank from 0 – 1.000).[24] The other one evaluate the quality of life of HIV patient with 0.65.[17] Other articles are use it as an application into costing studies.

DISCUSSION

Through this review, the quality of life or health-related quality of life studies of population in Vietnam were conducted for a long time, and almost in last five years. The quality of life problem is more concern than before when the economic conditions in each family also better than before. Besides that, when the researches are conducted for long time, it is an advantage condition to compare and evaluation the change and the trend in the quality of life or health-related quality of life of Vietnamese population.

Because of orientation establish utility score, we concern about the status of using EQ-5D as an instruments to transfer into utility. Four in five researches use old version of EQ-5D with three levels. Hoi Le V. *et al*[24] indicated this version has limitation on described more specific than new version with five levels. Besides that, they had a comparison between EQ-5D and Visual Analogue Scale (VAS),[17] between EQ-5D and Duke Health Profile (DHP) questionnaire.[21] In these articles, they showed the appropriate of using EQ-5D questionnaire than using other instruments to evaluation quality of life or health-related quality of life in Vietnamese context.

Table 3: Summary the results of articles using EQ-5D questionnaire

No.	Author	Year publish	Year conduct	Instrument	Study design	Province	Number of sample	Age of sample	Result	Conclusion
1	Hoang HT, Pham TL, Vo TT, Nguyen PK, Doran CM, Hill PS.	2008	2005	EQ-6D-3L	Survey-based outcome	Viet Duc Hospital/ Ha Noi	61	N/A	Thirty-five patients and their families were interviewed. On average, patients with severe, moderate and minor traumatic brain injury (TBI) incurred direct costs at USD 2,365, USD 1,390 and USD 849, with time lost for normal activities averaging 54 weeks, 26 weeks and 17 weeks and years lived with disability (YLD) of 0.46, 0.25 and 0.15 year, respectively	All three component costs of TBI were high; the direct cost accounted for the largest proportion, with costs rising with the severity of TBI
2	Hoi le V, Chuc NT, Lindholm L.	2010	2007	EQ-5D-3L	Survey-based outcome	Ba Vi/ Ha Noi	2873	N/A	The EQ-5D index at old age was found to be 0.876 (95%CI: 0.870-0.882). Ageing has a primary influence on the deterioration of HRQoL at older ages, mainly due to reduction in physical rather than mental functions. Educational disparity in HRQoL is low, and exists mostly between basic and higher levels of education. Being a household head and working at old age are advantageous for attaining better quality of life in physical rather than psychological terms. Economic conditions affect HRQoL through sensory rather than physical utilities. Long-term living conditions more likely affect HRQoL than short-term economic conditions.	
3	Tran BX, Ohinmaa A, Nguyen LT, Nguyen TA, Nguyen TH	2011	2008	EQ-5D-3L	Cross-sectional	Ha Noi, HCM, Quang Ninh, Lang Son, Cao Bang, An Giang	820	32.5	A total of 820 HIV-positive and HIV negative adults (mean age: 32.5; 38.7% female) were interviewed. Among 400 HIV-positive people, 52.3% had a history of injecting drugs, and 56.3% were at AIDS stage and receiving antiretroviral treatment (ART). The EQ-5D index and visual analog scale (VAS) score in less advanced HIV people (0.90, 69.3) and AIDS patients (0.88, 65.2) were significantly lower than those of the general population (0.96, 81.6) ($p<0.001$). The frequency of reported problems across EQ-5D dimensions in the HIV population (2.4-30.9%) was significantly higher than in the general population (0.7-12.1%)	Injecting drug users taking ART perceived lower HRQL score than non-injecting drug users. Joblessness and inaccessibility to health services were associated with lower HRQL

4	Tran BX, Ohinmaa A, Nguyen LT	2012	2012	EQ-5D-5L	Cross-sectional	Ha Noi, Hai Phong, HCM	1016	35.4	The mean EQ-5D-5L single index and VAS were 0.65 (95% Confidence Interval (CI) = 0.63; 0.67) and 70.3 (95% CI = 69.2; 71.5). Cronbach's alpha of five dimensions was 0.85. EQ 5D-5L has a good convergent validity with VAS (0.73). It discriminated patients at different HIV/AIDS stages, duration of ART, and CD4 cell count. Predictors of poorer HRQOL included being female, lower education level, unemployment, alcohol and drug use, CD4<200 cells/mL, and advanced HIV/AIDS stages.	The EQ-5D-5L has good measurement properties in HIV/AIDS patients and holds potentials for monitoring ART outcomes
5	Riewpaiboon A, Van Minh H, Huong NT, Dung P, Wright EP	2014	2010	EQ-5D-3L	Survey-based outcome	Quang Tri	210	38	The health-related quality of life measured in terms of the health utility score was on average 0.44 and 0.39 in summer and winter respectively. The total cost of illness per year per case was 971USD (83% of gross domestic product per capita)	Improving services to decrease economic burden
6	Tran PL, Leigh Blizzard C, Srikanth V, Hanh VT, Lien NT, Thang NH, *et al.*	2015	2012	EQ-5D-3L	Cohort study	HCM	108	Male: 59.4 Female: 62.4	The ICCs ranged from 0.60 to 0.86 (patient test–retest) and from 0.55 to 0.98 (patient–proxy agreement). The ICCs were greatest for physical functioning components (patient test retest 0.63–0.86, patient–proxy 0.69 0.98). The correlations between the DHP dimensions and EQ-5D were stronger when they measured similar constructs (r = 0.53–0.66) and were lower for less related constructs (r = 0.11–0.43)	The DHP has moderate reliability and validity for use with stroke-patients in Vietnam even when information is obtained from respondents

On the other hand, we also meet some limitations when conducting the research. There are many instruments are used to evaluate the quality of life of Vietnamese population and we do not have any guideline to convert or equivalent these score together. So, we cannot compare these quality of life index together. Although the quality of life indexes are high but they are not comprehensive reflection the quality of life of whole population; the target samples only focus in some specific group as the elderly or HIV patients.

CONCLUSION

This review provides the overview about the status of research in quality of life or health-related quality of life area in Vietnamese population. The instruments were used in these articles are unification and lack of the research evaluating the quality of life or health-related quality of life in representative whole Vietnamese population. In next research, we can develop and apply more studies using EQ-5D to evaluate the quality of life of whole population to make evidence-based in whole country.

CONFLICT OF INTEREST

All authors of this study participated in this study had done searching filter separately with high agreement. None of author and co-authors on any of the included articles in this systematic review.

ETHICAL APPROVAL

This research is compliant with ethical standards. It does not contain any study with human participants conducted by any of authors.

ABBREVIATION USED

HRQOL, HRQoL, HRQL: Health-related Quality of Life; QOL,QoL: quality of Life; WHOQOL: World Health Organization Quality of Life.

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