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A LITERATURE REVIEW ON EVALUATION OF HEALTH RELATED QUALITY OF LIFE (HRQOL)

Dhanya S. S.*[1], Chintha Chandran[1], Deepthi Mariya Davis[1], Bismi S.[1], Dhanya Dharman[2] and Shaiju S. Dharan[3]

*[1]Pharm. D Intern, Department of Pharmacy Practice, Ezhuthachan College of Pharmaceutical Sciences, Marayamuttom, Neyyattinkkara, Trivandrum.

[2]Assistant Professor, Department of Pharmacy Practice, Ezhuthachan College of Pharmaceutical Sciences, Marayamuttom, Neyyattinkkara, Trivandrum.

[3]Principal, Ezhuthachan College of Pharmaceutical Sciences, Marayamuttom, Neyyattinkkara, Trivandrum.

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***Corresponding Author**
Dhanya S. S.
Pharm. D Intern, Department of Pharmacy Practice, Ezhuthachan College of Pharmaceutical Sciences, Marayamuttom, Neyyattinkkara, Trivandrum.

ABSTRACT

Health Related Quality of Life mainly measures the physical and physiological well being of a patient. Quality of life can be improved by enhancing the standards of medical treatment and that can only be assessed by prescription audit, because it is based on documented evidences to support diagnosis, treatment and justified utilization of hospital facilities. A widely used model in the health services research literature is that of the RAND Medical Outcomes Study(MOS). SF-36 questionnaire aimed at two different constructs to measure health-related quality of life: the Physical Component and the Mental Component. The SF-12 consists of 12 items that are scored in two dimensions: the PCS and MCS scores. The PCS score includes items on general health perception, physical functioning, reduction in physical activities as compared with the subjectively expected, and pain, whereas the MCS score includes questions on general health perception, mood, energy level, and reduction in social activities, work ability or general function explained by emotional factors.

KEYWORDS: Health related quality of life, MOS, SF-36, SF-12.

INTRODUCTION

Health-related quality of life (HRQoL) is a concept encompassing subjective and objective benchmarks that allude to physical and psychosocial well-being.[1] Assessment of HRQoL among the general population has become an international concern due to aging populations, the growing prevalence of chronic conditions and the increasing cost of healthcare.[2] HRQoL is often used to monitor the health status of populations and to inform public health and healthcare policy, therefore it has great benefits for economic evaluation.[3] Due to the importance of HRQOL, the Institute of Medicine incorporated it as one of 20 benchmarks to identify healthy people in 2020.[4] (HRQoL) is a multi-dimensional concept that includes domains related to physical, mental, emotional, and social functioning. It goes beyond direct measures of population health, life expectancy, and causes of death, and focuses on the impact health status has on quality of life. A related concept of HRQoL is well-being, which assesses the positive aspects of a person's life, such as positive emotions and life satisfaction.

Life expectancy and causes of death have traditionally been used as key indicators of population health. While these indicators provide critical information about the health status of populations, they do not offer any information about the quality of the physical, mental, and social domains of life. Increasing life expectancy has also highlighted the need for other measures of health, especially those that capture the quality of the years lived. In 1995, the WHO recognized the importance of evaluating and improving people's quality of life.[5] Clinicians and public health officials have used HRQoL and well-being to measure the effects of chronic illness, treatments, and short- and long-term disabilities. Clinicians and public health officials have used HRQoL and well-being to measure the effects of chronic illness, treatments, and short- and long-term disabilities.

The concept of health-related quality of life (HRQOL) and its determinants have evolved since the 1980s to encompass those aspects of overall quality of life that can be clearly shown to affect health—either physical or mental.[6]

- On the individual level, HRQOL includes physical and mental health perceptions (e.g., energy level, mood) and their correlates—including health risks and conditions, functional status, social support, and socioeconomic status.
- On the community level, HRQOL includes community-level resources, conditions, policies, and practices that influence a population's health perceptions and functional status.

- On the basis of a synthesis of the scientific literature and advice from its public health partners, CDC has defined HRQOL as "an individual's or group's perceived physical and mental health over time.".[6]

HRQOL questions have become an important component of public health surveillance and are generally considered valid indicators of unmet needs and intervention outcomes. Self-assessed health status is also a more powerful predictor of mortality and morbidity than many objective measures of health.[7]

CONCEPTUAL MODELS

The Wilson and Cleary model of health-related quality of life (HRQoL), with suggestions for applying each of the components, and to facilitate the use of HRQoL in nursing and health care. A widely used model in the health services research literature is that of the RAND Medical Outcomes Study(MOS).[8] The MOS defines HRQOL as the extent to which health impacts an individual's ability to function and his/her perceived well-being in physical, mental, and social domains of life. The functioning part of HRQOL includes basic activities such as self-care (eg, bathing, dressing) and paid or unpaid labor (eg, housework, occupational activity). It also includes the extent to which one is able to interact with family and friends (social functioning). Functioning is thought to be a relatively objective measure because self-report information can be compared with other data sources (eg, observations, performance measures).[9]

SF-36 QUESTIONAIRE

SF-36 questionnaire aimed at two different constructs to measure health-related quality of life: the Physical Component and the Mental Component. In the end of the 1990s, after an exhaustive and sophisticated validation process, the SF-36 developers concluded that their questionnaire was adequate for measuring these two constructs of the health-related quality of life.[10] However, they have never proposed but, in fact, they disapproved the use of SF-36 for building a single index of health-related quality of life. Subsequently, analyses of the SF-36 dimensionality conducted in general populations confirmed the extraction of these two main factors (Physical and Mental).[11]

The SF-36 is comprised of 36 items selected from a larger pool of items used in the MOS.[12] The SF-36 assesses 8 health concepts by using multi-item scales (35 items): physical functioning (10 items), role limitations caused by physical health problems (4 items), role

limitations caused by emotional problems (3 items), social functioning (2 items), emotional well-being (5 items), energy and fatigue (4 items), pain (2 items), and general health perceptions (5 items). An additional single item assesses change in perceived health. The items can be combined to yield a single summary index.[13] Physical and mental health summary scores can also be derived. Although the terms quality of life and health-related quality of life are widely used by researchers and health professionals and seem at first glance value neutral, some members of the disability community have raised questions about the fundamental notion of quantifying health states.

The SF-36 measures eight health domains: physical functioning, role limitation by physical health problems, bodily pain, vitality for fatigue, general health perceptions, social functioning, role limitation caused by emotional problems and mental health. The score for each domain ranges from 0 to 100, with higher scores denoting better functioning. The eight domains can be grouped into two main domains: 'physical component summary' (PCS) and 'mental component summary' (MCS).[14] PCS and MCS scores are represented on a standardized scale (as a T score with a mean of 50 and standard deviation (SD) of 10) and have better distributional properties (continuous and symmetrical) than individual SF-36 subscales.

SF-12 QUESTIONAIRE

The SF-12 consists of 12 items that are scored in two dimensions: the PCS and MCS scores. The PCS score includes items on general health perception, physical functioning, reduction in physical activities as compared with the subjectively expected, and pain, whereas the MCS score includes questions on general health perception, mood, energy level, and reduction in social activities, work ability or general function explained by emotional factors.

It is a 12 item short form developed from the original short form 36.This internationally and widely used measure has proved to be a psychometrically robust and practicable instrument for use in outcome evaluation of subjective health functioning across different countries and population.

The SF-12 is a short version of the SF-36 and both have been shown to be valid, reliable, and general measures of HRQL. The estimated Cronbach's α is acceptable. Therefore, it is not likely that the influence of random factors on the variance reflects random variation in filling in questionnaires.[15]

WHO DOMAINS OF QUALITY OF LIFE

There is no single definition of Quality of Life, though there have been many attempts to define it. Similar to their definition of health, the World Health Organisation (WHO) definition is among the more comprehensive definitions of quality of life. The WHO defines quality of life as: '…individuals' perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns. It is a broad ranging concept affected in a complex way by the person's physical health, psychological state, level of independence, social relationships, personal beliefs and their relationship to salient features of their environment'. The WHO suggests that quality of life encompasses several key areas, called 'domains'. These domains have items incorporated within them.

Domain	Items incorporated within the domain
1. Physical health (HRQoL)	Energy and fatigue Pain and discomfort Sleep and rest
2. Psychological health (HRQoL)	Body image and appearance Negative feelings Positive feelings Self-esteem Thinking, learning, memory, and concentration
3. Level of independence (HRQoL)	Mobility Activities of daily living Dependence on medicines and medical aids Work capacity
4. Social relationships (HRQoL)	Personal relationships Social support Sexual activity
5. 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 and leisure Physical environment (pollution, noise, traffic, climate) Transport
6. Personal values and beliefs	Religion Spirituality Personal beliefs

PARTICIPATION MEASURES

HRQOL is also reflected in individuals' assessments of the impact of their health on their social participation within their current environment. Social participation is meant to include education, employment, and civic, social and leisure activities. Based on this approach, the measurement of participation is an important addition to the assessment of quality of life. Participation is measured in the context of a person's current health state and within his or her current social and physical environments.

Underlying this participation measure is the principle that a person with a functional limitation – for example, vision loss, mobility difficulty, or intellectual disability – can live a long and productive life and enjoy a good quality of life.[15] Poorer functional status, or more generally poorer health, should not be equated with poorer quality of life. Quality of life encompasses more than activities of daily living, health status, disease categories, or functional ability "because it directs attention to the more complete social, psychological and spiritual being".[15]

WELL-BEING MEASURES

Health-related quality of life (HRQoL) is a multi-dimensional concept that includes domains related to physical, mental, emotional, and social functioning. It goes beyond direct measures of population health, life expectancy, and causes of death, and focuses on the impact health status has on quality of life. A related concept of HRQoL is well-being, which assesses the positive aspects of a person's life, such as positive emotions and life satisfaction.

Clinicians and public health officials have used HRQoL and well-being to measure the effects of chronic illness, treatments, and short- and long-term disabilities. In addition, institutes in the National Institutes of Health (NIH) – such as the National Cancer Institute (NCI) – and centers within the Centers for Disease Control and Prevention (CDC) – such as the National Center for Chronic Disease Prevention and Health Promotion (NCCDPHP) – have included the evaluation and improvement of HRQoL and well-being as a public health priority.

- Patient Reported Outcomes Measurement Information System (PROMIS) Global Health Measure – assesses global physical, mental, and social HRQoL through questions on self-rated health, physical HRQoL, mental HRQoL, fatigue, pain, emotional distress, social activities, and roles.

- Well-Being Measures – assess the positive evaluations of people's daily lives—when they feel very healthy and satisfied or content with life, the quality of their relationships, their positive emotions, their resilience, and the realization of their potential.
- Participation Measures – reflect individuals' assessments of the impact of their health on their social participation within their current environment. Participation includes education, employment, civic, social, and leisure activities. The principle behind participation measures is that a person with a functional limitation—for example, vision loss, mobility difficulty, or intellectual disability—can live a long and productive life and enjoy a good quality of life.[16]

While many HRQoL indicators measure when people feel ill or sad or when they are limited in their daily tasks, well-being indicators measure when people feel very healthy and satisfied or content with life. Many traditional HRQoL and social indicators fail to capture these types of positive experiences of people's daily lives – the quality of their relationships, their positive emotions, resilience, and realization of their potential.[17]

Positive evaluations of a person's life can include the presence of positive emotions in daily activities, participation in society, satisfying relationships, and overall life satisfaction. These attributes are commonly referred to as well-being and are associated with numerous benefits related to health, work, family, and economics.[18] For example, positive emotions and evaluations of life are associated with decreased risk of disease, illness, and injury; better immune functioning; speedier recovery; and increased longevity.[19] People with high levels of wellbeing are more productive at work and are more likely to contribute to their communities. In addition, more research is supporting the view that positive emotions – which are central components of well-being – are not merely the opposite of negative emotions but rather may be independent dimensions of mental health.[20]

CONCLUSION

The global measure of health-related quality of life, has been increasingly reported in the scientific literature. Many studies using this measure were published in highly prestigious journals. However, its validity as a measure of total health-related quality of life can be questioned. Such total measure may contribute to build a biased body of knowledge.

REFERENCES

1. Centers for Disease Control and Prevention. Health-Related Quality of Life (HRQOL) (2016). Retrieved 26 March 2017. Available at: https://www.cdc.gov/hrqol/.
2. Brazier J, Ratcliffe J, Salomon J, Tsuchiya A. Measuring and valuinghealth benefits for economic evaluation. 2nd ed. Oxford: Oxford University Press, 2016.
3. Burström K, Johannesson M, Diderichsen F. Health-related quality of life by disease and socio-economic group in the general population in Sweden. Health Policy, 2001; 55(1): 51-69.
4. US Department of Health and Human Services. Healthy People 2020. (2017). Retrieved 26 March 2017. Available at: https://www.healthypeople.gov/sites/default/files/HP2020Framework.pdf.
5. World Health Organization. The World Health Organization Quality of Life assessment (WHOQOL): position paper from the World Health Organization. Soc Sci Med, 2005; 41(10): 1403–1409.
6. Centers for Disease Control and Prevention. Measuring healthy days: Population assessment of health-related quality of life. Centers for Disease Control and Prevention, Atlanta, Georgia, 2000.
7. Dominick KL, Ahern FM, Gold CH, Heller DA. Relationship of health-related quality of life to health care utilization and mortality among older adults. Aging Clin Exp Res, 2002; 14(6): 499–508.
8. Stewart AL, Sherbourne CD, Hays RD, et al. Summary and discussion of MOS measures. In: Stewart AL, Ware JE, editors. Measuring functioning and well-being: the Medical Outcomes Study approach. Durham (NC): Duke Univ Pr, 1992; 345-71.
9. Reuben DB, Valle LA, Hays RD, Siu AL. Measuring physical function in community-dwelling older persons: a comparison of self-administered, interviewer-administered, and performancebased measures. J Am Geriatr Soc, 1995; 43: 17-23.
10. Ware JE and Gandek B. Overview of the SF-36 health survey and the International Quality of Life Assessment (IQOLA) project. J Clin Epidemiol, 1998; 51: 903–912.
11. Guermazi M, Allouch C, Yahia M, et al. Translation in Arabic, adaptation and validation of the SF-36 Health Survey for use in Tunisia. Ann Phys Rehabil Med, 2012; 5: 388–403.
12. Ware JE, Kosinski M, Dewey JE. How to score version two of the SF-36® Health Survey. Lincoln (RI): QualityMetric Inc, 2000.
13. Brazier J, Roberts J, Deverill M. The estimation of a preferencebased measure of health from the SF-36. J Health Econ, 2002; 21: 271-92.

14. Department of Statistics. Statistical Report of Population and Housing Census in Jordan. 2016. Retrieved 30 December 2016. Available at: http://census.dos.gov.jo/wp-content/uploads/ sites/2/2016/02/Census_results_2016.pdf.
15. Albrecht GL, Devlieger PJ. The disability paradox: high quality of life against all odds. Soc Sci Med, 1999; 48: 977–988.
16. Ferrans CE. Definitions and conceptual models of quality of life. In: Lipscomb J, Gotay CC, Snyder C, editors. Outcomes assessment in cancer. Cambridge, England: Cambridge University, 2005; 14–30.
17. Krahn GL, Fujiura G, Drum CE, Cardinal BJ, Nosek MA; the RRTC Expert Panel on Health Status Measurement. The dilemma of measuring perceived health status in the context of disability. Disability and Health, 2009; 2: 49–56.
18. Diener E, Lucas R, Schimmack U, Helliwell J. Well-Being for public policy. New York: Oxford University Press, 2009.
19. Pressman SD, Cohen S. Does positive affect influence health? Psychol Bull, 2005; 131: 925– 971.
20. Ryff CD, Love GD, Urry LH, et al. Psychological well-being and ill-being: do they have distinct or mirrored biological correlates, Psychother? Psychosom, 2006; 75: 85–95.