

Estimating Willingness to Pay for a Quality-Adjusted Life Year in General public of Kerman

Introduction: Today, sustainability of health systems is a significant challenge, given the growing demands for healthcare, constraints on financial resources and expensive and innovative technologies. Countries with universal health coverage systems need to allocate their available resources based on evaluations to ensure rational and equitable decision-making. Economic evaluation analyses, such as Cost-Utility Analysis (CUA), can be instrumental in the efficient allocation of resources. CUA is an economic evaluation method that expresses outcomes in terms of cost per Quality-Adjusted Life Year (QALY). For CUAs to become practical tools for systematic, transparent and coherent decision-making, a threshold is required—a benchmark indicating the maximum monetary amount that a decision-maker is willing to pay to gain one additional QALY. In 2000, the WHO Commission on Macroeconomics and Health recommended using 1 to 3 times the per capita Gross Domestic Product (GDP) as a threshold. However, the revised WHO guidelines suggest that these thresholds are not strict decision rules but rather guidance for policymakers to evaluate value for money. One approach to estimating this threshold is to extract the social Willingness to Pay (WTP) for achieving health benefits through preference data obtained from contingent valuation surveys.

Objectives: The aim of conducting this type of research is to contribute to the development of higher-quality economic evaluation studies and support policymakers in selecting more cost-effective interventions.

Method: This research is a cross-sectional survey aimed at estimating the public's WTP for a QALY using the Contingent Valuation Method (CVM) with both open-ended and closed-ended formats in the context of pre-designed hypothetical scenarios. These scenarios are constructed using the EQ-5D-3L questionnaire and are based on the Iranian Value Set. The present study intends to estimate the WTP for a QALY, evaluate the influence of socio-economic and demographic characteristics on individuals' WTP for a QALY, and investigate the motivations behind the monetary valuation of a QALY. A sample of 471 individuals from general public of Kerman in 2024 will be examined. The average WTP per QALY will be calculated using the open-ended approach, and regression analyses will be conducted to identify significant determinants. In the Double-Bounded Dichotomous Choice technique, after estimating the mean WTP, probit regression models will be employed to assess the factors influencing individuals' WTP.

Results: In this study, 37 health states were identified according to the EQ-5D-3L interview protocol, and the health status of individuals was also reported using the VAS tool. The willingness to pay (WTP) for a QALY gain, obtained using a disaggregated method for each scenario through the open-ended approach, was estimated to range from 64.1 to 205 million Tomans (0.48–1.54 times the per capita GDP) and 284 million Tomans (equivalent to 2.13 times the per capita GDP) for end-of-life scenarios. Ultimately, the WTP for one year of quality-adjusted life, using the open-ended method, was reported

at a median of 266.47 million Tomans, equivalent to 1.99 times the per capita GDP. Using the closed-ended approach, the WTP for a QALY gain was estimated at 110.7–411.3 million Tomans (0.83–3.09 times the per capita GDP) for mild to severe health states and 534.6 million Tomans (4.01 times the per capita GDP) for end-of-life scenarios. On average, the WTP for one year of quality-adjusted life using the closed-ended method was reported at 516.05 million Tomans, equivalent to 3.87 times the per capita GDP. Factors influencing WTP for a QALY, including demographic and socio-economic parameters, were examined in both methods. Similarly, in both methods, factors such as health status, living region, and economic status were found to have significant associations with the amount of willingness to pay.

Keywords: Willingness to Pay, Quality-Adjusted Life Year, Contingent Valuation Method.



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