DETERMINANTS OF HEALTH RELATED QUALITY OF LIFE AMONG COMMUNITY-DWELLING ELDERLY IN SINGAPORE

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Introduction

Regional Health Systems are expanding their care from patients to population. In this issue, we introduce the first of a series on **community health**. Subsequent issues will cover:

- Association of socioeconomic status and social support with depressive symptoms among community-dwelling elderly
- Measuring frailty in community-dwelling elderly

HRQoL measurement is an important health outcome in clinical trials, clinical practice improvement strategies, and health services research and evaluation. This issue describes the determinants of HRQoL among community-dwelling elderly in Marine Parade.

WHAT IS HRQoL?

HRQoL is a multi-domain concept which refers to the effect of an illness and its therapy on a patient's physical, psychological and social wellbeing, as perceived by the patient (Figure 1).
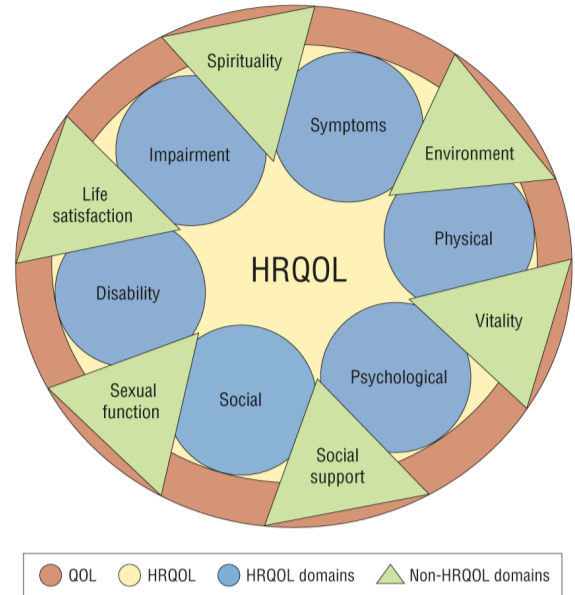

Figure 1 – Framework of quality of life (QoL) and HRQoL interface

Why is it important to measure HRQoL?

HRQoL measures have four functions:

(1) tracking patients' and populations' health and QoL;
(2) evaluating effectiveness of medical interventions as measured by HRQoL changes;
(3) quantifying the patient burden; and
(4) facilitating patient–clinician communication and recognising the importance of patient reported outcomes

Instruments for measuring HRQoL

HRQoL instruments capture quality of life in the context of one's health and illness. There are two types to measure HRQoL: generic and disease-specific.

Generic instruments are useful in comparing across diseases and treatments, but lack precision in a particular condition for which disease-specific instruments are suitable.

HRQoL OF ELDERLY IN MARINE PARADE

A cross-sectional survey was done to assess the health status and utilisation profile of individuals aged ≥60 years using a random sample of 4,200 residents from Marine Parade in 2011.

We studied associations between self-reported chronic conditions, limitations in activities of daily living and HRQoL. QoL was assessed using EQ-5D, which is a standardised instrument developed by the European Society for Quality of Life for use as a measure of health outcome, applicable to a wide range of health conditions and treatments. It consists of a simple descriptive profile and a visual analogue scale (VAS), which provides a single index value for health status, with lower scores indicating poorer HRQoL[2].

Determinants of HRQoL

Table 1 shows the determinants of HRQoL in the survey using EQ-5D index scores derived using UK value sets and EQ-5D Visual Analog Scale (VAS) scores.

Table 1 — Determinants of HRQoL in Marine Parade elderly population

| Univariate analysis	Multivariate analysis
Characteristics that were associated with lower HRQoL were: • Increasing age, females, Indians • Smaller housing type, lower income and education, unemployment • Living with tenant • Self-reported depression and limitations in activities of daily living (ADL) such as feeding, toileting and dressing • Depressive symptoms (Geriatric Depression Scale-15 score ≥5) and cognitive impairment (Abbreviated Mental Test score ≤7)	Independent predictors of HRQoL and predictors with greatest decrements in EQ-5D index and visual analog scores (VAS) were (Figures 2 & 3): • Unemployment • Self-reported depression, arthritis and osteoporosis • ADL limitations for activities such as "unable to shower", and "unable to do housework"
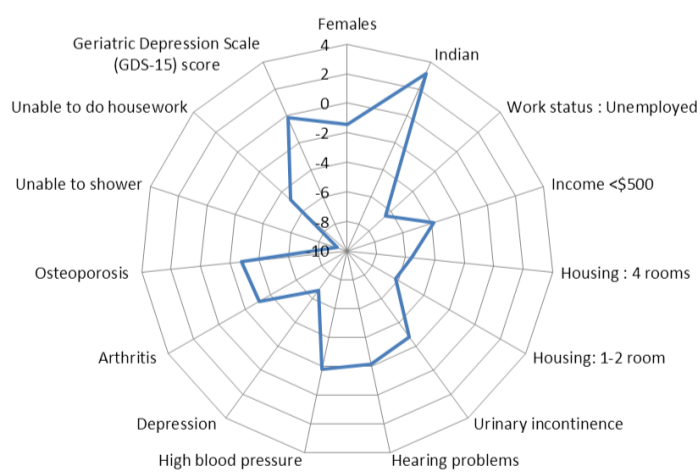
Figure 2 — Significant determinants of HRQoL (EQ-5D VAS)

The variables closer to the center had greater decrement in HRQoL. Reference categories: Males, Chinese, working-full time, ownership status – others, housing status – 5-room, absence of the above-stated chronic conditions, and no limitations in the above ADLs.
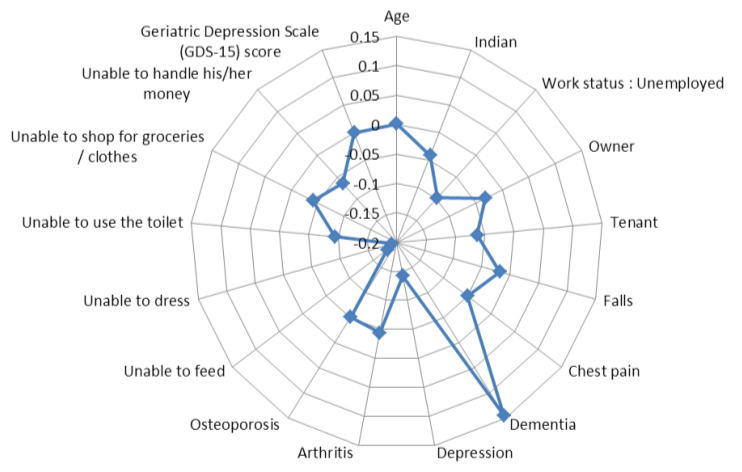

Figure 3 – Significant determinants of HRQoL (EQ-5D index)

The variables closer to the center had greater decrement in HRQoL. Reference categories: Males, Chinese, working-full time, ownership status – others, housing status – 5-room, absence of the above-stated chronic conditions, and no limitations in the above ADLs.

Conclusion

There are several active ageing initiatives to enhance the quality of life among community-dwelling elderly. This study has identified significant predictors of HRQoL, which are potential targets for active ageing interventions. The study also provides community-based EQ-5D index and VAS scores associated with a wide variety of chronic conditions and ADL limitations, which can be used to estimate quality-adjusted life-years in cost-effectiveness analyses.

References

1. Adapted from: Integrating Patient Preferences With Health Utilities: A Variation on Health-Related Quality of Life. Adapted from Arch Dermatol. 2008;144(8):1037-1041. doi:10.1001/archderm.144.8.1037

2. http://www.euroqol.org/about-eq-5d.html

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