

Editorial

Preferences, quality of life and public health

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According to the PubMed data base, the first review which mentioned 'quality of life' (QoL) in its title appeared >30 years ago. Entries of this term currently exceed 100 000. The rise of QoL research has probably been supported by factors, such as increasing prevalence of chronic conditions, increasing life expectancy in older age and a focus on nonsurvival benefits of medical technology. QoL stands for a multidimensional, subjective perception of health by the individual. It is typically measured as a profile, surveying items across dimensions of physical, psychological and social well being, functional health and further aspects such as the existence of pain. QoL captures key components of population health, and QoL profiles are therefore also being studied in public health research.

Yet, there are issues with this approach that need to be considered carefully. When comparing QoL between two populations, it may turn out that for one, QoL is better in some items but worse in others. In order to determine the overall result, aggregation across the various dimensions of health is unavoidable. This aggregation should be well motivated and transparent to the audience. Two ways to aggregate are: (i) researchers define and apply an aggregation rule, e.g. a summing score (ii) Individuals value overall health on the basis of their preferences. Economists are likely to choose for (ii) and to consider researchers' rules a lower ranking expert opinion, because the preferences of the individual affected are an integral part of the economic goal of allocative efficiency. This 'preference-based valuation' also provides a tool for public health researchers to assess overall QoL, but requires that they use instruments which include the valuation of those who are affected.

A number of instruments to describe and to value QoL have been developed.¹ In a nutshell, an individual can value QoL by (i) making choices between present QoL and perfect health, but the latter combined with reduced survival or (ii) grading QoL on a scale between the best and the worst possible health state. There is some methodological debate on which valuation method to use² and on whom to do the valuation.³ One approach for the second issue is to have the general population value hypothetical QoL states. Some reimbursement regulators require this approach for the evaluation of drugs. For public health research, however, it may be more relevant to have those persons do the valuation who actually experience the QoL state.

Among the instruments using preference-based valuation, the EuroQol (EQ-5D) scored highest in the PubMed data base

with 1480 hits by the beginning of 2009. For many indications, the EQ-5D has been psychometrically tested and found to be useful. Most of the applied EQ-5D studies evaluate medical technologies. These cost-utility studies multiply preference-based valuations by the duration of the respective QoL state and thus calculate their endpoint of quality-adjusted life years. The most prominent example of preference-based QoL instruments, the EQ-5D, also offers a promising approach to the measurement of population health.

In spite of these developments, rather few studies have used preference-based QoL in the analysis of population health and related public health issues. In order to increase the scope for application of these measures in public health research, some further work is necessary. Research needs include methodological topics such as which valuation method is most appropriate from a public health perspective, or which measures are most useful for target populations such as the chronically ill.⁴ Restrictions have to be considered, as eliciting preferences may be difficult for some population groups such as children or people with dementia.

But many issues in health policy, prevention and health promotion can already better be analyzed when including preference-based aggregation of QoL. Overall QoL can be used to measure the health impact of risk factors and diseases as well as to investigate the socioeconomic, genetic and behavioral determinants of total health. Using the EQ-5D in large US population samples, Nyman *et al.*⁵ derived preference-based valuations for socioeconomic subgroups and for 10 priority health conditions. Results revealed that overall QoL was lower for women than for men, increased with younger age, higher income and better education and declined for the 10 health conditions. This type of analysis may identify target groups for health policy. In the evaluation of prevention strategies, preference-based valuations of QoL may be used to capture the full health effect which would be difficult to assess by profiles. New research questions may emerge when preference-based QoL indicators are included in large population cohorts which analyze genetic and other health determinants,⁶ or in the analysis of the genetic predisposition of well-being.⁷ Public health provides plenty of opportunities for the preference-based approach to QoL.

References

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