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Self-Reported Population Health: An International Perspective based on EQ-5D



 Springer Open

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The EuroQol Group

- The EuroQol Group is a network of international multidisciplinary researchers devoted to the measurement of health status. Established in 1987, the EuroQol Group originally consisted of researchers from Europe, but nowadays includes members from North and South America, Asia, Africa, Australia, and New Zealand. The Group is responsible for the development of EQ-5D, a preference-based measure of health status that is now widely used in clinical trials, observational studies, and other health surveys. The EuroQol Group has been holding annual scientific meetings since its inception in 1987.
- The EuroQol Group can be justifiably proud of its collective scientific achievements over the last 20 years. Research areas include valuation, EQ-5D use in clinical studies and in population surveys, experimentation with the EQ-5D descriptive system, computerized applications, interpretation of EQ-5D ratings, and the role of EQ-5D in measuring social inequalities in self-reported health.
- The EuroQol Group's website (www.euroqol.org) contains detailed information about EQ-5D, guidance for users, a list of available language versions, EQ-5D references, and contact details.
- EQ-5D is a standardized measure of health status developed by the EuroQol Group in order to provide a simple, generic measure of health for clinical and economic appraisal. Applicable to a wide range of health conditions and treatments, it provides a simple descriptive profile and a single index value for health status that can be used in the clinical and economic evaluation of health care as well as in population health surveys.

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Glossary of EQ-5D Terms

EQ-5D-3L	Descriptive system of health-related quality of life states consisting of five dimensions (mobility, self-care, usual activities, pain/discomfort, anxiety/depression). Each dimension has three responses recording three levels of severity (no problems/some or moderate problems/extreme problems) within a particular EQ-5D dimension.
EQ-5D-5L	Descriptive system of health-related quality of life states consisting of five dimensions (mobility, self-care, usual activities, pain/discomfort, anxiety/depression). Each dimension has five responses recording five levels of severity (no problems/slight problems/moderate problems/severe problems/extreme problems) within a particular EQ-5D dimension.
EQ-5D-Y	EQ-5D-Y Youth version. Descriptive system of youth health-related quality of life states consisting of five dimensions (mobility, looking after myself, doing usual activities, having pain or discomfort, feeling worried, sad, or unhappy). Each dimension has three responses recording three levels of severity (no problems/some problems or a bit/a lot (of) problems or very) within a particular EQ-5D dimension.
EQ-5D descriptive system	Standard layout for the above five-dimensional descriptive system for recording an individual's current EQ-5D self-reported health state (often referred to as page 2 of the EQ-5D questionnaire).
EQ-5D Self-reported health state	An EQ-5D health state recorded by an individual on the EQ-5D descriptive system.

EQ VAS	Standard vertical 20-cm visual analogue scale (similar to a thermometer) for recording an individual's rating for their current health-related quality of life state (often referred to as page 3 of the EQ-5D questionnaire).
EQ VAS score	Score recorded by an individual for their current health-related quality of life state on the EQ VAS.
EQ SDQ	Standard set of questions concerning socio-demographic variables for use with the EQ-5D valuation questionnaire and a modified version for use with the EQ-5D questionnaire. These questions are optional for users.
EQ-5D self-report questionnaire	Questionnaire, of standard layout, consisting of the EQ-5D descriptive system, the EQ VAS, and (if required) the modified version of the EQ SDQ.
EQ-5D valuation questionnaire	Questionnaire, of standard layout, consisting of the EQ-5D questionnaire (including full EQ SDQ) in addition to the EQ-5D VAS, and a standard set of instructions.
EQ-5D index value	Index value attached to an EQ-5D state according to a particular set of weights or value set.
EQ-5D value set	A scoring algorithm that can be used to attach a single index value to each EQ-5D state using a scale anchored at 1 = full health and 0 = dead. Value sets are derived from EQ-5D valuation surveys normally conducted on a representative sample of the general population of specific countries or regions, typically using the EQ-5D VAS rating scale or the time trade-off techniques.

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Chapter 1

Introduction

Juan Cabasés and Rosalind Rabin

1.1 Purpose of This Book

During the 26 years since EQ-5D was first developed, a substantial amount of research has been carried out worldwide using the instrument. Among these studies were surveys conducted in various countries that measured the health-related quality of life of the general population. These studies have been informative in providing new data on population health characteristics, complementing the traditionally collected morbidity and mortality data.

The EuroQol Group is frequently asked to provide EQ-5D population reference data (sometimes called population norm data or simply population norms) for a specific country or international region. Such data can be used to compare profiles for patients with specific conditions with data for the average person in the general population in a similar age and/or gender group. Also the burden of disease in question can be compared to the general population's health.

In response to the increasing need for EQ-5D population reference data, the EuroQol Group established the Self-Reported Health Task Force whose objectives were as follows:

- Updating the international EQ-5D general population database archive.
- Providing easy-to-use tables with population norm data for individual countries.
- Illustrating the potential use of EQ-5D data in population health studies.
- Providing a recommended format to present and analyse EQ-5D data collected from future surveys.

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A first booklet summarised this work and presented population norms from population surveys conducted in 15 countries (Szende and Willimas 2004). The current book presents the population norms for 24 countries and some of their regions as well as results of some additional analyses of population health based on EQ-5D, including EQ-5D index norms.

The target audiences for this book are researchers using EQ-5D to collect data from patients or members of the general population and policy-makers using the collected information in health care decision-making. Readers wishing to learn more are encouraged to contact the EuroQol Group Executive Office (userinformationservice@euroqol.org).

1.2 EQ-5D

EQ-5D is a standardized health-related quality of life questionnaire developed by the EuroQol Group in order to provide a simple, generic measure of health for clinical and economic appraisal (EuroQol Group 1990). Applicable to a wide range of health conditions and treatments, it provides a simple descriptive profile, a self-report visual analogue scale and a single index value for health status that can be used in the clinical and economic evaluation of health care as well as in population health surveys (Fig. 1.1).

EQ-5D is designed for self-completion by respondents and is suited for use in postal surveys, web-based applications, and in face-to-face interviews. It is cognitively undemanding, taking only a few minutes to complete. The instructions to respondents are included in the questionnaire.

The EQ-5D consists of 2 pages – the EQ-5D descriptive system (page 2) and the EQ VAS (page 3). The EQ-5D descriptive system comprises five dimensions: mobility, self-care, usual activities, pain/discomfort and anxiety/depression. The EQ-5D is available in three level and five level response options, EQ-5D-3L and EQ-5D-5L, respectively, and a youth version, EQ-5D-Y.

The EQ-5D-3L (EQ-5D 3 level) was introduced in 1990 and is available in more than 160 translated versions. Although the EQ-5D-3L was initially designed for self-completion in paper-and-pencil format, EQ-5D-3L data are currently also collected electronically by web or tablet versions, or by following a telephone interviewer script. Each dimension has three levels: no problems, some problems, severe problems/unable to. The respondent is asked to indicate his/her health state by ticking (or placing a cross) in the box against the most appropriate statement in each of the five dimensions. This decision results in a 1-digit number expressing the level selected for that dimension. The digits for the five dimensions can be combined in a 5-digit number ('profile') describing the respondent's health state. It should be noted that the numerals 1–3 have no arithmetic properties and should not be used as a cardinal score.

The EQ VAS records the respondent's self-rated health on a vertical, visual analogue scale where the endpoints are labelled 'Best imaginable health state' and

By placing a tick in one box in each group below, please indicate which statements best describe your own health state today.

Mobility

- I have no problems in walking about
- I have some problems in walking about
- I am confined to bed

Self-Care

- I have no problems with self-care
- I have some problems washing or dressing myself
- I am unable to wash or dress myself

Usual Activities (*e.g. work, study, housework, family or leisure activities*)

- I have no problems with performing my usual activities
- I have some problems with performing my usual activities
- I am unable to perform my usual activities

Pain/Discomfort

- I have no pain or discomfort
- I have moderate pain or discomfort
- I have extreme pain or discomfort

Anxiety/Depression

- I am not anxious or depressed
- I am moderately anxious or depressed
- I am extremely anxious or depressed

Fig. 1.1 EQ-5D-3L

To help people say how good or bad a health state is, we have drawn a scale (rather like a thermometer) on which the best state you can imagine is marked 100 and the worst state you can imagine is marked 0.

We would like you to indicate on this scale how good or bad your own health is today, in your opinion. Please do this by drawing a line from the box below to whichever point on the scale indicates how good or bad your health state is today.

**Your own
health state**

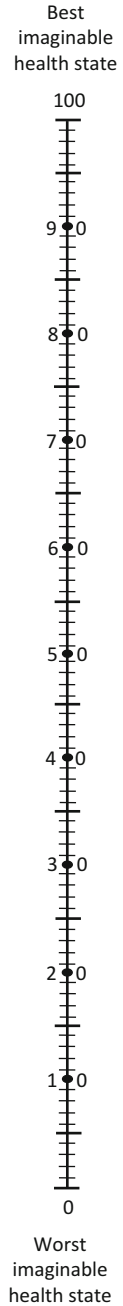


Fig. 1.1 (continued)

‘Worst imaginable health state’. This information can be used as a quantitative measure of health outcome as judged by the individual respondents.

The responses to the EQ-5D dimensions can be used to obtain a single index value (EQ-5D index) for all health states described by the 5-digit number. Given the five dimension and three-level response option format of the EQ-5D-3L questionnaire, there are 243 possible health states plus dead and unconscious. An index value is attached to each EQ-5D state according to a particular set of weights or value sets that measure health states on a scale anchored at 1 = full health and 0 = dead. Value sets (previously also referred to as “tariffs”) were based on representative samples of the general population (as opposed to patients) of a particular country or regions, and used a technique for valuing health states with the EQ-5D VAS rating scale or the Time Trade-Off technique. A distinction should be made between the EQ-VAS self-report question for measuring health outcome and the EQ-5D valuation questionnaire that is designed to collect valuations for health states defined by the EQ-5D descriptive system using the EQ-5D VAS rating scale.

The EQ-5D index values can be used in the estimations of Quality Adjusted Life Years (QALYs) as standard QALY calculations require valuations for all relevant health states on a scale anchored at 1 = full health and 0 = dead. While the EQ-5D index values (and QALYs based on it) are often used in economic evaluation to inform priority setting in health care, the EQ-5D index values are also useful as single index measures in clinical studies as well as in population health surveys.

After extensive research and preparation, the EuroQol Group launched the EQ-5D-5L self-complete version in 2009, with the aim of further improving the sensitivity and discriminatory power of the existing EQ-5D-3L version. The EQ-5D-5L (EQ-5D 5 level) is available in more than 100 translated versions. The EQ-5D-5L still consists of two pages – the EQ-5D-5L descriptive system (page 2) and the EQ visual Analogue scale (EQ VAS) (page 3). The descriptive system comprises the same five dimensions as the EQ-5D-3L. However, each dimension now has five levels: no problems, slight problems, moderate problems, severe problems, and extreme problems/unable.

The EQ-5D-Y (EQ-5D Youth version) is an EQ-5D-3L self complete version for children and adolescents aged 7–12. It is available in more than 25 languages.

All analyses and results in this book, however, are based on adult EQ-5D-3L and EQ VAS data.

1.3 The Structure of the Book

This book presents results from four main analyses of the international EQ-5D database.

Chapter 2 presents the data sources and methods of the book. General population surveys are accumulated from 24 countries (Table 2.1). Descriptive statistics are used to provide EQ-5D population norms by age and gender categories for EQ

VAS, EQ-5D index values, and for the five dimensions. Correlations between country-specific EQ-5D data (EQ VAS and 5 dimensions) and country-specific economic and health system macro indicators are calculated in the cross-country analysis. Odds ratios and the health concentration index methodology are used in the socio-demographic analysis of EQ-5D data.

Chapter 3 presents the population norm data using EQ-5D for each country. EQ-5D norms are reported for EQ VAS and EQ-5D index values, and for self-reported problems on each of the five dimensions of the EQ-5D descriptive system, all classified by age and gender. These EQ-5D norms can be used as reference data to compare patients with specific conditions and to assess the burden of the disease in question.

Chapter 4 demonstrates that cross-country differences exist in EQ-5D outcomes after the population data is standardized for demographic differences. These cross-country differences in the general level of health are explained by looking at macro data on the economic and health system characteristics of each country. Results show that it is the prior living standards of a country that mostly explain cross-country differences in self-reported health.

Chapter 5 specifically addresses the distribution of health within the population and the degree to which age, gender, education level and country are responsible for inequalities in self-reported health. Usual activities and pain/discomfort were the highest contributors to overall inequalities in self-assessed health in most countries. Education had a consistent role in explaining a lower level of self-reported health. The level of inequalities in self-assessed health and the health inequality profile by EQ-5D dimension differed substantially across countries, deserving the attention of policy makers within each country.

Future population surveys using EQ-5D-3L or EQ-5D-5L may be integrated into the EuroQol archive of population survey datasets as they become available. Researchers planning to conduct new population surveys using EQ-5D should contact the EuroQol Group Executive Office (userinformationservice@euroqol.org).

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Chapter 2

Data and Methods

Bas Janssen, Agota Szende, and Juan Manuel Ramos-Goñi

2.1 International EQ-5D Archive of Population Surveys

The international EQ-5D database archive consists of 27 EQ-5D population surveys collected in 24 countries. Countries with 1 or more population surveys include: Argentina, Armenia, Belgium, Canada, China, Denmark, England, Finland, France, Germany, Greece, Hungary, Italy, Japan, Korea, the Netherlands, New Zealand, Slovenia, Spain, Sweden, Thailand, United Kingdom, United States, and Zimbabwe. The datasets are structured in a standardized format to facilitate comparative research, although each survey also has its own characteristics and variables specific to the individual research context in which they were conducted. In addition, three datasets from Argentina, China, and Sweden (Stockholm area) were analyzed locally and results were added to the book, as the dataset transfer to the central archive was not possible from these countries. The datasets captured by this book currently include observations on 216,703 individuals. For a more detailed account of the data, see Table 2.1.

All of the surveys used a standardized version of EQ-5D-3L. The Dutch, Swedish and Finnish versions were translated in 1987 according to a ‘simultaneous’ process while the remaining versions were translated according to the EuroQol Group’s translation protocol – based on international guidelines. However, some differences between sampling and data collection methods should be noted.

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Table 2.1 National and Regional EQ-5D Population Surveys

	Source	Sample size	Data collection	Survey method
National				
Argentina	Ministry of Health of Argentina 2005	41,392	2005	Face-to-face interviews on the 2005 Risk Factors Survey on a random selection of households representative also at regional level
Belgium	ESEMED, König et al. 2009	2,411	2001–2003	Personal computer-based home interviews on a national representative sample of the noninstitutionalized general adult population as part of the European Study of the Epidemiology of Mental Disorders (ESEMED)
China	Household Health Survey 2010; Sun et al. 2011	8,031	2010	Face-to-face interviews on the representative 2010 Household Health Survey (HHS)
Denmark	Sorensen et al. 2009	16,861	2000–2001	Face-to-face interviews on three representative national surveys, including a national health interview survey undertaken by the National Institute of Public Health (SUSY-2000), a health survey undertaken in Funen County (Funen data set) and a national health survey undertaken by the University of Southern Denmark (SDU data set) with a total of 22,486 individuals
England	Health Survey for England 2010	14,763	2008	Computer assisted interviews on a randomly selected sample of households in England
Finland	Saarni et al. 2006	8,028	2000	Face-to-face interviews on the Health 2000 survey sample, which is a representative survey of the Finnish population aged 30 and over
France	ESEMED, König et al. 2009	2,892	2001–2003	Personal computer-based home interviews on a national representative sample of the noninstitutionalized general adult population as part of the European Study of the Epidemiology of Mental Disorders (ESEMED)
Germany	ESEMED, König et al. 2009	3,552	2001–2003	Personal computer-based home interviews on a national representative sample of the noninstitutionalized general adult population as part of the European Study of the Epidemiology of Mental Disorders (ESEMED)
Greece	Yfantopoulos 1999	464	1998	Face-to-face interviews on a sample of 500 individuals selected from the general population

Hungary	Szende and Nemeth 2003	5,503	2000	Self-administered questionnaire during a personal interview on a random sample of 7000 people from the electoral registry
Italy	ESEMED, König et al. 2009	4,709	2001–2003	Personal computer-based home interviews on a national representative sample of the noninstitutionalized general adult population as part of the European Study of the Epidemiology of Mental Disorders (ESEMED)
Korea	Lee et al. 2009	1,307	2007	Face-to-face interviews on a random sample of the South Korean residential registry
Netherlands	ESEMED, König et al. 2009	2,367	2001–2003	Personal computer-based home interviews on a national representative sample of the noninstitutionalized general adult population as part of the European Study of the Epidemiology of Mental Disorders (ESEMED)
New Zealand	Devlin et al. 2000	1,327	1999	Postal survey on a random sample of 3000 New Zealanders selected from the electoral roll
Slovenia	Prevolnik Rupel and Rebolj 2001	742	2000	Postal survey on a randomized sample of 3000 people selected from the general population
Spain	ESEMED, König et al. 2009	5,473	2001–2003	Personal computer-based home interviews on a national representative sample of the noninstitutionalized general adult population as part of the European Study of the Epidemiology of Mental Disorders (ESEMED)
Sweden	Björk et al. 1999	534	1994	Postal survey on a randomized sample of 1000 Swedish citizens selected from the general population from an address register
Thailand	Tongsiri et al. 2011	1,409	2007	Face-to-face interviews on a random national sample provided by the national statistical office
United Kingdom	Kind et al. 1998	3,395	1993	Face-to-face interviews on a random sample of 5324 individuals selected from the general population (based on the Postcode Address file) from England, Scotland and Wales
United States	MEPS, Sullivan et al. 2005	38,678	2000–2002	Paper-and-pencil questionnaire among the Medical Expenditure Panel Survey participants , a nationally representative survey of the US civilian noninstitutionalized population. The research pooled 2000, 2001, and 2002 MEPS data on 23,839, 32,122, and 37,418 individuals

(continued)

Table 2.1 (continued)

	Source	Sample size	Data collection	Survey method
Regional				
Armenia (5 regions)	Gharagebakyan 2003	2,217	2002	Face-to-face interviews on a random sample of 1300 households (2337 individuals) selected from the general population of 5 regions of Armenia (Yerevan city, Gegharkounik, Shirak, Lori, and Simnik)
Canada (Alberta)	HQCA 2010	5,010	2010	Computer Assisted Telephone Interviewing with a sample of 5010 adult Albertans
Japan (3 prefectures)	Tsuchiya et al. 2002	620	1998	Face-to-face interviews on a random sample of 972 individuals selected from the general population (over age 20) of 3 Prefectures in Japan – Saitama, Hiroshima and Hokkaido
Spain (Canary Islands)	Canary Health Survey 2009	4,468	2009	Personal computer-based home interviews on a district representative regional Canaries Health Survey to 4600 individuals
Spain (Catalonia)	Catalunya Health Survey 2011	5,603	2011	Personal computer-based home interviews on a district representative regional Catalonia Continuous Health Survey in semester waves of 2500 individuals
Sweden (Stockholm county)	Sun et al. 2012	32,597	2006	Postal survey on a representative sample of the Stockholm County population aged 20–88 years
Zimbabwe (Harare)	Jelsma 2003	2,350	2000	Face-to-face interviews with 2488 residents from Glenview (a high density suburb of Harare). As compared to the 1992 census Harare Profile, males were underrepresented and there were more young and better educated respondents than in the general population

Most importantly, while the majority of surveys were national representative surveys covering the whole of the country, some surveys covered a specific part (such as prefectures, regions or even city areas). Therefore, care should be exercised in generalizing data outside the geographic location captured by the data collection. Results in this book are reported separately for the national and the regional surveys.

Surveys also differed in sample sizes and in the method of data collection. The Argentinean dataset had the largest sample with over 41,000 respondents, while the Greek and the Swedish national surveys had the smallest sample of around 500 respondents. Some of the surveys were postal while others were performed as part of a face-to-face interview or administered by telephone. Since the questions asked in EQ-5D are very simple to answer, there is no reason to believe that there would be a significant impact on results other than differences in response rates.

While only the most recent national surveys were included in this book from each country, the date of data collection varied considerably across countries. Data collection for the majority of surveys took place during or after 2000, however some surveys were older with the United Kingdom and Swedish national datasets being the earliest from 1993 to 1994, respectively. These differences should be considered when interpreting results, given that health-related quality of life in general and specifically EQ-5D ratings and values could have changed over time.

Standardized variables across all datasets included reported problems by the five dimensions, self-reported EQ VAS ratings, and the EQ-5D index values. In addition, all analyses of EQ-5D data presented in this book focused on three main characteristics of the population: age, gender, and education level. Age in most surveys was measured as a continuous variable (life years), while gender was recorded as a categorical variable. Education level in each country was recoded to a three-level scale, distinguishing low (i.e. primary), medium (i.e. secondary), and high (i.e. university degree) education level.

All data analyses were performed using SPSS version 19 and Stata version 12 statistical software packages. All codes were checked and analyses were reproduced by a second analyst. The exact methodologies are described in the remainder of this chapter.

2.2 Methods of Describing EQ-5D Population Norms

The EuroQol Group is frequently asked to provide EQ-5D population reference data (sometimes called normative data) for a specific country or international region. Such data can be used as reference data to compare profiles for patients with specific conditions with data for the average person in the general population in a similar age and/or gender group. This comparison helps to identify the burden of disease in a particular patient population.

Descriptive statistics are provided for EQ VAS, the five dimensions, and EQ-5D-3L index values for the total population and by gender and the following age groups: 18–24, 25–34, 35–44, 45–54, 55–64, 65–74, 75+ years.

EQ-5D index value calculations are provided using the following value sets (Szendek et al. 2007):

- **European VAS value set for all countries.** Note that the European VAS value set was constructed using data from 11 valuation studies in 6 countries: Finland (1), Germany (3), The Netherlands (1), Spain (3), Sweden (1) and the UK (2). This survey included enough data from different European regions to make the European VAS dataset moderately representative for Europe. (Greiner et al. 2003; Weijnen et al. 2003).
- **Country-specific time trade-off (TTO) value set if available.** Note that the time trade-off (TTO) method has played an important role in generating value sets for the EQ-5D as one of the most widely accepted preference elicitation methods for health states (Torrance 1986) for economic evaluation and the method of choice in the first large-scale EQ-5D valuation study (Dolan 1997). Table 2.2 summarizes those 13 countries that have their own TTO value sets and describes the value sets.
- **Country-specific VAS value set if available.** Note that the Visual Analogue Scale (VAS) has become the other widely used method to elicit preferences for the EQ-5D, including nine countries. Table 2.3 summarizes countries that have their own VAS based value sets and describes the value sets, including the European value set.

This means that for countries with no available value set from their own general population, only the European VAS value set based EQ-5D index values are summarised. However, for countries with available TTO and/or VAS value sets, additional population norms of EQ-5D index values are calculated.

To summarize key results on reported problems, EQ VAS, and EQ-5D index values, countries are tabulated in alphabetic order and are not ranked. Detailed country-by-country results are provided in the appendices. Because the population norms data are presented by age and gender, there is no need for the sample to have the same age distribution as the general population in each country. Therefore the data that are presented in the tables have not been standardized for age or gender. This means that international comparisons across several age groups should be made with caution as the demographic build-up by age and gender varies between countries, and that the samples of the general population used to create the tables do not necessarily follow that same distribution. However, international comparisons of data contained in a single cell (i.e. 1 age and gender group) are valid. The following section describes the methodology used to analyse cross-country differences in EQ-5D population data.

Table 2.2 Coefficients for the estimation of the EQ-5D index values based on TTO valuation studies

Country	Source	Model	MAD	Constant	MO2	MO3	SC2	SC3	UA2	UA3	PD2	PD3	AD2	AD3	N3	Other
Argentina	Augustovski 2009	OLS	0.039		-0.189	-0.272	-0.128	-0.209	-0.111	-0.067	-0.130	-0.209	-0.082	-0.135		O2: 0.003 O3: -0.355 Z2: -0.413 Z3: 0.117 C2 ² : 0.010 C3 ² : -0.005
Denmark	Wittrup-Jensen 2002	RE	0.089	-0.114	-0.053	-0.411	-0.063	-0.192	-0.048	-0.144	-0.062	-0.396	-0.068	-0.367		
France	Chevalier 2011	RE	0.043		-0.155	-0.372	-0.212	-0.326	-0.156	-0.189	-0.112	-0.265	-0.090	-0.204	-0.174	
Germany	Greiner 2005	RE	0.047	-0.001	-0.099	-0.327	-0.087	-0.174			-0.112	-0.315		-0.065	-0.323	
Italy	Scalone 2013	RE	0.030		-0.076	-0.518	-0.100	-0.289	-0.085	-0.198	-0.098	-0.334	-0.095	-0.213		D1: 0.043
Japan	Tsuchiya 2002	OLS	0.015	-0.152	-0.075	-0.418	-0.054	-0.102	-0.044	-0.133	-0.080	-0.194	-0.063	-0.112		
Korea	Lee 2009	OLS	0.029	-0.050	-0.418	-0.046	-0.136	-0.051	-0.208	-0.037	-0.151	-0.043	-0.158		-0.050	
Netherlands	Lamers 2006	RE	0.030	-0.071	-0.036	-0.161	-0.082	-0.152	-0.032	-0.057	-0.086	-0.329	-0.124	-0.325	-0.234	
Spain	Badia 2001	RE	NR	-0.024	-0.106	-0.430	-0.134	-0.309	-0.071	-0.195	-0.089	-0.261	-0.062	-0.144	-0.291	
Thailand	Tongsiri 2011	RE	0.080	-0.202	-0.121	-0.432	-0.121	-0.242	-0.059	-0.118	-0.072	-0.209	-0.032	-0.110	-0.139	
United Kingdom	MVH Group 1995	RE	0.039	-0.081	-0.069	-0.314	-0.104	-0.214	-0.036	-0.094	-0.123	-0.386	-0.071	-0.236	-0.269	
United States	Shaw 2005	RE	0.025		-0.146	-0.558	-0.175	-0.471	-0.140	-0.374	-0.173	-0.537	-0.156	-0.450		D1: 0.140 I2 ² : -0.011 I3: 0.122 I3 ² : 0.015
Zimbabwe	Jelsma 2003	RE	0.049	-0.100	-0.056	-0.204	-0.092	-0.231	-0.043	-0.135	-0.067	-0.302	-0.046	-0.173		

MO2 = 1 if mobility is at level 2; MO3 = 1 if mobility is at level 3. SC2 = 1 if self-care is at level 2; SC3 = 1 if self-care is at level 3. UA2 = 1 if usual activities is at level 2; UA3 = 1 if usual activities is at level 3. PD2 = 1 if pain/discomfort is at level 2; PD3 = 1 if pain/discomfort is at level 3. AD2 = 1 if anxiety/depression is at level 2; AD3 = 1 if anxiety/depression is at level 3. N3 = 1 if any dimension is at level 3. D1 = additional number of dimensions at either level 2 or level 3; I2 = number of dimensions at level 2 beyond the first; I3 = number of dimensions at level 3 beyond the first; I3 = number of dimensions at level 1 and level 2; O3 = 1 if all dimensions at level 1 and level 3; Z2 = 1 if at least one dimension at level 2 and one dimension at level 3; Z3 = number of dimensions at level 2 given at least one dimension at level 3; C2 = number of dimensions at level 2; C3 = number of dimensions at level 3; MAD= mean absolute difference; OLS = ordinary least squares; RE = random

Table 2.3 Coefficients for the estimation of the EQ-5D index values based on VAS valuation studies

Country	Source	Model	MAD	Constant	MO2	MO3	SC2	SC3	UA2	UA3	PD2	PD3	AD2	AD3	N3	Other
Argentina	Augustovski 2009	OLS	0.020	-0.248	-0.247	-0.184	-0.178	-0.209	-0.148	-0.185	-0.157	-0.150	-0.116			O2: -0.028 O3: -0.388 Z2: -0.232 Z3: 0.086 C2 ² : 0.020 C3 ² : 0.008
Belgium	Cleemput 2004	RE	0.036	-0.152	-0.074	-0.148	-0.083	-0.166	-0.031	-0.062	-0.084	-0.168	-0.103	-0.206	-0.256	
Denmark	Wittrup-Jensen 2002	RE	NR	-0.225	-0.126	-0.252	-0.112	-0.224	-0.064	-0.128	-0.078	-0.156	-0.091	-0.182		
Europe ^a	Greiner 2003	RE	0.030	-0.128	-0.066	-0.183	-0.117	-0.156	-0.026	-0.086	-0.093	-0.164	-0.089	-0.129	-0.229	
Finland	Ohinmaa 1995	OLS	NR	-0.158	-0.058	-0.230	-0.098	-0.143	-0.047	-0.131	-0.111	-0.153	-0.160	-0.196		
Germany ^b	Claes 1999	RE	0.036	0.926	0.945	0.393	0.808	0.470	0.880	0.554	0.975	0.467	0.817	0.468		
New Zealand	Devlin 2000	RE	0.041	-0.204	-0.075	-0.150	-0.071	-0.142	-0.014	-0.028	-0.080	-0.160	-0.092	-0.184	-0.217	
Slovenia	Prevolnik Rupel 2000	OLS	NR	-0.128	-0.206	-0.412	-0.093	-0.186	-0.054	-0.108	-0.111	-0.222	-0.093	-0.186		
Spain	Badia 1998	OLS	NR	-0.150	-0.090	-0.179	-0.101	-0.202	-0.055	-0.110	-0.060	-0.119	-0.051	-0.102	-0.212	
United Kingdom	MVH Group 1995	RE	NR	-0.155	-0.071	-0.182	-0.093	-0.145	-0.031	-0.081	-0.084	-0.171	-0.063	-0.124	-0.215	

^a These values have been rescaled with the mean value of dead

^b The German model is a multiplicative model. This implies that when any of the dimensions is at level 1 the appropriate coefficient for that dimension is 1

MO2 = 1 if mobility is at level 2, 0 otherwise; MO3 = 1 if mobility is at level 3, 0 otherwise. SC2 = 1 if self-care is at level 2, 0 otherwise; SC3 = 1 if self-care is at level 3, 0 otherwise. UA2 = 1 if usual activities is at level 2, 0 otherwise; UA3 = 1 if usual activities is at level 3, 0 otherwise. PD2 = 1 if pain/discomfort is at level 2, 0 otherwise; PD3 = 1 if pain/discomfort is at level 3, 0 otherwise. AD2 = 1 if anxiety/depression is at level 2, 0 otherwise; AD3 = 1 if anxiety/depression is at level 3, 0 otherwise. N1 = 1 if any dimension is at either level 2 or level 3, 0 otherwise; N3 = 1 if any dimension is at level 3, 0 otherwise; O2 = 1 if all dimensions at level 1 and level 2, 0 otherwise; O3 = 1 if all dimensions at level 1 and level 3, 0 otherwise; Z2 = 1 if at least one dimension at level 2 and one dimension at level 3, 0 otherwise; Z3 = number of dimensions at level 2 given at least one dimension at level 3; C2 = number of dimensions at level 2; C3 = number of dimensions at level 3. GLIM = generalized linear model; MAD = mean absolute difference; NR = not reported; OLS = ordinary least squares; RE = random effects model

2.3 Methods of Cross-Country Analysis of EQ-5D Data

Cross-country summary data for reported problems by five dimensions and EQ VAS were estimated using a standardized population structure for all countries with national EQ-5D surveys. Countries were tabulated in alphabetic order. Standardization for age was performed to avoid bias due to the fact that some populations have a relatively higher proportion of elderly people. Age standardization of reported problems by dimension and EQ VAS was based on the European population structure using Eurostat data from 2010 (Table 2.4).

To explore reasons for cross-country differences in EQ-5D data, correlations between country-specific EQ-5D data (EQ VAS and five dimensions) and country-specific economic and health system macro indicators were calculated.

Living standards were estimated by means of Gross Domestic Product (GDP) per capita and unemployment rate. Indicators for health care system performance were health expenditure per capita and health expenditure as a % of GDP, number of hospital beds per 1,000 people and number of physicians per 1,000 people. The indicators were selected on the basis of a presumed or possible relationship with self-reported health. Data were obtained from the World Health Organization Statistical Information System and the World Bank. The data were from 2010 or the closest year with available data (Table 2.5). An alternative set of macro data was also used to see how results might change when using macro data from the same year as the EQ-5D data collection, including variables on gross national income on purchasing power parity, unemployment rate, and health expenditure data.

For all correlation analyses, non-parametric Spearman rank correlations were calculated. For this calculation, countries were ranked based on mean self-assessed health results, and their living standards and health care system performance characteristics. A high rank correlation means that the ranking of countries on one variable (e.g. prevalence of self-reported health problems) is similar to the ranking of another variable (e.g. GDP per capita).

Table 2.4 European population age structure

Age group	EU population (%)
18–24	11
25–34	17
35–44	18
45–54	18
55–64	15
65–74	11
75+	10
<i>ALL</i>	<i>100</i>

Source: Eurostat 2010, EU 27

Table 2.5 Country-specific economic and health system macro indicators

	GDP per capita \$ 2010	Unemployment rate % 2010 ^a	Health expenditure (% of GDP) 2010 ^a	Health expenditure per capita \$ 2010 ^a	Physicians per 1,000 people 2004–2009 ^a
Argentina	9,124	8.6	8.1	742	3.2
Belgium	43,006	8.3	10.7	4,618	3.0
China	4,433	4.3	5.1	221	1.4
Denmark	56,486	7.4	11.4	6,422	3.4
France	39,170	9.3	11.9	4,691	3.5
Germany	40,164	7.1	11.6	4,668	3.5
Greece	25,832	12.5	10.2	2,729	6.0
Hungary	12,863	11.2	7.3	942	3.1
Italy	33,787	8.4	9.5	3,248	4.2
Korea	20,540	3.7	6.9	1,439	2.0
Netherlands	46,623	4.5	11.9	5,593	3.9
New Zealand	32,407	6.5	10.1	3,279	2.4
Slovenia	22,898	7.2	9.4	2,154	2.5
Spain	29,956	20.1	9.5	2,883	3.7
Sweden	49,360	8.4	9.6	4,710	3.8
Thailand	4,614	1.2	3.9	179	0.3
United Kingdom	36,256	7.8	9.6	3,503	2.7
United States	46,612	9.6	17.9	8,362	2.4

Source: Macro indicators for each country were obtained from the World Bank (www.worldbank.org) Physician per 1,000 population data were obtained from the World Health Organization Statistical Information System (www.who.int)

^aData availability for last year varies in some countries

2.4 Methods of Sociodemographic Analysis of EQ-5D Data

Two main approaches were used to derive socio-demographic indicators based on EQ-5D, based on odds ratios and concentration indices.

Logistic regression age-adjusted odds ratios for reporting problems on each EQ-5D dimension were calculated by age groups, gender, and education. An odds ratio higher than 1 indicates that the examined group reported more health problems than the reference group. The reference group was males, 18–24 years, with medium/high education.

Secondly, the analysis used the concentration index method, which is a single index measure of relative inequalities (Wagstaff et al. 1991; Kakwani et al. 1997). The overall health concentration index measures the mean difference in health between individuals as a proportion of the average health of the total population. This index can also be interpreted as a measure of how unequal the distribution of health is in the population. Health inequality is measured on a scale between 0 (meaning complete equality in health) and 1 (meaning complete inequality in health). Researchers also showed that the concentration index value also

corresponds to 75 % of the Schutz index, and as such, it can also be interpreted as the proportion of health that should be redistributed from those above the average level to those below the average in order to equalize the distribution of health. (Koolman and Doorslaer 2004).

The overall concentration index can be decomposed to identify the impact of various factors, such as socio-demographic or quality of life characteristics, in order to determine how much each factor contributes to inequalities (Wagstaff and Doorslaer 2004; Clarke et al. 2010). In the current analysis, overall self-reported health was measured by the EQ VAS. Decomposition analysis was performed to determine inequalities by socio-demographic factors and by the EQ-5D dimensions, as well as in a combined model in which both socio-demographic and EQ-5D dimension variables were included.

The health concentration index for overall self-reported health, as measured by the EQ VAS, was computed by the convenient regression model as proposed by Kakwani et al. (1997):

$$\frac{2\sigma_R^2}{EQVAS}EQVAS_i = \alpha_i + \gamma_k R_i + \varepsilon_i$$

where R_i is the relative fractional rank of the i th individual (ranked by the individual's EQ VAS health), and γ_k is the estimated concentration index.

For the purposes of the decomposition analysis, the same estimation is used for all explanatory variables (by replacing EQ VAS with the explanatory variable in the equation and also using this variable for ranking purposes).

The total health concentration index can be written as the weighted sum of the concentration indices of the explanatory variables and the generalized concentration index of ε :

$$\hat{C} = \sum_k \hat{\eta}_k \hat{C}_{xk} + G\hat{C}_\varepsilon$$

where the weights are equal to the elasticities of EQ VAS score with respect to each explanatory variable in the model:

$$\hat{\eta}_k = \hat{\gamma}_k \bar{x}_k / \overline{EQVAS}$$

where \bar{x}_k (the mean of x_k explanatory variables: age, gender, education, EQ-5D problems) is multiplied by the coefficients for each explanatory variable that are taken from the linear regression model to explain EQ VAS:

$$EQ - VAS = \alpha + \sum_k \gamma_k x_{ik} + \varepsilon_i.$$

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Chapter 3

Population Norms for the EQ-5D

Bas Janssen and Agota Szende

3.1 Catalogue of Population Norms

Annexes 1 and 2 capture a full set of EQ-5D population norm tables that were estimated for each country. The tables contain information on the size of the study, EQ VAS ratings and proportion of reported problems on each of the EQ-5D dimensions, as well as EQ-5D index values.

Annex 1 includes surveys that were based on national representative populations. The survey for England is included among the national surveys, as it is expected to be referenced more widely in studies performed in the United Kingdom. Annex 2 includes surveys that were based on general populations but were limited to specific regions of the particular country. There are three examples where both national and regional surveys are available in a single country, including Spain, Sweden, and the United Kingdom. The choice between using the national versus the regional dataset as a reference group may well depend on the objectives and audiences of future studies. It is important to note that in all of these three countries, the regional surveys were conducted more recently. Both the survey for England and the Stockholm county survey capture a large proportion of the population in England and Sweden. The results of the English survey were similar to the UK survey, conducted 17 years previously, however no EQ VAS data were collected in the English survey. The new Stockholm county survey results show consistently worse EQ-5D population norms in all EQ-5D variables and in all age

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groups. The two Spanish regional surveys also generally show worse EQ-5D population norms compared to the earlier national Spanish survey, although this is not consistently seen in all age groups.

All surveys included the EQ VAS ratings, with the exception of the Finnish and English surveys. All surveys included EQ-5D dimensions. The EQ-5D index population norms based on the European value set were calculated for all surveys. Country-specific TTO-based value sets were available for 13 countries to calculate EQ-5D index population norms. Country-specific VAS-based value sets were available for 10 countries to calculate EQ-5D index population norms. Results for sub-groups with less than 15 observations were indicated as not being available. Key results are discussed in the sections below, while all detailed tables are included in the annexes.

The population norm tables in the annexes reflect granular reporting of descriptive statistics in order to provide flexibility for researchers when using the EQ-5D norms for comparative purposes. The population norm tables can be used as reference data to compare profiles for patients with specific conditions with data for the average person in the general population in a similar age and/or gender group.

3.2 EQ VAS Population Norms

For illustration purposes, the mean EQ VAS data from all population surveys of the EuroQol archive were pooled and are presented in Fig. 3.1. As can be seen, the mean EQ VAS ratings decrease with increasing age. Also, men of all age groups reported higher EQ VAS ratings than women.

Table 3.1 shows results for self-rated EQ VAS scores for each country by age group and for the total population. It is important to note that while results in each age group may be compared across countries, the total population scores cannot be compared directly as they reflect the unique age structure within each country.

Figure 3.2 graphically presents self-rated EQ VAS scores by age group for each country. As can be seen, the mean EQ VAS ratings decrease with increasing age, although countries vary according to how younger age groups rate their health and how the slope of people's self-rated health declines over the decades of their life. Korean data show a somewhat outlier pattern in people reporting their health within a narrow EQ VAS range. This was also observed to some extent in the New Zealand data.

For easier interpretation, Figs. 3.3 and 3.4 present self-rated EQ VAS scores separately by age group for two sets of countries. The first graph shows the 'upper values' (mainly viewed from the perspective of older people), and the second the 'lower values'. Accordingly, a difference in the lower end of the Y-axis on the first figure should be noted.

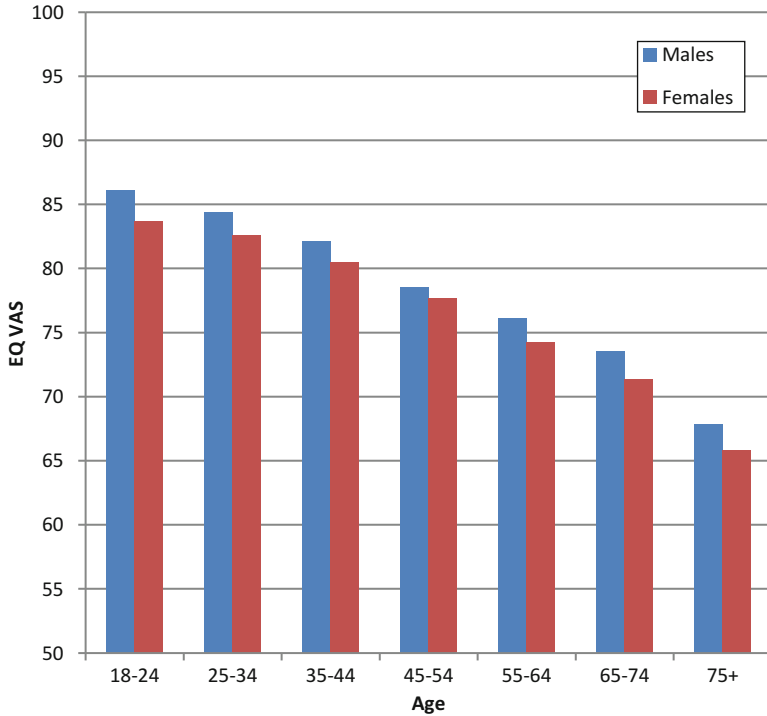


Fig. 3.1 Illustration of mean population EQ VAS ratings

Table 3.1 EQ VAS ratings by age group and total population (not standardized)

	18-24	25-34	35-44	45-54	55-64	65-74	75+	Total
Argentina	82.0	79.4	77.2	74.4	69.5	67.9	62.2	75.3
Belgium	84.0	82.0	80.2	77.2	74.2	71.3	69.4	77.6
China	89.1	85.7	82.7	79.4	76.5	72.2	69.4	80.4
Denmark	86.2	87.9	85.8	83.0	81.6	78.3	76.2	83.7
France	83.9	83.2	78.7	77.9	74.2	68.1	61.5	76.8
Germany	85.3	84.0	82.5	78.5	72.9	68.6	60.5	77.3
Greece	83.5	85.8	84.7	78.0	69.9	67.0	56.0	79.0
Hungary	83.3	81.1	75.3	69.1	63.7	59.0	53.9	71.1
Italy	87.5	83.9	81.4	77.0	74.0	67.8	60.1	77.1
Korea	78.9	80.7	80.6	80.4	76.9	76.5	-	79.5
Netherlands	85.7	84.6	83.7	81.0	80.7	78.0	72.9	82.0
New Zealand	82.4	82.3	82.5	82.2	81.6	79.6	70.8	80.8
Slovenia	85.4	82.6	80.8	75.5	67.9	65.3	55.4	76.4
Spain	82.0	80.1	76.7	73.6	72.0	69.0	62.2	75.0
Sweden	84.3	86.2	86.2	83.7	79.0	81.5	71.8	83.3
Thailand	82.9	80.9	80.1	78.3	79.3	76.1	72.3	79.4
United Kingdom	86.5	86.8	86.6	82.0	81.7	77.3	73.8	82.8
United States	86.2	83.5	81.8	79.2	76.9	75.1	68.5	80.0

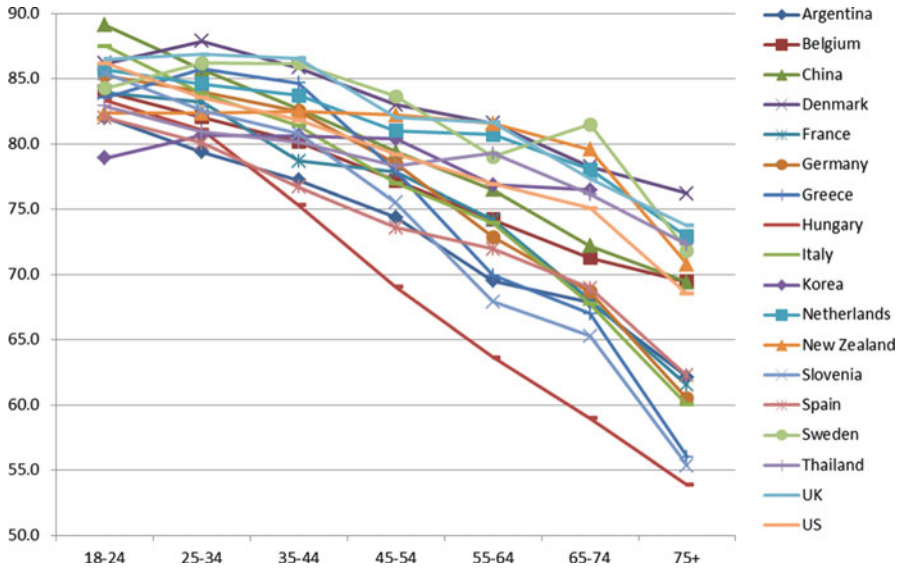


Fig. 3.2 EQ VAS ratings by age group

Table 3.2 shows results for self-rated EQ VAS scores for each regional survey by age group and for the total population. As seen across the national surveys, the mean EQ VAS ratings decrease with increasing age in the regional surveys as well.

3.3 EQ-5D Dimensions

As the data on the 5 EQ-5D dimensions are not continuous but ordinal, the information is presented as the proportions of the population reporting level 1 (no problems), level 2 (some problems) and level 3 (extreme problems) per dimension, by age group and gender. Because the number of people reporting severe problems is usually very small in general population surveys, the sum of the proportions of reported level 2 and level 3 problems is sometimes used. This essentially changes the 3-level EQ-5D dimensions into 2-level dimensions, using categories ‘no problems’ and ‘problems’.

In a pooled dataset of surveys, Fig. 3.5 illustrates the sum of the proportion of reported level 2 and level 3 problems for each of the 5 EQ-5D dimensions for three distinct age groups. As can be seen from the figure, the proportion of problems increased with age on all dimensions. Problems with mobility increased the most with increasing age, whereas problems with anxiety/depression increased the least. For every age group the proportion of problems with pain/discomfort was higher than the proportion of problems on the other dimensions.

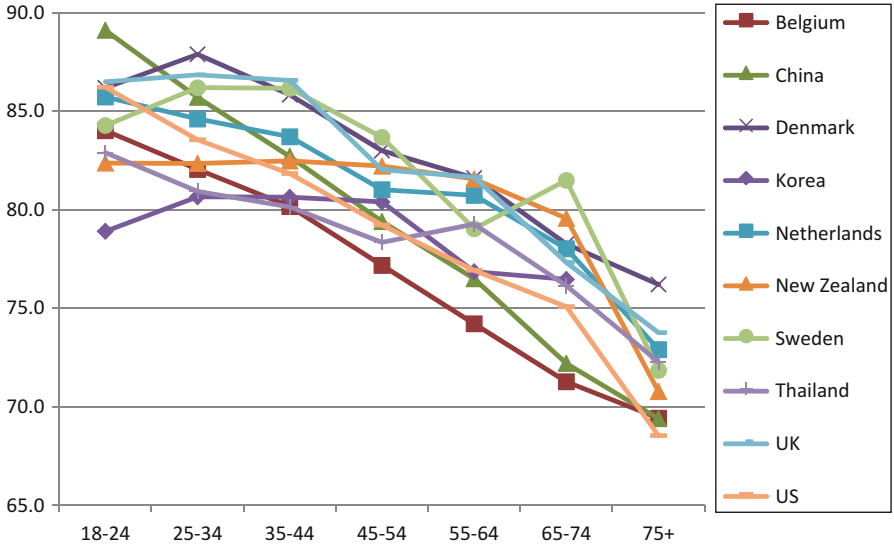


Fig. 3.3 EQ VAS ratings by age group (countries with 'upper values')

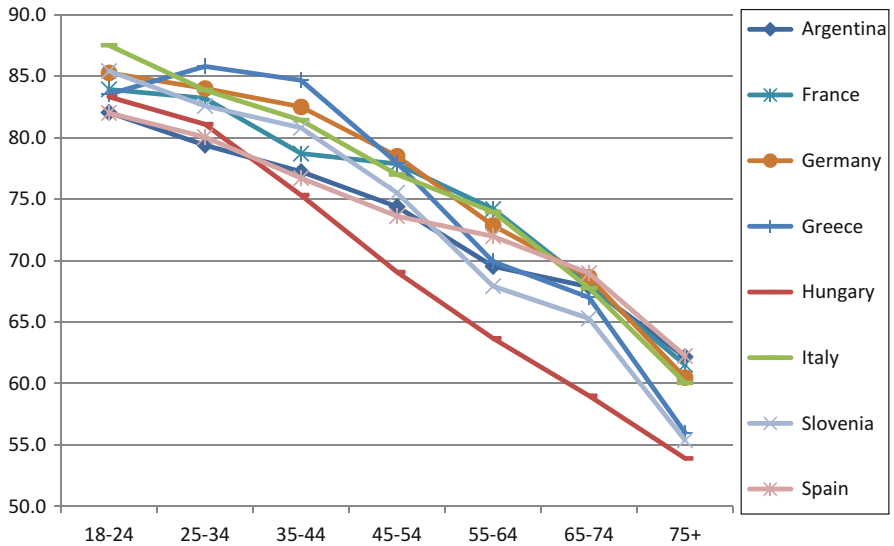


Fig. 3.4 EQ VAS ratings by age group (countries with 'lower values')

Table 3.2 EQ VAS ratings by age group and total population (not standardized) from regional surveys

	18–24	25–34	35–44	45–54	55–64	65–74	75+	Total
Armenia (5 regions)	87.8	78.4	68.0	62.3	55.3	50.1	43.8	65.7
Canada (Alberta)	81.6	80.5	78.7	75.7	77.1	77.1	75.3	78.3
Japan (3 prefectures)	78.9	77.9	79.3	79.8	76.8	76.6	67.7	77.8
Spain – Canary Islands	83.3	79.7	77.4	71.6	66.1	64.4	56.4	71.7
Spain – Catalunya	82.4	79.3	77.5	72.7	67.6	63.6	54.4	72.3
Sweden – Stockholm county	81.7	81.5	80.7	79.2	78.1	75.9	68.5	78.7
Zimbabwe – Harare district	81.8	79.8	76.6	75.1	70.5	61.5	–	79.8

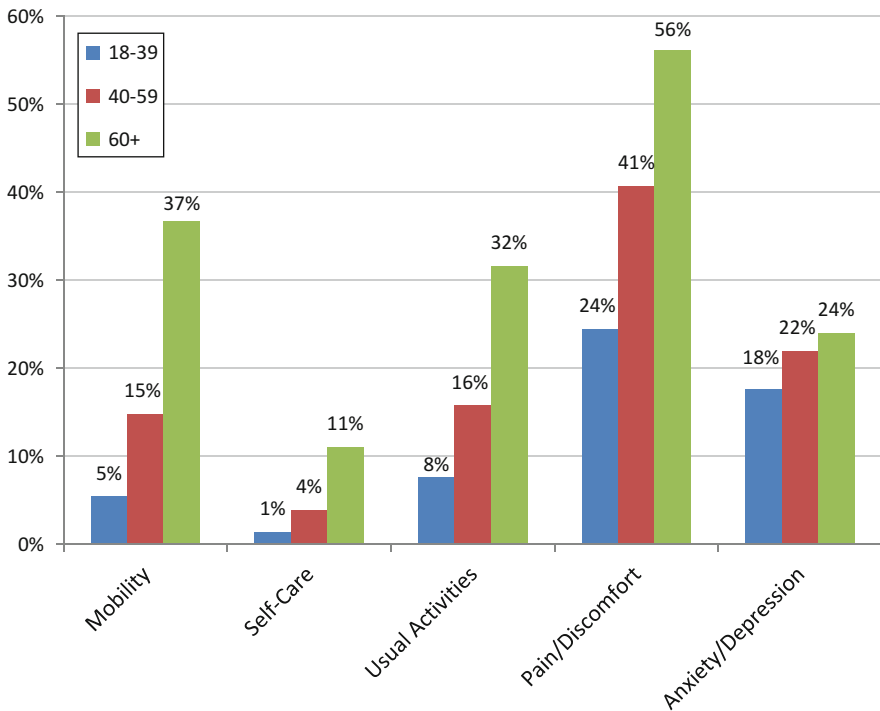


Fig. 3.5 EQ-5D profile of the population (% reporting any problem)

Table 3.3 summarizes results for reported problems along the five dimensions by country. These results reflect the total population scores and cannot be compared directly to each other as they reflect the unique age structure within each country.

Table 3.3 Reported problems by 5 dimensions (% of any problem)

	Mobility	Self-care	Usual activities	Pain/discomfort	Anxiety/depression
Argentina	10.8	2.9	8.0	30.9	22.8
Belgium	12.6	4.0	12.4	28.5	6.6
China	5.1	2.8	5.2	10.7	8.7
Denmark	10.7	2.5	17.9	36.7	16.1
England	19.4	5.6	17.0	35.3	19.3
Finland	26.3	8.6	21.0	47.8	13.9
France	13.4	4.0	10.0	35.9	15.0
Germany	15.9	2.7	9.9	27.6	4.3
Greece	13.3	5.7	10.5	16.8	10.7
Hungary	19.6	6.5	14.8	39.2	35.2
Italy	10.4	3.3	9.4	26.6	8.7
Korea	5.9	0.8	4.1	21.3	17.4
Netherlands	11.5	3.4	13.5	34.2	3.5
New Zealand	20.0	4.4	21.5	40.8	21.2
Slovenia	29.8	14.0	32.9	47.2	36.4
Spain	13.7	4.1	11.7	22.9	7.8
Sweden	8.6	1.5	7.9	40.8	26.0
Thailand	26.3	8.7	22.7	65.0	47.4
United Kingdom	18.4	4.3	16.3	33.0	21.0
United States	18.5	3.7	17.9	48.3	23.2

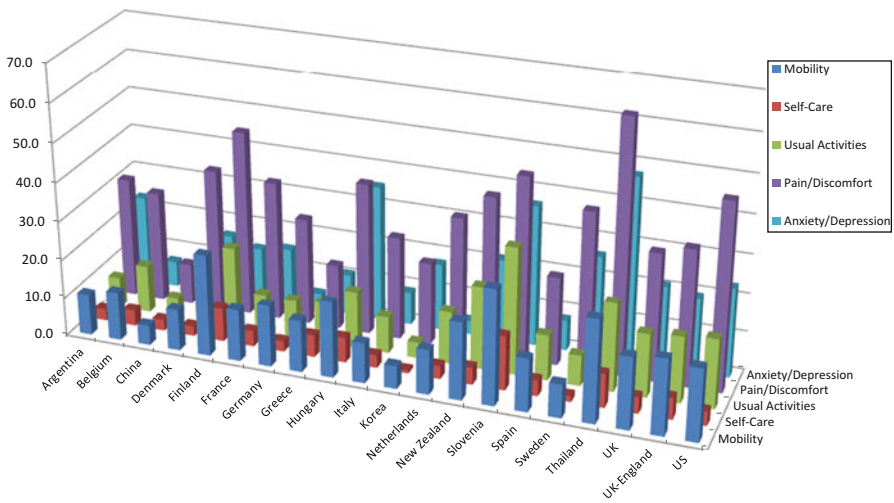


Fig. 3.6 EQ-5D profile by country

Figure 3.6 graphically presents reported problems by dimension for each country. As can be seen, problems with pain/discomfort were generally the most prevalent, while problems with self-care were the least prevalent among the 5 dimensions.

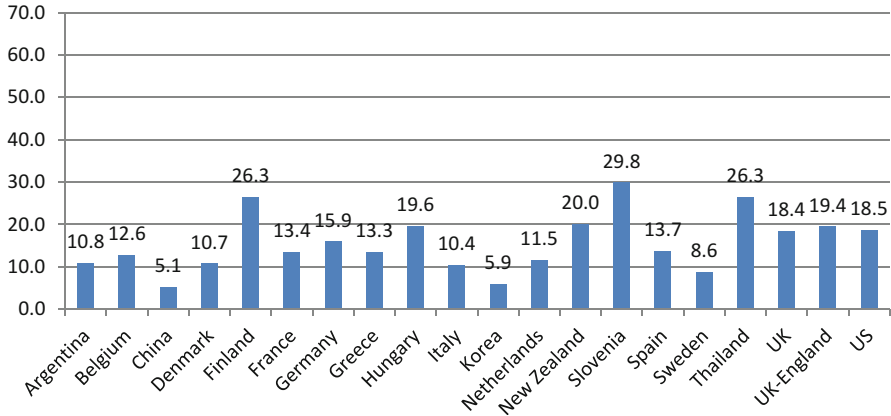


Fig. 3.7 Reported problems with mobility (% of any problem)

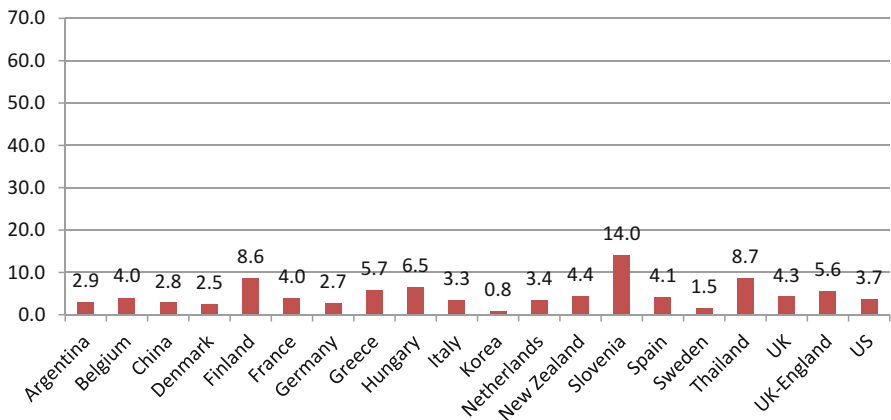


Fig. 3.8 Reported problems with self-care (% of any problem)

Figures 3.7, 3.8, 3.9, 3.10 and 3.11 show reported problems for each dimension separately across all countries. Variability in reported problems for each dimension is also present among countries, with percentages of reported problem ranges of 5.1–29.8 % for mobility; 0.8–14.0 % for self-care; 4.1–32.9 % for usual activities; 10.7–65.0 % for pain/discomfort; and 3.5–47.4 % for anxiety/depression.

Table 3.4 summarizes the results for reported problems across the 5 dimensions by regional surveys. These results reflect the total population scores and cannot be compared directly to each other as they reflect the unique age structure within each country.

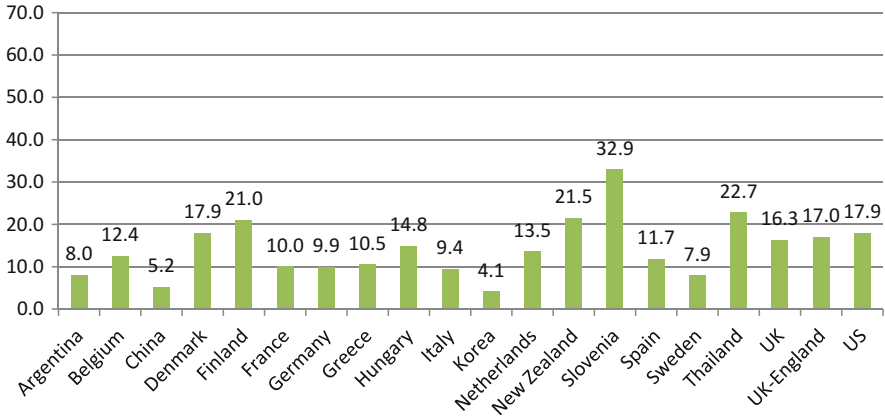


Fig. 3.9 Reported problems with usual activities (% of any problem)

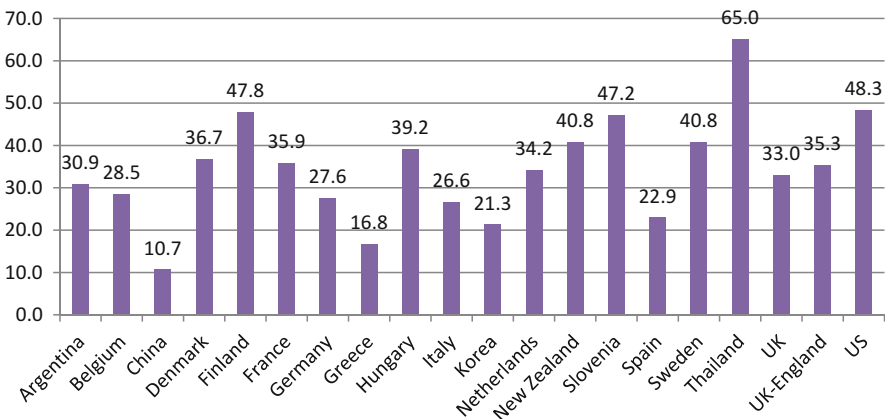


Fig. 3.10 Reported problems with pain/discomfort (% of any problem)

3.4 EQ-5D Index Population Norms

Tables 3.5, 3.6, and 3.7 summarize key EQ-5D index value population norms by age group for each country, based on different value sets. Table 3.5 shows EQ-5D index values that are based on the European VAS value set scoring algorithm. Table 3.6 shows the available EQ-5D index values that are based on country-specific TTO value sets. Table 3.7 shows the available EQ-5D index values that are based on country-specific VAS value sets.

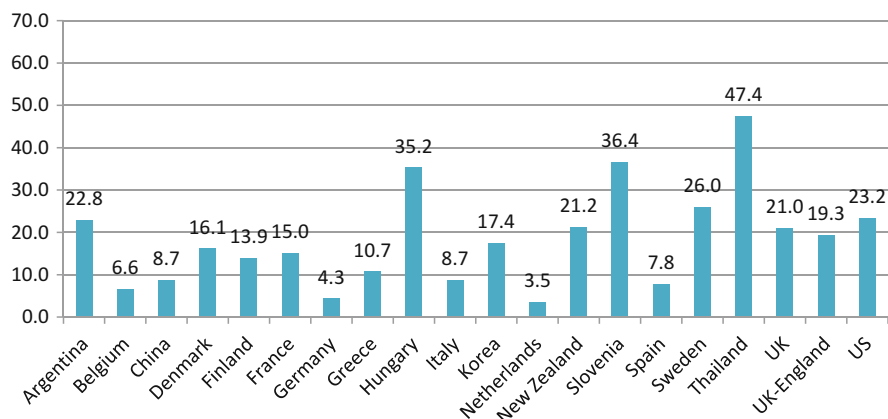


Fig. 3.11 Reported problems with anxiety/depression (% of any problem)

Table 3.4 Reported problems by five dimensions (% of any problem) – regional surveys

	Mobility	Self-care	Usual activities	Pain/discomfort	Anxiety/depression
Armenia (5 regions)	27.4	14.3	30.2	65.1	53.5
Canada (Alberta)	18.5	3.7	17.9	48.3	23.2
Japan (3 prefecture)	7.3	1.8	5.2	20.0	8.5
Spain-Canary Islands	17.1	6.3	14.7	39.5	25.7
Spain – Catalunya	16.9	7.0	12.4	32.9	19.5
Sweden – Stockholm county	11.6	2.1	10.4	45.2	32.7
Zimbabwe – Harare district	9.8	3.4	11.0	30.5	30.7

Therefore, cross-country differences seen in Tables 3.6 and 3.7 can be due to a mixture of differences in how people in each country report problems along the five dimensions and how different populations value these problems. Total population scores also cannot be compared for the reason that they are not standardized for demographic differences across countries. Regional data are presented using the available national TTO and VAS value sets.

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Table 3.5 EQ-5D index population norms (European VAS value set)

	Age							Total
	18–24	25–34	35–44	45–54	55–64	65–74	75+	
National								
Argentina	0.907	0.889	0.869	0.849	0.829	0.796	0.724	0.856
Belgium	0.953	0.921	0.920	0.889	0.881	0.848	0.761	0.891
China	0.990	0.980	0.970	0.960	0.930	0.900	0.840	0.951
Denmark	0.914	0.914	0.881	0.861	0.845	0.818	0.753	0.866
Finland	N/A	0.919	0.891	0.853	0.805	0.762	0.573	0.815
France	0.924	0.921	0.883	0.893	0.836	0.804	0.756	0.872
Germany	0.950	0.949	0.943	0.908	0.881	0.838	0.771	0.902
Greece	0.979	0.972	0.957	0.916	0.817	0.793	0.739	0.913
Hungary	0.934	0.911	0.873	0.802	0.755	0.716	0.639	0.823
Italy	0.969	0.956	0.943	0.910	0.877	0.823	0.724	0.899
Korea	0.957	0.958	0.949	0.915	0.828	0.787	N/A	0.915
Netherlands	0.938	0.910	0.922	0.874	0.869	0.863	0.798	0.892
New Zealand	0.913	0.906	0.893	0.858	0.817	0.800	0.712	0.848
Slovenia	0.879	0.859	0.831	0.772	0.697	0.663	0.621	0.788
Spain	0.968	0.963	0.939	0.911	0.884	0.870	0.773	0.915
Sweden	0.888	0.893	0.868	0.835	0.813	0.836	0.701	0.851
Thailand	0.814	0.785	0.771	0.717	0.694	0.670	0.657	0.742
UK	0.934	0.922	0.905	0.849	0.804	0.785	0.734	0.856
UK-England	0.922	0.915	0.891	0.857	0.819	0.785	0.720	0.857
US	0.899	0.883	0.853	0.809	0.776	0.756	0.677	0.825
Regional								
Armenia (5 regions)	0.881	0.798	0.736	0.690	0.600	0.521	0.473	0.693
Canada (Alberta)	0.879	0.960	0.944	0.905	0.937	0.931	0.868	0.925
Japan (3 prefectures)	0.961	0.961	0.965	0.938	0.908	0.886	0.758	0.927
Spain-Canary Islands	0.930	0.910	0.878	0.825	0.753	0.736	0.619	0.815
Spain – Catalunya	0.958	0.929	0.914	0.871	0.807	0.762	0.623	0.853
Sweden – Stockholm county	0.860	0.860	0.850	0.820	0.800	0.800	0.740	0.824
Zimbabwe – Harare district	0.867	0.859	0.774	0.750	0.697	0.607	N/A	0.842

Table 3.6 EQ-5D index population norms (country-specific TTO value sets)

	Age							Total
	18–24	25–34	35–44	45–54	55–64	65–74	75+	
National								
Argentina	0.951	0.936	0.919	0.898	0.874	0.835	0.756	0.902
Denmark	0.928	0.927	0.901	0.882	0.870	0.847	0.794	0.887
France	0.948	0.946	0.913	0.922	0.853	0.810	0.735	0.892
Germany	0.972	0.973	0.966	0.945	0.922	0.891	0.839	0.938
Italy	0.984	0.978	0.973	0.955	0.936	0.904	0.839	0.947
Korea	0.981	0.982	0.976	0.960	0.909	0.888		0.958
Netherlands	0.950	0.927	0.935	0.890	0.890	0.886	0.830	0.910
Spain	0.982	0.975	0.949	0.923	0.901	0.891	0.781	0.929
UK	0.940	0.927	0.911	0.847	0.799	0.779	0.726	0.856
UK-England	0.929	0.919	0.893	0.855	0.810	0.773	0.703	0.855
US	0.924	0.912	0.889	0.855	0.830	0.817	0.755	0.867
Regional	18–24	25–34	35–44	45–54	55–64	65–74	75+	Total
Japan (3 prefecture)	0.967	0.963	0.965	0.941	0.912	0.881	0.768	0.929
Spain-Canary Islands	0.953	0.934	0.911	0.854	0.780	0.754	0.596	0.836
Spain – Catalunya	0.974	0.947	0.941	0.898	0.838	0.780	0.594	0.871
Zimbabwe – Harare district	0.848	0.841	0.793	0.785	0.756	0.661		0.833

Table 3.7 EQ-5D index population norms (country-specific VAS value set)

	Age							Total
	18–24	25–34	35–44	45–54	55–64	65–74	75+	
National								
Argentina	0.928	0.911	0.888	0.867	0.837	0.793	0.712	0.871
Belgium	0.948	0.915	0.912	0.881	0.871	0.836	0.748	0.883
Denmark	0.885	0.884	0.845	0.822	0.799	0.766	0.691	0.826
Finland		0.909	0.878	0.835	0.781	0.738	0.583	0.800
Germany	0.962	0.966	0.962	0.937	0.915	0.882	0.817	0.930
New Zealand	0.890	0.883	0.869	0.827	0.782	0.763	0.672	0.818
Slovenia	0.869	0.841	0.794	0.712	0.619	0.554	0.498	0.738
Spain	0.969	0.963	0.939	0.912	0.883	0.866	0.761	0.914
UK	0.931	0.920	0.902	0.846	0.799	0.778	0.726	0.852
UK-England	0.922	0.914	0.888	0.854	0.814	0.775	0.706	0.853
Regional	18–24	25–34	35–44	45–54	55–64	65–74	75+	Total
Japan (3 prefecture)	0.885	0.884	0.845	0.822	0.799	0.766	0.691	0.826
Spain-Canary Islands	0.934	0.916	0.886	0.834	0.765	0.740	0.617	0.821
Spain – Catalunya	0.960	0.932	0.919	0.878	0.815	0.770	0.620	0.857

Chapter 4

Cross-Country Analysis of EQ-5D Data

Agota Szende and Bas Janssen

4.1 Cross Country Comparison of Standardized EQ-5D Data

EQ VAS ratings and the rate of self-reported problems on the five dimensions within specific age groups were seen to be variable between countries in Chap. 3. However, when aggregate measures of self-assessed health are compared between countries, it is necessary to adjust for potential differences in demographics. As gender was shown to play a small role in explaining EQ-5D data, the standardization took into account age differences across countries.

Table 4.1 presents mean EQ-5D data for 18 countries with national representative population surveys where demographic characteristics were standardized based on a European population structure. Note that the data presented in Table 4.1 do not represent the actual situation in each country, but are based on the European age distribution. Because the age structure superimposed on the dataset was the same for each country, comparisons between countries can be made. When comparing Table 4.1 with the non-standardized EQ VAS ratings (Table 3.1, column for total) and 5D reported problems (Table 3.3), the results show the impact of age standardization of population norms, that are usually within a few percentage score difference.

As can be seen in Table 4.1, the data show that important differences exist in EQ-5D population data across countries after taking into account differences in population structure. Mean EQ VAS score varied from 70.37 to 83.28 in the total

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Table 4.1 Self-reported EQ-5D results after age standardization (mean VAS and proportions of any problem)

	EQ VAS	Mobility	Self-care	Usual activity	Pain/discomfort	Anxiety/depression
Argentina	73.92	0.133	0.037	0.098	0.339	0.238
Belgium	77.42	0.139	0.048	0.129	0.294	0.061
China	79.91	0.061	0.034	0.061	0.115	0.092
Denmark	83.28	0.115	0.028	0.186	0.370	0.162
France	76.32	0.144	0.046	0.107	0.358	0.145
Germany	77.16	0.172	0.031	0.105	0.278	0.045
Greece	76.50	0.172	0.083	0.137	0.204	0.112
Hungary	70.37	0.209	0.072	0.158	0.404	0.362
Italy	76.95	0.123	0.044	0.111	0.277	0.092
Korea	71.31	0.065	0.010	0.046	0.296	0.229
Netherlands	81.44	0.118	0.035	0.125	0.326	0.032
New Zealand	80.76	0.192	0.043	0.208	0.393	0.212
Slovenia	74.47	0.347	0.167	0.365	0.510	0.380
Spain	74.29	0.127	0.040	0.110	0.213	0.073
Sweden	82.49	0.113	0.025	0.096	0.425	0.264
Thailand	78.90	0.298	0.092	0.259	0.652	0.470
United Kingdom	82.75	0.182	0.043	0.162	0.331	0.209
US	79.33	0.193	0.037	0.183	0.480	0.224

population. The largest difference between any two countries in reporting problems were 28.6, 12.7, 31.9, 53.7, and 43.8 % in absolute terms along the five dimensions, respectively.

Hungary reported the lowest EQ VAS ratings, followed by Korea, while Denmark and the United Kingdom reported the highest EQ VAS ratings. The highest proportion of problems on the 5 EQ-5D dimensions was reported by Slovenia and Thailand. Note that while Hungary and Korea reported a lower mean EQ VAS than Slovenia and Thailand, more problems were reported in Slovenia and Thailand across the 5 EQ-5D dimensions. At the other end of the spectrum, China reported the lowest proportion of problems but reported average EQ VAS ratings, while Denmark and the UK reported the highest EQ VAS ratings and average proportions of problems. These results indicate that countries also differed in how they answered the more general EQ VAS question relative to how they answered the more specific questions on the EQ-5D dimensions.

4.2 The Impact of Economic and Health Care Indicators

After seeing that differences in EQ-5D data across countries exist after standardization for population structure, this section examines whether these patterns can be explained by differences in living standards and health care system

Table 4.2 Spearman rank correlations between indicators of living standards and self-reported health

EQ-VAS	GDP per capita			Health expenditure (% of GDP)			Physicians per 1,000 people		
	Age group	Unemployment rate	Health expenditure	Age group	Unemployment rate	Health expenditure	Age group	Unemployment rate	Health expenditure
	18-24	0.38	0.29	18-24	0.40	0.09			
	25-34	0.55*	0.44	25-34	0.53*	0.32			
	35-44	0.50*	0.35	35-44	0.47	0.18			
	45-54	0.49*	0.29	45-54	0.48*	-0.13			
	55-64	0.45	0.26	55-64	0.45	-0.25			
	65-74	0.47	0.20	65-74	0.44	-0.21			
	75+	0.42	0.17	75+	0.37	-0.24			
	Total	0.58*	0.39	Total	0.55*	-0.03			
EQ-5D dimension	GDP per capita			Health expenditure (% of GDP)			Physicians per 1,000 people		
	Age group	Unemployment rate	Health expenditure	Age group	Unemployment rate	Health expenditure	Age group	Unemployment rate	Health expenditure
Mobility	18-24	0.20	0.28	18-24	0.21	0.38			
	25-34	0.11	0.16	25-34	0.14	-0.43			
	35-44	-0.09	0.10	35-44	-0.03	-0.33			
	45-54	0.01	0.08	45-54	0.00	-0.23			
	55-64	-0.38	-0.11	55-64	-0.32	-0.22			
	65-74	-0.32	-0.11	65-74	-0.27	-0.24			
	75+	-0.11	-0.10	75+	-0.13	-0.01			
	Total	-0.19	0.04	Total	-0.13	-0.27			
Self-care	18-24	-0.21	-0.15	18-24	-0.18	-0.30			
	25-34	0.09	0.10	25-34	0.11	-0.37			
	35-44	-0.33	-0.03	35-44	-0.25	-0.20			
	45-54	0.01	0.02	45-54	-0.02	-0.26			
	55-64	-0.48*	-0.25	55-64	-0.42	-0.26			
	65-74	-0.50*	-0.26	65-74	-0.47*	-0.17			
	75+	-0.25	-0.14	75+	-0.31	0.44			
	Total	-0.35	-0.14	Total	-0.35	-0.05			

(continued)

Table 4.2 (continued)

EQ-5D dimension	Age group	GDP per capita	Unemployment rate	Health expenditure (% of GDP)	Health expenditure per capita	Physicians per 1,000 people
Usual activities	18-24	0.34	-0.29	0.31	0.37	-0.34
	25-34	0.33	-0.26	0.28	0.34	-0.32
	35-44	0.23	-0.16	0.24	0.25	-0.32
	45-54	0.23	-0.09	0.13	0.22	-0.27
	55-64	-0.18	0.12	-0.03	-0.14	-0.17
	65-74	-0.15	-0.10	-0.05	-0.15	-0.25
	75+	-0.13	0.09	-0.13	-0.18	-0.05
	Total	0.08	-0.03	0.13	0.09	-0.24
Pain/discomfort	18-24	0.34	-0.18	0.26	0.37	-0.27
	25-34	0.32	-0.17	0.23	0.32	-0.21
	35-44	0.26	0.01	0.15	0.27	-0.21
	45-54	0.16	-0.05	0.05	0.17	-0.28
	55-64	-0.04	-0.13	-0.17	-0.04	-0.38
	65-74	-0.16	-0.21	-0.24	-0.14	-0.51*
	75+	-0.20	-0.16	-0.30	-0.18	-0.44
	Total	0.10	-0.11	-0.01	0.12	-0.38
Anxiety/depression	18-24	-0.01	-0.08	-0.17	0.00	-0.36
	25-34	-0.24	0.01	-0.30	-0.22	-0.47
	35-44	-0.30	0.10	-0.37	-0.28	-0.42
	45-54	-0.30	0.07	-0.41	-0.30	-0.40
	55-64	-0.43	-0.07	-0.56*	-0.44	-0.47*
	65-74	-0.53*	-0.08	-0.60**	-0.52*	-0.54*
	75+	-0.51*	-0.25	-0.68**	-0.52*	-0.59**
	Total	-0.38	-0.04	-0.51*	-0.38	-0.46

* $p < 0.05$; ** $p < 0.01$

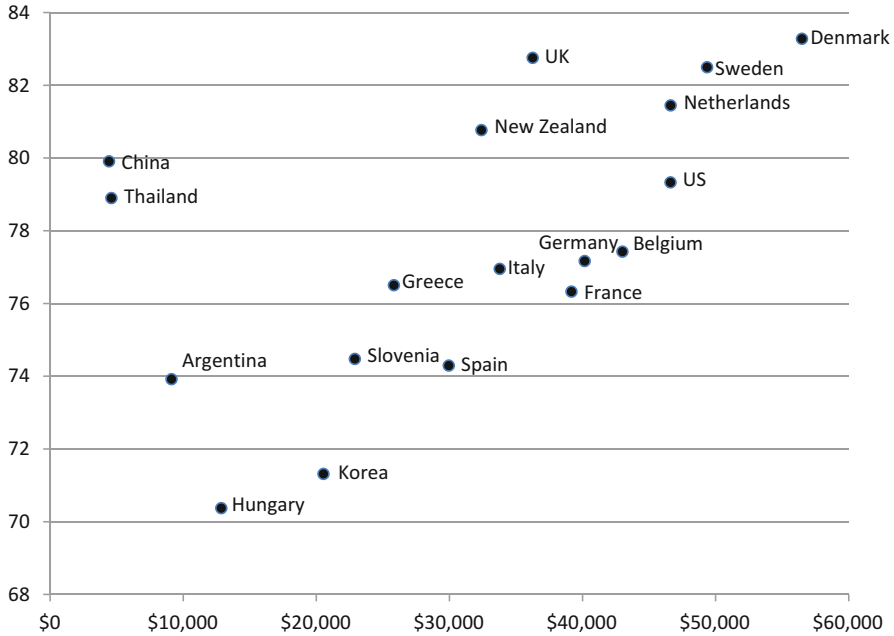


Fig. 4.1 Self-reported EQ VAS according to GDP* per capita in 18 countries *GDP is the total value of all goods and services produced by an economy in 1 year

performance. In addition, we explored whether macro-economic variables are correlated with EQ VAS ratings and the prevalence of problems in different age groups across countries.

Table 4.2 gives an overview of Spearman rank correlation coefficients between EQ VAS ratings and self-reported health problems on EQ-5D dimensions, and indicators of living standards and health care system performance in the 18 countries. Correlations are presented for different age groups and for all age groups combined.

The prior living standards (GDP per capita) in the countries studied correlated most with the EQ VAS scores (0.58), while unemployment appeared to significantly correlate in people over the age of 45 only. Health care expenditure also correlated with better EQ VAS data (0.55). Less significant results were detected between macro indicators and reported problems.

The positive relationship between living standards and self-reported EQ VAS was further examined and is graphically presented in Fig. 4.1.

As Fig. 4.1 shows, EQ VAS correlated well with a country's GDP, although China and Thailand were outliers with relatively high EQ VAS scores compared to their GDP.

Further linear regression analyses showed that GDP level explained 29 % of EQ VAS at the country level ($p = 0.02$), but explained 67 % of the EQ VAS when excluding 'outliers' China and Thailand. Health expenditure per capita was the only

other statistically significant explanatory factor that explained 26 % of the country mean VAS ($p = 0.03$). While GPD showed a stronger correlation with VAS than health expenditure, a dollar unit of health expenditure had eight times the impact of a dollar unit of GPD on the country mean VAS scores (with coefficients of 0.0001 for GPD and 0.0008 for health expenditure). Another set of regression analyses, that used macro data from the year of EQ-5D data collection in each country on gross national income expressed in purchasing power parity in 2010 values, did not reach statistically significant results. However, health care expenditure remained a statistically significant factor ($p = 0.03$), explaining 27 % of variation in the country mean VAS scores.

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Chapter 5

Socio-demographic Indicators Based on EQ-5D

Agota Szende and Bas Janssen

5.1 The Use of EQ-5D in Socio-demographic Analysis

In addition to describing population norms, the EQ-5D database archive also offered the opportunity to explore health inequalities as reported by general populations of 18 countries. We have seen that age, and gender to a lesser extent, played an important role in explaining EQ-5D data across individuals. A social indicator, education, was also available in most datasets that were analysed alongside age and gender to explain EQ-5D data.

The level of attained education is important as it represents the cultural component of an individual's socio-economic status, and is an indicator of living circumstances in the earlier part of one's life. Education level is fairly stable over the life course of an individual. Later in life it shapes one's occupation and expected income potential. Through this mechanism, its indirect link with health is stronger than its direct effect (Singh-Manoux et al. 2002).

Among the higher education groups, lower prevalence of health risk factors has been observed. Given the existing health problems, individuals with a lower level of education experience greater ill-health (Eachus et al. 1999). Higher education can directly or through its vehicle mechanisms (such as being able to afford domestic help, acquisition of home appliances, reduced workload or part-time work) enable extra coping pathways that are not available to individuals with lower levels of attained education (Simon 2002). Furthermore, observational studies among people suffering from chronic conditions revealed that, through better self-management

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and compliance, better treatment results can be achieved among the better-educated (Katz 1998; Karter et al. 2000; Goldman and Smith 2002). A large body of literature has shown that education is an important determinant of health indicators (Kunst et al. 1995; Mackenbach et al. 1997; Regidor et al. 1999; Borrell et al. 1999; Dalstra et al. 2002; Blakely et al. 2002; Regidor et al. 2003; von dem Knesebeck et al. 2003; Nishi et al. 2004).

Two commonly used approaches of socio-demographic analysis of health, odds ratios and concentration indices, were applied to the EQ-5D national surveys.

5.2 Odds Ratios Based on EQ-5D

The odds ratios for age, gender, and education are presented by country and by EQ-5D dimension in Table 5.1. The reference population group was men aged 18–24 years with medium or high education level. The odds ratios presented for demographic and education categories should be interpreted as relative to this reference group.

Generally, each decade of age added substantial odds for higher reported problems along all the EQ-5D dimensions. The only exception was anxiety/depression in the Netherlands and Sweden, where the odds decreased with age. In all other countries, anxiety/depression had increased odds with age but among the five dimension this dimension had the smallest odds ratio. Gender related odds ratios generally favoured men in terms of reported problems. However, exceptions included mobility, self-care, and usual activities in some countries. Gender related odds ratios were highest for self-care in Korea (6.53), self-care in Greece (4.76), and self-care in Sweden (3.06).

In most countries, attaining at least the medium level of education translated into significantly lower age- and gender-adjusted odds of experiencing problems on any dimension. Education had generally the highest impact in Korea and Slovenia, and had a particularly high impact on self-care in Sweden, with an odds ratio of 11.63.

5.3 Concentration Indices Based on EQ-5D

Results of the concentration index analysis of the 17 countries are shown in Tables 5.2, 5.3 and 5.4. Findings suggest that the level of inequalities in self-assessed EQ VAS health and the health inequality profile by EQ-5D dimension differed across countries. In terms of the overall level of inequalities, Korea, Denmark, and China presented the lowest level of relative inequalities (0.090, 0.094, and 0.095 respectively) while Spain and Hungary had the highest relative inequalities (0.173 and 0.157, respectively).

Differences were discerned in the extent to which the socio-demographic and the quality of life factors explained overall inequalities in self-assessed health.

Table 5.1 Odds ratios (95 % confidence intervals) for reporting problems on EQ-5D-3L dimensions in 19 countries

Country	Dimension	Gender	95 % CI	Age	95 % CI	Edu	95 % CI			
Belgium	Mobility	1.37	0.98	1.91	1.64	1.46	1.84	1.05	0.70	1.58
	Self-care	1.37	0.91	2.07	1.63	1.30	2.03	0.91	0.53	1.56
	Usual activities	1.47	1.13	1.91	1.50	1.33	1.68	1.17	0.83	1.65
	Pain/discomfort	1.31	1.05	1.63	1.31	1.22	1.42	1.19	0.88	1.63
	Anxiety/ depression	1.63	1.04	2.55	1.05	0.93	1.20	1.04	0.60	1.82
China	Mobility	1.18	0.95	1.45	1.71	1.58	1.84	1.89	1.46	2.46
	Self-care	1.08	0.82	1.42	1.53	1.39	1.68	1.71	1.23	2.38
	Usual activities	1.20	0.97	1.48	1.55	1.44	1.67	2.47	1.89	3.23
	Pain/discomfort	1.67	1.43	1.95	1.55	1.47	1.63	1.54	1.29	1.83
	Anxiety/ depression	1.19	1.01	1.40	1.23	1.17	1.30	2.36	1.95	2.86
Denmark	Mobility	1.25	1.12	1.38	1.41	1.37	1.45	1.82	1.62	2.04
	Self-care	1.25	1.02	1.53	1.51	1.42	1.59	1.89	1.49	2.40
	Usual activities	1.48	1.36	1.61	1.28	1.25	1.31	1.62	1.48	1.76
	Pain/discomfort	1.41	1.32	1.51	1.17	1.15	1.20	1.41	1.32	1.51
	Anxiety/ depression	1.68	1.54	1.83	1.06	1.04	1.09	1.33	1.22	1.46
England	Mobility	1.22	1.11	1.35	1.65	1.59	1.70	2.17	1.95	2.41
	Self-care	1.19	1.02	1.40	1.47	1.40	1.55	2.33	1.95	2.79
	Usual activities	1.28	1.16	1.41	1.47	1.43	1.52	2.04	1.82	2.27
	Pain/discomfort	1.16	1.08	1.26	1.39	1.36	1.43	1.72	1.57	1.88
	Anxiety/ depression	1.52	1.39	1.67	1.03	1.00	1.06	1.52	1.37	1.68
Finland	Mobility	1.04	0.91	1.18	2.17	2.06	2.28	1.89	1.65	2.16
	Self-care	0.96	0.80	1.15	2.24	2.08	2.41	1.78	1.46	2.17
	Usual activities	1.17	1.02	1.34	1.92	1.83	2.02	1.82	1.57	2.10
	Pain/discomfort	1.32	1.19	1.46	1.46	1.40	1.52	1.62	1.44	1.81
	Anxiety/ depression	1.26	1.08	1.46	1.16	1.10	1.22	1.50	1.28	1.77
France	Mobility	1.63	1.22	2.17	1.91	1.73	2.10	1.36	0.97	1.89
	Self-care	0.94	0.59	1.49	1.68	1.43	1.99	1.51	0.86	2.65
	Usual activities	1.22	0.89	1.66	1.54	1.38	1.72	1.29	0.89	1.88
	Pain/discomfort	1.19	0.98	1.44	1.39	1.30	1.48	1.20	0.97	1.49
	Anxiety/ depression	1.16	0.90	1.49	1.01	0.93	1.09	0.93	0.71	1.22
Germany	Mobility	1.18	0.96	1.46	1.92	1.79	2.06	1.89	1.16	3.09
	Self-Care	1.47	0.90	2.39	2.17	1.84	2.57	1.91	1.00	3.67
	Usual activities	1.22	0.93	1.59	1.69	1.54	1.86	1.96	1.25	3.08
	Pain/discomfort	1.36	1.15	1.60	1.38	1.28	1.48	1.59	0.99	2.56
	Anxiety/ depression	1.43	0.98	2.07	1.04	0.90	1.19	1.79	0.82	3.91
Greece	Mobility	1.34	0.71	2.53	1.93	1.54	2.42	2.13	1.06	4.29
	Self-care	4.76	1.75	13.01	2.58	1.76	3.78	1.54	0.55	4.33
	Usual activities	1.95	0.93	4.11	2.52	1.86	3.40	2.22	0.96	5.14
	Pain/discomfort	1.83	1.04	3.20	1.59	1.32	1.92	3.03	1.62	5.68
	Anxiety/ depression	1.27	0.66	2.43	1.19	0.96	1.47	3.79	1.71	8.36

(continued)

Table 5.1 (continued)

Country	Dimension	Gender	95 % CI		Age	95 % CI		Edu	95 % CI	
Hungary	Mobility	1.17	1.00	1.37	1.80	1.71	1.89	2.00	1.70	2.35
	Self-care	0.84	0.66	1.08	1.84	1.69	2.00	2.61	2.00	3.40
	Usual activities	1.02	0.86	1.21	1.64	1.56	1.73	2.35	1.97	2.80
	Pain/discomfort	1.45	1.28	1.64	1.48	1.43	1.54	1.95	1.71	2.23
	Anxiety/ depression	1.71	1.51	1.93	1.24	1.20	1.29	1.98	1.74	2.26
Italy	Mobility	1.44	1.15	1.79	2.25	2.07	2.45	1.78	1.30	2.43
	Self-care	1.94	1.39	2.70	2.16	1.88	2.48	1.81	1.12	2.91
	Usual activities	1.77	1.41	2.20	1.91	1.76	2.07	2.00	1.46	2.75
	Pain/discomfort	1.74	1.50	2.02	1.53	1.46	1.60	1.47	1.24	1.75
	Anxiety/ depression	2.26	1.81	2.81	1.25	1.17	1.35	1.20	0.90	1.59
Korea	Mobility	2.40	1.37	4.22	1.66	1.29	2.15	3.56	1.81	7.03
	Self-care	6.53	0.77	55.11	3.52	1.44	8.64	3.34	0.31	35.97
	Usual activities	1.67	0.87	3.20	1.60	1.17	2.18	6.72	2.77	16.27
	Pain/discomfort	1.73	1.28	2.34	1.63	1.42	1.86	2.51	1.70	3.71
	Anxiety/ depression	2.05	1.51	2.80	1.31	1.14	1.49	1.42	0.93	2.16
Netherlands	Mobility	1.60	1.12	2.29	1.53	1.37	1.70	1.38	0.95	2.01
	Self-care	2.93	1.60	5.39	1.36	1.07	1.72	1.08	0.55	2.13
	Usual activities	1.97	1.43	2.71	1.30	1.19	1.42	1.14	0.82	1.60
	Pain/discomfort	1.42	1.13	1.78	1.22	1.13	1.31	1.06	0.84	1.35
	Anxiety/ depression	2.12	1.08	4.15	0.80	0.63	1.01	2.41	1.07	5.46
New Zealand	Mobility	1.04	0.77	1.40	1.75	1.58	1.93	1.26	0.92	1.73
	Self-care	0.77	0.45	1.33	1.76	1.46	2.13	1.28	0.73	2.25
	Usual activities	1.11	0.83	1.47	1.58	1.44	1.73	1.09	0.80	1.48
	Pain/discomfort	1.08	0.86	1.37	1.45	1.34	1.56	1.29	0.99	1.68
	Anxiety/ depression	1.43	1.08	1.89	1.11	1.02	1.21	1.27	0.94	1.71
Slovenia	Mobility	0.70	0.48	1.02	1.95	1.72	2.20	4.48	2.64	7.58
	Self-care	0.87	0.54	1.39	1.67	1.45	1.93	3.89	2.30	6.58
	Usual activities	0.93	0.66	1.31	1.51	1.37	1.68	3.29	2.04	5.31
	Pain/discomfort	1.04	0.76	1.43	1.52	1.37	1.67	2.30	1.39	3.81
	Anxiety/ depression	1.13	0.83	1.54	1.16	1.06	1.27	1.66	1.06	2.59
Spain	Mobility	1.61	1.30	2.00	1.91	1.78	2.06	1.46	1.10	1.96
	Self-care	2.02	1.36	3.01	1.79	1.58	2.03	2.12	1.20	3.74
	Usual activities	1.76	1.39	2.24	1.63	1.51	1.75	1.37	1.01	1.88
	Pain/discomfort	1.71	1.43	2.05	1.34	1.28	1.41	1.41	1.15	1.73
	Anxiety/ depression	1.86	1.41	2.46	1.15	1.08	1.23	1.48	1.10	2.01
Sweden	Mobility	1.37	0.71	2.61	1.68	1.34	2.11	1.36	0.67	2.75
	Self-care	3.06	0.60	15.69	1.39	0.83	2.32	11.63	1.24	109.0
	Usual activities	0.97	0.51	1.87	1.27	1.03	1.57	1.58	0.77	3.26
	Pain/discomfort	1.11	0.77	1.62	1.26	1.12	1.42	2.05	1.33	3.16
	Anxiety/ depression	1.74	1.16	2.63	0.94	0.83	1.07	1.41	0.87	2.28

(continued)

Table 5.1 (continued)

Country	Dimension	Gender	95 % CI	Age	95 % CI	Edu	95 % CI			
Thailand ^a	Mobility	1.30	1.01	1.67	1.57	1.42	1.72	–	–	–
	Self-care	0.93	0.64	1.36	1.40	1.22	1.61	–	–	–
	Usual activities	0.97	0.75	1.24	1.22	1.11	1.34	–	–	–
	Pain/discomfort	1.37	1.09	1.71	1.31	1.20	1.43	–	–	–
	Anxiety/ depression	1.44	1.17	1.79	1.14	1.05	1.23	–	–	–
United Kingdom	Mobility	0.90	0.75	1.09	1.65	1.56	1.76	1.68	1.37	2.06
	Self-care	0.80	0.57	1.13	1.45	1.30	1.62	1.85	1.26	2.71
	Usual activities	0.88	0.72	1.07	1.40	1.32	1.48	1.56	1.27	1.92
	Pain/discomfort	1.02	0.87	1.19	1.39	1.33	1.46	1.77	1.50	2.09
	Anxiety/ depression	1.35	1.14	1.61	1.13	1.07	1.18	1.52	1.26	1.82
United States	Mobility	1.25	1.17	1.34	1.73	1.70	1.77	1.96	1.80	2.14
	Self-care	1.04	0.93	1.16	1.61	1.55	1.68	2.33	2.06	2.63
	Usual activities	1.43	1.35	1.52	1.54	1.51	1.57	1.84	1.69	2.01
	Pain/discomfort	1.30	1.24	1.37	1.46	1.43	1.48	1.45	1.35	1.57
	Anxiety/ depression	1.49	1.42	1.57	1.12	1.10	1.14	1.42	1.33	1.51

^aEducation variable not available

Socio-demographic factors explained the smallest proportion of health inequalities in New Zealand (2.4 %), Korea (3.0 %), and Sweden (4.0 %), while they explained higher proportions in Slovenia (27.6 %) and Hungary (24.4 %).

The five dimensions of EQ-5D were generally more powerful in explaining overall self-assessed health. The explained proportion of the index varied from 14.6 % in Thailand to 54.3 % in Slovenia and Greece.

Within the socio-demographic variables, gender played the smallest role in explaining overall inequalities in self-assessed health (0–21.7 %), while age was generally the most important determinant (0–97.8 %). Education played a variable role in explaining inequalities in each country, from 0.3 % in Belgium to 93.9 % in Korea.

The health inequality profile according to the EQ-5D dimensions showed different patterns across countries. Pain/discomfort and usual activities were the highest contributors to overall inequalities in self-assessed health in most countries ($n = 8$ and $n = 7$, respectively). In Greece and Germany, mobility was the most important factor among the five dimensions. The relative share of mobility was the highest in Greece (37.5 %), while New Zealand had the highest relative share of self-care (21.7 %). Problems with usual activities contributed with the highest relative share in The Netherlands (48.0 %). Pain/discomfort had a particularly high relative share in Thailand (57.2 %) and Korea (49.6 %). The relative share of anxiety/depression was highest in China (36.4 %) in explaining overall inequalities in self-assessed health.

Table 5.2 Health inequality profile of 17 countries by socio-demographic factors (explained share in absolute and relative percentages)

Country	Inequality index*	Socio-demographic factor (percentages)			
		Explained share	Gender	Age	Education
Belgium	0.126	7.9	0.2	7.7	0.0
		100.0	1.9	97.8	0.3
China	0.095	21.7	0.1	12.9	8.6
		100.0	0.6	59.6	39.7
Denmark	0.094	7.0	0.0	4.3	2.7
		100.0	0.0	61.2	38.8
France	0.132	12.8	0.0	11.9	0.9
		100.0	0.0	93.3	6.7
Germany	0.131	17.8	0.1	16.9	0.8
		100.0	0.5	95.2	4.3
Greece	0.125	16.5	0.5	12.7	3.3
		100.0	2.9	77.2	19.9
Hungary	0.157	24.4	0.4	19.6	4.4
		100.0	1.5	80.2	18.2
Italy	0.133	19.0	0.7	17.6	0.7
		100.0	3.6	92.5	3.9
Korea	0.090	3.0	0.2	0.0	2.8
		100.0	6.1	0.0	93.9
Netherlands	0.104	4.7	0.4	3.7	0.6
		100.0	8.8	78.1	13.0
New Zealand	0.103	2.4	0.1	2.1	0.2
		100.0	2.9	86.8	10.3
Slovenia	0.136	27.6	0.3	15.9	11.4
		100.0	1.1	57.7	41.2
Spain	0.173	7.5	0.5	6.7	0.4
		100.0	6.4	88.8	4.9
Sweden	0.103	4.0	0.1	1.6	2.3
		100.0	2.7	40.1	57.2
Thailand ^a	0.108	0.9	0.2	0.7	–
		100.0	21.7	78.3	–
United Kingdom	0.110	9.0	0.0	5.9	3.1
		100.0	0.1	65.6	34.3
United States	0.112	9.3	0.3	7.6	1.4
		100.0	3.7	81.5	14.8

* $p < 0.05$ in all countries^aEducation variable is not available in Thailand

The decomposition analysis that combined both the socio-demographic variables and reported problems along the five dimensions confirmed the above findings. However, in this analysis, problems with usual activities became the strongest contributor to overall inequalities in the majority of countries (n=9) followed by pain/discomfort.

Table 5.3 Health inequality profile of 17 countries by quality of life dimensions (explained share in absolute and relative percentages)

Country	Inequality index*	Quality of life factors (percentages)					
		Explained share	Mobility	Self-care	Usual activities	Pain/discomfort	Anxiety/depression
Belgium	0.126	24.9	5.2	3.5	8.2	4.7	3.4
		100.0	20.9	13.9	32.9	18.8	13.5
China	0.095	24.4	3.1	0.2	2.8	9.5	8.9
		100.0	12.5	0.8	11.4	38.9	36.4
Denmark	0.094	36.5	7.0	2.6	12.7	8.4	5.8
		100.0	19.3	7.2	34.7	23.0	15.8
France	0.132	24.2	5.4	3.0	4.6	7.4	3.7
		100.0	22.5	12.5	19.1	30.5	15.4
Germany	0.131	34.6	11.3	1.6	9.1	9.3	3.3
		100.0	32.8	4.6	26.4	26.8	9.4
Greece	0.125	54.3	20.4	0.2	16.5	11.7	5.6
		100.0	37.5	0.4	30.3	21.5	10.3
Hungary	0.157	46.3	9.0	2.9	6.8	18.3	9.3
		100.0	19.5	6.3	14.7	39.5	20.0
Italy	0.133	35.2	7.7	2.7	9.2	10.8	4.8
		100.0	21.8	7.6	26.2	30.7	13.7
Korea	0.090	16.8	0.3	0.3	2.8	8.3	5.1
		100.0	1.8	2.0	16.6	49.6	30.1
Netherlands	0.104	30.7	6.5	0.4	14.7	8.3	0.9
		100.0	21.1	1.2	48.0	26.9	2.8
New Zealand	0.103	37.4	7.3	8.1	10.6	5.0	6.4
		100.0	19.5	21.7	28.3	13.4	17.2
Slovenia	0.136	54.3	13.0	9.3	14.6	11.9	5.5
		100.0	24.0	17.1	26.8	21.9	10.1
Spain	0.173	21.5	5.1	0.6	5.5	7.7	2.7
		100.0	23.5	2.9	25.5	35.7	12.5
Sweden	0.103	43.9	2.6	2.6	9.6	16.6	12.6
		100.0	5.9	5.9	21.8	37.7	28.6
Thailand	0.108	14.6	1.5	0.0	2.2	8.4	2.7
		100.0	10.2	0.0	15.1	57.2	18.5
United Kingdom	0.110	35.0	7.1	1.6	9.7	9.6	7.0
		100.0	20.3	4.5	27.7	27.4	20.1
United States	0.112	42.6	8.2	4.3	13.8	7.8	8.5
		100.0	19.3	10.1	32.5	18.2	19.9

* $p < 0.05$ in all countries

Table 5.4 Health inequality profile of 17 countries by socio-demographic and quality of life dimensions (explained share in absolute and relative percentages)

	Inequality index*	Explained share	Gender	Age	Education	Mobility	Self-care	Usual activities	Pain/discomfort	Anxiety/ depression
Belgium	0.126	26.8	0.0	3.8	0.0	4.3	3.4	7.8	4.2	3.4
		100.0	0.0	14.0	0.0	16.1	12.6	29.0	15.5	12.7
China	0.095	36.6	0.1	11.5	4.1	2.3	0.2	2.4	7.4	8.6
		100.0	0.3	31.3	11.3	6.2	0.7	6.5	20.3	23.4
Denmark	0.094	38.4	0.1	1.6	1.7	7.1	2.4	12.0	8.1	5.5
		100.0	0.1	4.2	4.3	18.5	6.3	31.1	21.1	14.4
France	0.132	28.6	0.0	7.0	0.7	3.5	2.9	4.5	6.1	4.0
		100.0	0.0	24.5	2.4	12.1	10.0	15.7	21.4	13.8
Germany	0.131	39.4	0.0	9.0	0.3	8.3	1.3	8.7	8.5	3.4
		100.0	0.0	22.9	0.7	21.1	3.2	22.0	21.4	8.7
Greece	0.126	55.2	0.1	2.6	0.3	20.4	0.0	15.4	10.4	6.0
		100.0	0.1	4.7	0.5	37.1	0.0	27.9	18.9	10.8
Hungary	0.157	50.6	0.0	9.4	1.2	6.6	2.4	5.9	15.8	9.2
		100.0	0.0	18.7	2.3	13.1	4.8	11.8	31.3	18.1
Italy	0.133	38.8	0.0	8.0	0.1	5.6	2.5	8.7	9.1	4.8
		100.0	0.0	20.5	0.2	14.5	6.4	22.4	23.5	12.4
Korea	0.090	19.3	0.0	0.0	1.5	0.4	0.4	2.7	9.0	5.3
		100.0	0.0	0.0	7.9	2.1	2.0	14.0	46.6	27.4
Netherlands	0.104	31.4	0.0	1.4	0.4	5.7	0.4	14.7	8.0	0.9
		100.0	0.0	4.4	1.2	18.2	1.2	46.7	25.4	2.8
New Zealand	0.103	38.9	0.1	0.0	0.1	8.1	8.1	10.6	5.3	6.5
		100.0	0.2	0.0	0.3	20.8	20.9	27.3	13.8	16.8
Slovenia	0.136	57.7	0.3	4.1	6.2	8.8	7.4	13.9	11.3	5.7
		100.0	0.5	7.2	10.7	15.3	12.7	24.2	19.6	9.9
Spain	0.173	22.8	0.1	2.8	0.1	4.0	0.6	5.2	7.2	2.7
		100.0	0.6	12.4	0.6	17.5	2.5	22.9	31.6	12.0

Sweden	0.104	44.4	0.0	0.4	0.3	2.4	2.5	9.7	16.3	12.8
Thailand ^a	0.108	100.0	0.1	0.9	0.7	5.4	5.6	21.9	36.7	28.8
United Kingdom	0.110	15.4	0.4	0.2	-	1.5	0.0	2.1	8.4	2.9
United States	0.112	100.0	2.3	1.0	-	9.5	0.0	13.9	54.7	18.6
		35.9	0.0	1.1	1.3	6.3	1.5	9.8	8.9	6.9
		100.0	0.0	3.0	3.7	17.7	4.3	27.2	24.7	19.3
		43.1	0.0	1.1	0.5	7.6	4.0	13.9	7.4	8.5
		100.0	0.0	2.6	1.2	17.5	9.4	32.2	17.3	19.8

^a $p < 0.05$ in all countries

^aEducation variable is not available in Thailand

5.4 Conclusions

Evidence from these analyses shows that inequalities in self-reported health measured by the EQ-5D exist across many countries despite different demographic, economic and cultural characteristics. The individual health inequality profile of each country deserves the attention of policy makers to promote greater equity.

Both the analysis of odds ratios and concentration indices showed that age is the most important overall predictor of experiencing lower EQ VAS and problems on mobility, self-care, usual activities, and pain/discomfort in all countries. Gender does play an additional role, although its role is much smaller. Having attained at least a medium level of education, adjusted for age and gender, translated into lower odds of reporting problems on any dimension of EQ-5D in almost all surveyed countries. However, this relationship seemed to possess some country-specific traits that deserve the attention of policy makers.

In addition, the decomposition analysis of the concentration index provided a unique insight into the role of each individual EQ-5D dimension in explaining overall inequalities in EQ VAS. This analysis, in particular, highlighted the widespread importance of problems with pain/discomfort and usual activities in explaining inequalities in overall self-assessed health.

Finally, it has to be noted that the above results should not be used for ranking countries based on health inequality among their populations. Neither was the analysis designed to account for potential differences in demographic or other sample characteristics across countries. Each country should consider the results within the light of their own social and health care context. Further data collection and research by population subgroups that were not included in this study – such as social, ethnic, or patient groups – could help prioritize and further refine inequality reduction programs.

Another limitation of this study derives from the simple, generic nature of the EQ-5D questionnaire. The domains described by the EQ-5D-3L are generic and response options are limited to three levels. While these characteristics make the EQ-5D feasible to administer in large population surveys, they also lead to some limitations in interpreting results. For example, it is not possible to determine what proportion of reported pain related to acute, sub-acute, or chronic pain, or what were the key types of usual activities people had problem with. Targeted research along each important quality of life domain could further help understand in-depth characteristics of inequalities and identify strategies to tackle them efficiently.

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Annex 1: EQ-5D Population Norms – National Surveys

Argentina

Source: Ministry of Health of Argentina (2005)

Number of respondents

Age	18–24	25–34	35–44	45–54	55–64	65–74	75+	Total
Total	5,957	9,059	8,213	6,690	5,078	3,686	2,709	41,392
Males	2,829	3,951	3,569	3,008	2,171	1,350	949	17,827
Females	3,128	5,108	4,644	3,682	2,907	2,336	1,760	23,565

EQ VAS (self-rated health)

EQ-VAS (self-rated)		Age							Total
		18–24	25–34	35–44	45–54	55–64	65–74	75+	
Total	Mean	82.0	79.4	77.2	74.4	69.5	67.9	62.2	75.3
	Standard error	0.5	0.4	0.4	0.5	0.6	0.6	1.0	0.2
	25th percentile	75	70	70	70	60	50	50	70
	50th percentile	85	80	80	80	70	70	60	80
	75th percentile	90	90	90	90	80	80	80	90
Males	Mean	83.9	81.1	79.3	75.9	70.3	69.6	64.2	77.3
	Standard error	0.6	0.5	0.6	0.8	0.8	0.9	1.8	0.3
	25th percentile	80	70	70	70	60	60	50	70
	50th percentile	90	80	80	80	70	70	70	80
	75th percentile	90	90	90	90	80	80	80	90
Females	Mean	79.9	77.9	75.5	72.9	68.8	66.5	60.8	73.6
	Standard error	0.6	0.6	0.6	0.7	0.8	0.8	1.1	0.3
	25th percentile	70	70	70	60	50	50	50	60
	50th percentile	80	80	80	80	70	70	60	80
	75th percentile	90	90	90	80	80	80	80	90

Problems reported by dimension (raw numbers, weighted proportions)

	Age													
	18–24		25–34		35–44		45–54		55–64		65–74		75+	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Total														
Mobility	5,800	97.3	8,743	96.6	7,715	94.6	5,960	90.9	4,084	82.5	2,592	74.0	1,486	56.5
Some problems	142	2.6	303	3.3	477	5.2	709	8.9	969	17.2	1,051	24.8	1,140	40.8
Confined to bed	15	0.2	13	0.1	21	0.3	21	0.2	25	0.4	43	1.3	83	2.7
Self-care	5,917	98.8	8,996	99.1	8,130	98.3	6,557	98.4	4,892	97.1	3,409	93.4	2,234	83.6
Some problems	30	1.1	50	0.8	71	1.6	117	1.5	174	2.8	251	5.1	382	13.5
Unable to	10	0.1	13	0.0	12	0.1	16	0.1	12	0.1	26	1.4	93	2.9
Usual activities	5,794	97.4	8,769	96.6	7,775	95.6	6,103	93.8	4,359	87.8	2,965	82.2	1,769	68.0
Some problems	153	2.6	278	3.1	416	4.2	565	6.0	677	11.6	651	15.9	770	27.0
Unable to	10	0.1	12	0.3	22	0.2	22	0.2	42	0.5	70	2.0	170	4.9
Pain/discomfort	4,804	83.0	6,996	78.0	5,797	71.1	4,161	65.6	2,843	60.7	1,804	53.3	1,064	41.9
Some	1,076	16.1	1,890	19.7	2,150	26.2	2,176	29.3	1,873	34.5	1,565	39.5	1,305	45.0
Extreme	77	0.9	173	2.4	266	2.7	353	5.0	362	4.8	317	7.2	340	13.2
Anxiety/depression	4,922	83.2	7,288	79.9	6,238	76.4	4,929	74.8	3,668	74.5	2,623	73.8	1,882	69.4
Some	918	14.9	1,545	17.9	1,726	20.9	1,503	22.0	1,150	20.8	879	21.8	680	25.2
Extreme	117	1.9	226	2.3	249	2.7	258	3.1	260	4.7	184	4.4	147	5.3

	Age													
	18-24		25-34		35-44		45-54		55-64		65-74		75+	
Males	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Mobility														
No problems	2,757	97.5	3,817	97.0	3,399	95.4	2,773	92.5	1,826	84.9	992	78.4	574	65.2
Some problems	65	2.4	130	3.0	161	4.5	230	7.4	336	14.9	339	20.4	354	32.8
Confined to bed	7	0.1	4	0.1	9	0.1	5	0.1	9	0.2	19	1.2	21	2.0
Self-care														
No problems	2,812	99.2	3,922	99.3	3,537	99.2	2,965	98.2	2,103	97.4	1,262	93.1	821	86.9
Some problems	12	0.8	21	0.7	28	0.8	36	1.7	61	2.5	77	4.9	98	10.4
Unable to	5	0.1	8	0.0	4	0.1	7	0.1	7	0.1	11	1.9	30	2.7
Usual activities														
No problems	2,750	97.5	3,845	96.9	3,433	96.6	2,854	95.8	1,919	89.6	1,121	85.8	694	78.9
Some problems	72	2.4	98	3.0	128	3.3	144	4.0	235	10.1	204	12.4	208	17.0
Unable to	7	0.1	8	0.1	8	0.1	10	0.2	17	0.3	25	1.8	47	4.1
Pain/discomfort														
No	2,405	87.0	3,230	81.0	2,781	78.0	2,085	70.5	1,380	65.5	774	61.1	433	48.3
Some	406	12.6	672	17.5	715	19.9	823	24.7	673	31.1	490	32.4	420	40.3
Extreme	18	0.4	49	1.5	73	2.1	100	4.8	118	3.4	86	6.5	96	11.4
Anxiety/depression														
No	2,420	85.8	3,347	82.4	2,927	82.2	2,397	79.8	1,663	76.9	1,034	76.9	714	74.6
Some	371	12.9	535	15.7	590	16.4	536	18.0	425	18.4	276	20.6	202	21.2
Extreme	38	1.4	69	1.8	52	1.5	75	2.3	83	4.7	40	2.4	33	4.2

(continued)

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	Age													
	18-24		25-34		35-44		45-54		55-64		65-74		75+	
Females	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Mobility														
No problems	3,043	96.9	4,926	96.3	4,316	93.9	3,187	89.4	2,258	80.2	1,600	70.6	912	50.7
Some problems	77	2.8	173	3.6	316	5.8	479	10.3	633	19.3	712	28.1	786	46.1
Confined to bed	8	0.3	9	0.2	12	0.4	16	0.4	16	0.5	24	1.3	62	3.2
Self-care														
No problems	3,105	98.5	5,074	99.0	4,593	97.5	3,592	98.7	2,789	96.7	2,147	93.7	1,413	81.4
Some problems	18	1.5	29	1.0	43	2.3	81	1.3	113	3.2	174	5.3	284	15.6
Unable to	5	0.0	5	0.0	8	0.2	9	0.1	5	0.1	15	1.0	63	3.1
Usual activities														
No problems	3,044	97.2	4,924	96.3	4,342	94.7	3,249	91.8	2,440	86.1	1,844	79.5	1,075	60.7
Some problems	81	2.8	180	3.2	288	5.0	421	8.0	442	13.2	447	18.5	562	33.8
Unable to	3	0.0	4	0.5	14	0.3	12	0.2	25	0.7	45	2.1	123	5.5
Pain/discomfort														
No	2,399	78.6	3,766	75.4	3,016	65.2	2,076	60.9	1,463	56.0	1,030	47.2	631	37.5
Some	670	20.1	1,218	21.6	1,435	31.6	1,353	33.8	1,200	37.9	1,075	45.0	885	48.1
Extreme	59	1.4	124	3.1	193	3.2	253	5.3	244	6.1	231	7.8	244	14.4
Anxiety/depression														
No	2,502	80.3	3,941	77.7	3,311	71.5	2,532	70.0	2,005	72.2	1,589	71.4	1,168	66.0
Some	547	17.2	1,010	19.7	1,136	24.7	967	26.0	725	23.0	603	22.7	478	28.0
Extreme	79	2.5	157	2.6	197	3.8	183	4.0	177	4.8	144	5.9	114	6.1

EQ-5D index value (VAS value set)

EQ-5D index value (VAS value set)		Age							Total
		18–24	25–34	35–44	45–54	55–64	65–74	75+	
Total	Mean	0.928	0.911	0.888	0.867	0.837	0.793	0.712	0.871
	Standard error	0.003	0.004	0.004	0.005	0.006	0.008	0.010	0.002
	25th percentile	0.84	0.84	0.81	0.81	0.72	0.62	0.51	0.81
	50th percentile	1.00	1.00	1.00	1.00	0.84	0.81	0.72	1.00
	75th percentile	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Males	Mean	0.941	0.923	0.913	0.887	0.856	0.819	0.761	0.893
	Standard error	0.004	0.005	0.005	0.007	0.009	0.012	0.016	0.003
	25th percentile	1.00	0.84	0.84	0.81	0.72	0.66	0.57	0.81
	50th percentile	1.00	1.00	1.00	1.00	1.00	0.84	0.81	1.00
	75th percentile	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Females	Mean	0.914	0.900	0.866	0.846	0.819	0.772	0.679	0.850
	Standard error	0.005	0.005	0.006	0.006	0.008	0.009	0.011	0.003
	25th percentile	0.84	0.81	0.81	0.72	0.72	0.61	0.50	0.72
	50th percentile	1.00	1.00	1.00	0.84	0.84	0.81	0.65	1.00
	75th percentile	1.00	1.00	1.00	1.00	1.00	1.00	0.84	1.00

Belgium

Source: ESEMeD; König et al. (2009)

Number of respondents

Age	18–24	25–34	35–44	45–54	55–64	65–74	75+	Total
Total	165	405	560	433	349	302	197	2,411
Males	74	205	283	215	179	145	87	1,188
Females	91	200	277	218	170	157	110	1,223

EQ VAS (self-rated health)

EQ-VAS (self-rated)		Age							Total
		18–24	25–34	35–44	45–54	55–64	65–74	75+	
Total	Mean	84.0	82.0	80.2	77.2	74.2	71.3	69.4	77.6
	Standard error	1.0	1.2	1.2	1.4	1.6	1.3	1.7	0.5
	25th percentile	80	80	80	70	70	65	60	70
	50th percentile	85	85	85	80	80	75	75	80
	75th percentile	90	95	90	90	90	85	80	90
Males	Mean	84.3	81.6	81.7	78.8	75.8	70.6	69.2	78.6
	Standard error	1.2	1.9	1.5	2.0	2.2	1.9	2.8	0.8
	25th percentile	80	80	80	75	70	65	60	70
	50th percentile	85	85	85	80	80	75	75	80
	75th percentile	90	90	90	90	90	85	80	90
Females	Mean	83.7	82.5	78.7	75.4	72.4	71.7	69.6	76.7
	Standard error	1.7	1.5	1.9	2.0	2.3	1.8	2.1	0.8
	25th percentile	80	80	75	70	70	65	60	70
	50th percentile	87	88	85	80	80	75	70	80
	75th percentile	95	95	90	90	90	80	80	90

Males		Age													
		18-24		25-34		35-44		45-54		55-64		65-74		75+	
		n	%	n	%	n	%	n	%	n	%	n	%	n	%
Mobility	No problems	68	91.4	202	97.7	269	94.6	190	89.0	159	90.5	115	75.0	63	64.7
	Some problems	6	8.6	2	0.6	12	4.8	22	10.2	20	9.5	29	24.7	24	35.3
	Confined to bed	0	0.0	1	1.6	2	0.6	3	0.7	0	0.0	1	0.3	0	0.0
Self-care	No problems	73	99.1	202	97.8	276	98.0	204	93.9	174	97.4	139	94.6	79	90.4
	Some problems	1	0.9	1	0.3	5	1.4	10	5.8	5	2.6	6	5.4	7	8.3
	Unable to	0	0.0	2	1.8	2	0.6	1	0.3	0	0.0	0	0.0	1	1.2
Usual activities	No problems	73	97.4	196	95.7	263	93.1	190	87.0	158	88.6	124	81.7	67	77.0
	Some problems	1	2.6	8	4.1	15	5.4	22	12.3	19	10.3	18	15.8	14	16.4
	Unable to	0	0.0	1	0.2	5	1.4	3	0.6	2	1.1	3	2.5	6	6.5
Pain/discomfort	No	61	82.6	170	79.9	218	78.5	156	74.1	125	68.1	99	61.0	56	64.5
	Some	12	16.7	34	18.4	61	20.1	50	24.0	50	28.3	43	37.5	29	33.3
	Extreme	1	0.7	1	1.6	4	1.4	9	1.9	4	3.6	3	1.5	2	2.2
Anxiety/depression	No	70	94.7	193	94.6	270	95.1	208	97.8	164	92.9	138	95.4	83	95.1
	Some	4	5.3	9	4.5	9	2.8	6	2.0	14	6.8	7	4.6	4	4.9
	Extreme	0	0.0	3	0.9	4	2.0	1	0.2	1	0.3	0	0.0	0	0.0

(continued)

(continued)

	Age													
	18-24		25-34		35-44		45-54		55-64		65-74		75+	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Females														
Mobility														
No problems	89	99.0	182	92.2	257	93.6	190	85.1	141	81.3	119	76.7	61	49.4
Some problems	2	1.0	18	7.8	19	6.1	28	14.9	29	18.7	38	23.3	47	48.8
Confined to bed	0	0.0	0	0.0	1	0.3	0	0.0	0	0.0	0	0.0	2	1.8
Self-care														
No problems	90	99.6	194	97.5	273	98.9	212	94.9	162	96.5	146	92.4	84	75.6
Some problems	1	0.4	6	2.5	4	1.1	6	5.1	8	3.5	9	6.7	21	20.7
Unable to	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	0.8	5	3.7
Usual activities														
No problems	88	95.6	185	93.3	255	92.2	183	83.2	151	88.9	118	77.7	61	53.3
Some problems	3	4.4	12	5.5	22	7.8	32	16.0	19	11.1	38	22.0	38	35.5
Unable to	0	0.0	3	1.2	0	0.0	3	0.8	0	0.0	1	0.3	11	11.2
Pain/discomfort														
No	79	93.2	155	76.6	216	77.7	142	61.8	104	59.4	94	55.4	50	39.1
Some	12	6.8	41	21.9	56	20.7	69	34.9	63	38.5	59	43.0	53	53.4
Extreme	0	0.0	4	1.5	5	1.6	7	3.3	3	2.1	4	1.6	7	7.6
Anxiety/depression														
No	90	98.6	185	93.1	256	91.4	193	88.7	161	94.8	140	89.4	102	93.5
Some	1	1.4	13	6.4	18	7.2	21	9.9	6	3.6	14	8.8	7	5.2
Extreme	0	0.0	2	0.6	3	1.4	4	1.5	3	1.6	3	1.8	1	1.3

China**Source:** Household Health Survey (2010), Sun et al. (2011)**Number of respondents**

Age	18–24	25–34	35–44	45–54	55–64	65–74	75+	Total
Total	1,095	958	1,782	1,491	1,401	884	420	8,031
Males	549	450	853	721	675	444	184	3,876
Females	546	508	929	770	726	440	236	4,155

EQ VAS (self-rated health)

EQ-VAS (self-rated)		Age							Total
		18–24	25–34	35–44	45–54	55–64	65–74	75+	
Total	Mean	89.1	85.7	82.7	79.4	76.5	72.2	69.4	80.4
	Standard error	0.3	0.4	0.3	0.3	0.4	0.5	0.8	0.2
	25th percentile	80	80	80	70	70	60	60	73
	50th percentile	90	90	90	80	80	75	70	84
	75th percentile	100	90	90	90	90	80	80	90
Males	Mean	89.3	86.1	83.1	80.7	77.8	73.1	72.0	81.3
	Standard error	0.5	0.6	0.4	0.5	0.5	0.7	1.1	0.2
	25th percentile	85	80	80	75	70	65	60	75
	50th percentile	90	90	90	80	80	80	70	84
	75th percentile	100	90	90	90	90	80	80	90
Females	Mean	88.9	85.4	82.4	78.2	75.3	71.3	67.4	79.6
	Standard error	0.4	0.5	0.4	0.5	0.5	0.7	1.1	0.2
	25th percentile	80	80	80	70	70	60	60	73
	50th percentile	90	90	85	80	80	70	70	82
	75th percentile	98	90	90	90	85	80	80	89

Problems reported by dimension

	Age		18-24		25-34		35-44		45-54		55-64		65-74		75+	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Total	1,084	99.0	942	98.3	1,737	97.5	1,448	97.0	1,310	93.5	783	88.6	316	75.3		
Mobility																
No problems	10	0.9	14	1.5	41	2.3	42	2.8	87	6.2	94	10.6	95	22.6		
Some problems	1	0.1	2	0.2	4	0.2	3	0.2	4	0.3	7	0.8	9	2.1		
Confined to bed																
No problems	1,076	98.2	949	99.1	1,761	98.8	1,464	98.2	1,358	97.0	832	94.1	362	86.2		
Some problems	18	1.6	7	0.7	18	1.0	24	1.6	36	2.6	46	5.2	48	11.4		
Unable to	2	0.2	2	0.2	4	0.2	3	0.2	6	0.4	6	0.7	10	2.4		
Usual activities																
No problems	1,080	98.6	940	98.1	1,736	97.4	1,439	96.4	1,306	93.2	799	90.4	319	75.9		
Some problems	13	1.2	16	1.7	39	2.2	49	3.3	85	6.1	68	7.7	75	17.9		
Unable to	2	0.2	2	0.2	7	0.4	4	0.3	10	0.7	17	1.9	26	6.2		
Pain/discomfort																
No	1,073	98.0	919	95.9	1,688	94.7	1,331	89.3	1,170	83.5	698	79.0	296	70.5		
Some	22	2.0	37	3.9	89	5.0	155	10.4	224	16.0	176	19.9	119	28.3		
Extreme	0	0.0	2	0.2	5	0.3	4	0.3	7	0.5	10	1.1	5	1.2		
Anxiety/depression																
No	1,064	97.2	908	94.8	1,657	93.1	1,370	91.8	1,238	88.4	754	85.3	338	80.5		
Some	30	2.7	45	4.7	119	6.7	115	7.7	156	11.1	120	13.6	77	18.3		
Extreme	1	0.1	5	0.5	4	0.2	7	0.5	7	0.5	10	1.1	5	1.2		

(continued)

Females	Age													
	18-24		25-34		35-44		45-54		55-64		65-74		75+	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Mobility	540	98.9	502	98.8	903	97.2	744	96.6	678	93.4	374	85.0	175	74.2
No problems	6	1.1	6	1.2	24	2.6	24	3.1	46	6.3	62	14.1	52	22.0
Some problems	0	0.0	0	0.0	2	0.2	2	0.3	2	0.3	4	0.9	9	3.8
Confined to bed	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Self-care	536	98.1	504	99.2	918	98.8	757	98.3	704	97.0	410	93.1	198	83.9
No problems	9	1.7	4	0.8	9	1.0	11	1.4	21	2.9	28	6.4	31	13.1
Some problems	1	0.2	0	0.0	2	0.2	2	0.3	1	0.1	2	0.5	7	3.0
Unable to	538	98.5	498	98.0	902	97.1	735	95.4	675	92.9	390	88.6	172	72.9
Usual activities	7	1.3	10	2.0	25	2.7	32	4.2	47	6.5	40	9.1	44	18.6
No problems	1	0.2	0	0.0	2	0.2	3	0.4	4	0.6	10	2.3	20	8.5
Some problems	532	97.4	484	95.3	866	93.2	662	86.0	583	80.3	327	74.3	155	65.7
Unable to	14	2.6	23	4.5	59	6.4	104	13.5	138	19.0	108	24.6	76	32.2
Pain/discomfort	0	0.0	1	0.2	4	0.4	4	0.5	5	0.7	5	1.1	5	2.1
No	529	96.9	476	93.7	857	92.3	703	91.2	628	86.5	367	83.4	185	78.4
Some	17	3.1	29	5.7	71	7.6	62	8.1	95	13.1	68	15.5	47	19.9
Extreme	0	0.0	3	0.6	1	0.1	5	0.7	3	0.4	5	1.1	4	1.7

Denmark**Source:** Sørensen et al. (2009)**Number of respondents**

Age	18–24	25–34	35–44	45–54	55–64	65–74	75+	Total
Total	1,580	2,974	3,277	3,341	2,737	1,824	1,128	16,861
Males	733	1,358	1,475	1,615	1,347	862	510	7,900
Females	847	1,616	1,802	1,726	1,390	962	618	8,961

EQ VAS (self-rated health)*

EQ-VAS (self-rated)		Age							Total
		18–24	25–34	35–44	45–54	55–64	65–74	75+	
Total	Mean	86.2	87.9	85.8	83.0	81.6	78.3	76.2	83.7
	Standard error	0.5	0.3	0.4	0.5	0.5	0.7	1.0	0.2
	25th percentile	80	82	80	75	75	70	67.5	80
	50th percentile	90	90	90	89	85	80	80	90
	75th percentile	95	95	95	95	95	90	90	95
Males	Mean	86.2	88.1	85.7	82.5	82.3	79.6	75.6	83.8
	Standard error	0.8	0.5	0.6	0.7	0.7	1.0	1.5	0.3
	25th percentile	80	82	80	75	75	75	65.25	80
	50th percentile	90	90	90	85	85	83	80	90
	75th percentile	95	95	95	94	95	90	90	95
Females	Mean	86.1	87.7	85.9	83.5	80.9	77.1	76.7	83.5
	Standard error	0.8	0.5	0.5	0.6	0.7	1.0	1.3	0.3
	25th percentile	80	82.25	80	75	75	67	69	75
	50th percentile	90	90	90	90	85	80	80	90
	75th percentile	95	95	95	95	95	90	90	95

*N = 6,500; EQ VAS was included in two of three sub-studies

Males	Age													
	18-24		25-34		35-44		45-54		55-64		65-74		75+	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Mobility	716	97.7	1,311	96.5	1,388	94.1	1,484	91.9	1,195	88.7	701	81.3	340	66.7
Some problems	16	2.2	44	3.2	86	5.8	129	8.0	150	11.1	160	18.6	165	32.4
Confined to bed	1	0.1	3	0.2	1	0.1	2	0.1	2	0.1	1	0.1	5	1.0
Self-care	728	99.3	1,354	99.7	1,454	98.6	1,581	97.9	1,321	98.1	824	95.6	456	89.4
Some problems	4	0.5	4	0.3	16	1.1	33	2.0	22	1.6	31	3.6	45	8.8
Unable to	1	0.1	0	0.0	5	0.3	1	0.1	4	0.3	7	0.8	9	1.8
Usual activities	693	94.5	1,246	91.8	1,314	89.1	1,376	85.2	1,097	81.4	658	76.3	326	63.9
Some problems	35	4.8	104	7.7	137	9.3	205	12.7	214	15.9	161	18.7	145	28.4
Unable to	5	0.7	8	0.6	24	1.6	34	2.1	36	2.7	43	5.0	39	7.6
Pain/discomfort	583	79.5	1,070	78.8	1,030	69.8	1,059	65.6	807	59.9	505	58.6	269	52.7
Some	146	19.9	277	20.4	432	29.3	513	31.8	509	37.8	337	39.1	224	43.9
Extreme	4	0.5	11	0.8	13	0.9	43	2.7	31	2.3	20	2.3	17	3.3
Anxiety/depression	667	91.0	1,232	90.7	1,300	88.1	1,369	84.8	1,168	86.7	736	85.4	441	86.5
Some	62	8.5	118	8.7	171	11.6	239	14.8	175	13.0	122	14.2	63	12.4
Extreme	4	0.5	8	0.6	4	0.3	7	0.4	4	0.3	4	0.5	6	1.2

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	Age													
	18–24		25–34		35–44		45–54		55–64		65–74		75+	
Females	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Mobility														
No problems	815	96.2	1,543	95.5	1,681	93.3	1,565	90.7	1,183	85.1	762	79.2	379	61.3
Some problems	32	3.8	73	4.5	120	6.7	161	9.3	204	14.7	197	20.5	228	36.9
Confined to bed	0	0.0	0	0.0	1	0.1	0	0.0	3	0.2	3	0.3	11	1.8
Self-care														
No problems	843	99.5	1,607	99.4	1,782	98.9	1,694	98.1	1,350	97.1	903	93.9	541	87.5
Some problems	3	0.4	8	0.5	18	1.0	31	1.8	32	2.3	51	5.3	57	9.2
Unable to	1	0.1	1	0.1	2	0.1	1	0.1	8	0.6	8	0.8	20	3.2
Usual activities														
No problems	773	91.3	1,434	88.7	1,518	84.2	1,367	79.2	1,041	74.9	670	69.6	327	52.9
Some problems	71	8.4	163	10.1	248	13.8	305	17.7	303	21.8	238	24.7	202	32.7
Unable to	3	0.4	19	1.2	36	2.0	54	3.1	46	3.3	54	5.6	89	14.4
Pain/discomfort														
No	602	71.1	1,178	72.9	1,126	62.5	982	56.9	738	53.1	465	48.3	261	42.2
Some	242	28.6	425	26.3	634	35.2	684	39.6	607	43.7	450	46.8	321	51.9
Extreme	3	0.4	13	0.8	42	2.3	60	3.5	45	3.2	47	4.9	36	5.8
Anxiety/depression														
No	707	83.5	1,375	85.1	1,470	81.6	1,380	80.0	1,091	78.5	740	76.9	467	75.6
Some	131	15.5	232	14.4	318	17.6	323	18.7	285	20.5	212	22.0	143	23.1
Extreme	9	1.1	9	0.6	14	0.8	23	1.3	14	1.0	10	1.0	8	1.3

England**Source:** Health Survey for England (2008)**Number of respondents**

Age	18–24	25–34	35–44	45–54	55–64	65–74	75+	Total
Total	1,259	2,143	2,709	2,524	2,544	1,937	1,647	14,763
Males	572	937	1,197	1,130	1,181	900	676	6,593
Females	687	1,206	1,512	1,394	1,363	1,037	971	8,170

EQ VAS (self-rated health)

Not included in survey

	Age		18-24		25-34		35-44		45-54		55-64		65-74		75+	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Males																
Mobility																
No problems	515	96.6	830	95.8	1,011	90.6	938	88.8	892	79.1	594	68.6	327	51.3		
Some problems	18	3.1	36	4.0	107	9.4	120	10.9	237	20.6	265	31.0	307	48.1		
Confined to bed	1	0.3	1	0.1	0	0.0	3	0.3	3	0.2	4	0.4	4	0.6		
Self-care																
No problems	531	99.4	853	98.7	1,092	97.9	1,023	96.6	1,043	92.9	781	91.0	541	86.7		
Some problems	3	0.6	12	1.3	25	2.1	32	2.9	76	6.4	71	8.3	74	11.7		
Unable to	0	0.0	0	0.0	0	0.0	4	0.4	7	0.6	6	0.7	10	1.6		
Usual activities																
No problems	517	97.5	823	95.2	1,022	91.8	940	89.1	893	79.5	647	75.4	400	64.0		
Some problems	14	2.2	39	4.3	82	7.3	106	9.9	200	17.2	177	21.1	187	30.0		
Unable to	2	0.3	4	0.5	11	0.9	12	1.0	37	3.3	31	3.5	38	6.0		
Pain/discomfort																
No	457	85.7	726	84.3	825	73.7	722	68.2	686	60.7	457	52.7	268	42.4		
Some	74	13.8	129	14.8	271	24.4	307	29.1	377	33.4	359	41.7	326	51.6		
Extreme	3	0.5	8	0.8	22	1.9	31	2.8	69	5.8	49	5.6	38	6.0		
Anxiety/depression																
No	469	87.8	748	86.6	938	84.1	874	83.2	946	83.9	727	84.2	507	80.9		
Some	61	11.5	104	12.1	156	13.8	170	15.5	166	14.6	127	14.8	110	17.9		
Extreme	4	0.7	11	1.2	22	2.0	14	1.3	17	1.5	8	0.9	8	1.3		

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	Age		18-24		25-34		35-44		45-54		55-64		65-74		75+	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Females																
Mobility																
No problems	620	95.3	1,096	94.3	1,332	92.1	1,118	83.9	1,008	76.5	628	62.9	408	44.6		
Some problems	32	4.7	68	5.7	112	7.9	217	15.8	310	23.2	368	36.8	509	55.3		
Confined to bed	0	0.0	0	0.0	1	0.1	3	0.3	4	0.3	3	0.3	1	0.1		
Self-care																
No problems	646	99.0	1,145	98.4	1,413	98.0	1,262	94.6	1,212	92.2	882	89.3	752	83.9		
Some problems	7	1.0	18	1.5	30	2.0	70	5.0	98	7.4	104	10.4	134	14.9		
Unable to	0	0.0	1	0.1	0	0.0	4	0.4	4	0.4	3	0.3	11	1.2		
Usual activities																
No problems	612	93.9	1,088	93.8	1,305	90.3	1,121	84.7	1,035	78.8	704	71.0	498	55.2		
Some problems	39	6.0	71	5.9	133	9.2	186	13.4	245	18.5	259	26.3	355	39.2		
Unable to	1	0.2	4	0.3	8	0.5	26	1.9	36	2.6	26	2.7	52	5.7		
Pain/discomfort																
No	537	82.2	946	81.7	1,117	77.3	860	64.6	720	54.6	437	43.8	323	35.1		
Some	112	17.3	201	17.0	290	20.2	410	30.7	504	38.6	470	47.0	492	53.5		
Extreme	4	0.5	15	1.3	37	2.6	64	4.6	91	6.8	92	9.2	104	11.4		
Anxiety/depression																
No	527	81.0	930	80.1	1,164	80.8	1,020	76.7	1,004	76.3	760	76.6	664	73.7		
Some	117	17.6	203	17.7	256	17.7	271	20.1	274	20.7	211	21.8	220	24.6		
Extreme	9	1.4	28	2.2	23	1.5	42	3.1	39	3.0	16	1.6	15	1.6		

EQ-5D index value (European VAS value set)

EQ-5D index value (European VAS)		Age							Total
		18–24	25–34	35–44	45–54	55–64	65–74	75+	
Total	Mean	0.926	0.918	0.895	0.862	0.825	0.790	0.726	0.862
	Standard error	0.004	0.003	0.003	0.004	0.005	0.005	0.006	0.002
	25th percentile	0.78	0.78	0.78	0.78	0.71	0.69	0.62	0.78
	50th percentile	1.00	1.00	1.00	1.00	1.00	0.78	0.71	1.00
	75th percentile	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Males	Mean	0.936	0.929	0.894	0.877	0.839	0.813	0.755	0.877
	Standard error	0.006	0.005	0.005	0.006	0.007	0.008	0.009	0.002
	25th percentile	1.00	1.00	0.78	0.78	0.71	0.69	0.69	0.78
	50th percentile	1.00	1.00	1.00	1.00	1.00	0.78	0.78	1.00
	75th percentile	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Females	Mean	0.915	0.907	0.896	0.847	0.811	0.770	0.706	0.848
	Standard error	0.006	0.005	0.005	0.006	0.006	0.008	0.008	0.002
	25th percentile	0.78	0.78	0.78	0.78	0.71	0.69	0.60	0.78
	50th percentile	1.00	1.00	1.00	1.00	0.78	0.78	0.71	1.00
	75th percentile	1.00	1.00	1.00	1.00	1.00	1.00	0.85	1.00

EQ-5D index value (TTO value set)

EQ-5D index value (TTO value set)		Age							Total
		18–24	25–34	35–44	45–54	55–64	65–74	75+	
Total	Mean	0.933	0.923	0.898	0.862	0.819	0.784	0.717	0.862
	Standard error	0.004	0.004	0.004	0.005	0.006	0.006	0.007	0.002
	25th percentile	0.85	0.85	0.80	0.80	0.73	0.69	0.66	0.80
	50th percentile	1.00	1.00	1.00	1.00	1.00	0.80	0.74	1.00
	75th percentile	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Males	Mean	0.942	0.934	0.897	0.879	0.833	0.810	0.753	0.878
	Standard error	0.006	0.005	0.006	0.006	0.008	0.009	0.010	0.003
	25th percentile	1.00	1.00	0.80	0.80	0.74	0.73	0.69	0.80
	50th percentile	1.00	1.00	1.00	1.00	1.00	0.85	0.80	1.00
	75th percentile	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Females	Mean	0.924	0.913	0.900	0.846	0.804	0.760	0.692	0.847
	Standard error	0.006	0.005	0.005	0.007	0.008	0.009	0.010	0.003
	25th percentile	0.85	0.85	0.85	0.80	0.73	0.69	0.62	0.80
	50th percentile	1.00	1.00	1.00	1.00	0.85	0.80	0.73	1.00
	75th percentile	1.00	1.00	1.00	1.00	1.00	1.00	0.88	1.00

EQ-5D index value (VAS value set)

EQ-5D index value (VAS value set)		Age							Total
		18–24	25–34	35–44	45–54	55–64	65–74	75+	
Total	Mean	0.923	0.916	0.892	0.858	0.820	0.784	0.717	0.858
	Standard error	0.004	0.003	0.003	0.004	0.005	0.005	0.006	0.002
	25th percentile	0.78	0.78	0.76	0.76	0.70	0.66	0.63	0.76
	50th percentile	1.00	1.00	1.00	1.00	1.00	0.76	0.70	1.00
	75th percentile	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Males	Mean	0.934	0.928	0.890	0.873	0.835	0.807	0.746	0.873
	Standard error	0.006	0.005	0.005	0.006	0.007	0.008	0.009	0.002
	25th percentile	1.00	1.00	0.76	0.76	0.70	0.69	0.66	0.76
	50th percentile	1.00	1.00	1.00	1.00	1.00	0.77	0.76	1.00
	75th percentile	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Females	Mean	0.912	0.905	0.893	0.844	0.806	0.763	0.697	0.844
	Standard error	0.006	0.005	0.005	0.006	0.006	0.008	0.008	0.002
	25th percentile	0.78	0.78	0.78	0.76	0.70	0.66	0.60	0.75
	50th percentile	1.00	1.00	1.00	1.00	0.78	0.76	0.69	1.00
	75th percentile	1.00	1.00	1.00	1.00	1.00	1.00	0.81	1.00

Finland**Source:** HEALTH (2000), Aromaa and Koskinen (2004)**Number of respondents**

Age	18–24	25–34	35–44	45–54	55–64	65–74	75+	Total
Total	0	856	1,813	1,920	1,282	993	1,164	8,028
Males	0	415	901	963	612	422	324	3,637
Females	0	441	912	957	670	571	840	4,391

EQ VAS (self-rated health)

Not included in survey

Males	Age													
	18-24		25-34		35-44		45-54		55-64		65-74		75+	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Mobility														
No problems	-	-	315	95.5	661	92.6	662	81.7	352	67.8	206	57.9	70	28.5
Some problems	-	-	15	4.5	52	7.3	146	18.0	166	32.0	148	41.6	167	67.9
Confined to bed	-	-	0	0.0	1	0.1	2	0.2	1	0.2	2	0.6	9	3.7
Self-care														
No problems	-	-	327	98.5	699	97.9	760	93.8	478	91.9	312	86.9	143	58.4
Some problems	-	-	4	1.2	11	1.5	49	6.0	41	7.9	44	12.3	77	31.4
Unable to	-	-	1	0.3	4	0.6	1	0.1	1	0.2	3	0.8	25	10.2
Usual activities														
No problems	-	-	312	94.5	651	92.9	681	85.4	405	78.9	261	73.9	106	44.0
Some problems	-	-	17	5.2	44	6.3	108	13.6	101	19.7	79	22.4	89	36.9
Unable to	-	-	1	0.3	6	0.9	8	1.0	7	1.4	13	3.7	46	19.1
Pain/discomfort														
No	-	-	254	77.2	486	69.8	483	61.0	233	45.8	146	41.5	67	27.7
Some	-	-	75	22.8	205	29.5	301	38.0	267	52.5	196	55.7	165	68.2
Extreme	-	-	0	0.0	5	0.7	8	1.0	9	1.8	10	2.8	10	4.1
Anxiety/depression														
No	-	-	292	92.4	596	90.0	650	87.7	429	89.2	301	88.3	167	73.2
Some	-	-	19	6.0	54	8.2	84	11.3	49	10.2	39	11.4	59	25.9
Extreme	-	-	5	1.6	12	1.8	7	0.9	3	0.6	1	0.3	2	0.9

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		Age													
		18-24		25-34		35-44		45-54		55-64		65-74		75+	
Females		n	%	n	%	n	%	n	%	n	%	n	%	n	%
Mobility	No problems	-	-	366	95.8	740	93.6	721	84.4	409	68.2	259	53.5	132	21.5
	Some problems	-	-	16	4.2	50	6.3	132	15.5	191	31.8	222	45.9	434	70.7
	Confined to bed	-	-	0	0.0	1	0.1	1	0.1	0	0.0	3	0.6	48	7.8
Self-care	No problems	-	-	376	98.7	777	98.4	820	95.9	548	91.0	436	90.3	335	54.9
	Some problems	-	-	4	1.0	11	1.4	34	4.0	50	8.3	40	8.3	179	29.3
	Unable to	-	-	1	0.3	2	0.3	1	0.1	4	0.7	7	1.4	96	15.7
Usual activities	No problems	-	-	365	96.6	743	94.8	733	86.1	457	76.2	324	67.9	188	31.7
	Some problems	-	-	11	2.9	38	4.8	112	13.2	132	22.0	134	28.1	235	39.6
	Unable to	-	-	2	0.5	3	0.4	6	0.7	11	1.8	19	4.0	170	28.7
Pain/discomfort	No	-	-	281	74.5	504	65.2	451	53.5	234	39.8	136	28.9	154	25.8
	Some	-	-	95	25.2	264	34.2	381	45.2	344	58.5	325	69.1	415	69.4
	Extreme	-	-	1	0.3	5	0.6	11	1.3	10	1.7	9	1.9	29	4.8
Anxiety/depression	No	-	-	328	90.6	660	88.0	691	86.3	490	85.1	374	81.8	431	76.3
	Some	-	-	30	8.3	85	11.3	103	12.9	83	14.4	79	17.3	125	22.1
	Extreme	-	-	4	1.1	5	0.7	7	0.9	3	0.5	4	0.9	9	1.6

EQ-5D index value (European VAS value set)

EQ-5D index value (European VAS)		Age							Total
		18–24	25–34	35–44	45–54	55–64	65–74	75+	
Total	Mean	–	0.923	0.897	0.859	0.810	0.768	0.578	0.820
	Standard error	–	0.005	0.004	0.004	0.006	0.007	0.010	0.003
	25th percentile	–	0.78	0.78	0.78	0.71	0.69	0.34	0.71
	50th anxiety	–	1.00	1.00	1.00	0.78	0.78	0.66	0.78
	75th percentile	–	1.00	1.00	1.00	1.00	1.00	0.78	1.00
Males	Mean	–	0.927	0.899	0.866	0.824	0.781	0.617	0.843
	Standard error	–	0.008	0.006	0.006	0.008	0.011	0.017	0.004
	25th percentile	–	0.78	0.78	0.78	0.71	0.69	0.48	0.71
	50th percentile	–	1.00	1.00	1.00	0.78	0.78	0.69	1.00
	75th percentile	–	1.00	1.00	1.00	1.00	1.00	0.78	1.00
Females	Mean	–	0.919	0.894	0.852	0.798	0.757	0.562	0.802
	Standard error	–	0.007	0.005	0.006	0.007	0.009	0.012	0.004
	25th percentile	–	0.78	0.78	0.78	0.69	0.69	0.28	0.69
	50th percentile	–	1.00	1.00	0.78	0.78	0.78	0.64	0.78
	75th percentile	–	1.00	1.00	1.00	1.00	0.81	0.75	1.00

EQ-5D index value (VAS value set)

EQ-5D index value (VAS value set)		Age							Total
		18–24	25–34	35–44	45–54	55–64	65–74	75+	
Total	Mean	–	0.907	0.876	0.832	0.778	0.735	0.578	0.798
	Standard error	–	0.006	0.005	0.005	0.006	0.007	0.008	0.003
	25th percentile	–	0.73	0.73	0.68	0.67	0.63	0.41	0.67
	50th percentile	–	1.00	1.00	1.00	0.73	0.73	0.63	0.73
	75th percentile	–	1.00	1.00	1.00	1.00	1.00	0.73	1.00
Males	Mean	–	0.914	0.882	0.842	0.795	0.755	0.607	0.822
	Standard error	–	0.009	0.007	0.007	0.009	0.011	0.015	0.004
	25th percentile	–	0.73	0.73	0.68	0.67	0.63	0.44	0.67
	50th percentile	–	1.00	1.00	1.00	0.73	0.73	0.63	1.00
	75th percentile	–	1.00	1.00	1.00	1.00	1.00	0.73	1.00
Females	Mean	–	0.902	0.871	0.823	0.764	0.719	0.566	0.778
	Standard error	–	0.008	0.006	0.007	0.008	0.009	0.009	0.004
	25th percentile	–	0.73	0.73	0.68	0.63	0.63	0.40	0.63
	50th percentile	–	1.00	1.00	0.73	0.73	0.73	0.57	0.73
	75th percentile	–	1.00	1.00	1.00	1.00	0.78	0.68	1.00

France**Source:** ESEMeD; König et al. (2009)**Number of respondents**

Age	18–24	25–34	35–44	45–54	55–64	65–74	75+	Total
Total	233	510	655	610	395	319	170	2,892
Males	111	233	319	286	185	127	67	1,328
Females	122	277	336	324	210	192	103	1,564

EQ VAS (self-rated health)

EQ-VAS (self-rated)		Age							Total
		18–24	25–34	35–44	45–54	55–64	65–74	75+	
Total	Mean	83.9	83.2	78.7	77.9	74.2	68.1	61.5	76.8
	Standard error	1.6	0.9	0.9	1.0	1.1	1.4	2.4	0.5
	25th percentile	80	80	70	70	70	60	50	70
	50th percentile	90	90	80	80	80	70	70	80
	75th percentile	95	90	90	90	90	80	80	90
Males	Mean	83.5	82.0	79.2	78.0	73.1	70.0	63.7	77.4
	Standard error	2.7	1.4	1.1	1.3	1.6	1.9	2.9	0.6
	25th percentile	80	80	70	70	70	60	50	70
	50th percentile	90	85	80	80	80	70	70	80
	75th percentile	95	90	90	90	85	80	80	90
Females	Mean	84.4	84.4	78.2	77.7	75.3	66.7	60.3	76.3
	Standard error	1.6	1.2	1.5	1.5	1.3	1.9	3.4	0.7
	25th percentile	80	80	70	70	70	60	50	70
	50th percentile	90	90	80	80	80	70	60	80
	75th percentile	90	90	90	90	90	80	80	90

Problems reported by dimension (raw numbers, weighted proportions)

	Age													
	18–24		25–34		35–44		45–54		55–64		65–74		75+	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Total	227	98.4	492	96.7	610	93.1	556	93.1	313	80.0	213	67.8	93	53.9
Mobility	6	1.6	18	3.3	44	6.5	53	6.8	82	20.0	104	31.6	76	45.0
Some problems	0	0.0	0	0.0	1	0.3	1	0.1	0	0.0	2	0.6	1	1.1
Confined to bed	232	99.4	503	98.5	637	97.6	594	98.3	369	93.5	296	91.9	142	83.7
Self-care	1	0.6	6	1.4	17	2.4	15	1.5	26	6.5	21	7.4	25	13.3
Some problems	0	0.0	1	0.1	1	0.1	1	0.2	0	0.0	2	0.8	3	3.0
Unable to	228	96.4	487	96.3	605	92.7	565	94.3	339	84.7	265	82.1	114	68.2
Usual activities	5	3.6	22	3.5	46	6.4	42	5.4	53	14.7	49	15.8	52	28.3
Some problems	0	0.0	1	0.2	4	0.9	3	0.3	3	0.7	5	2.0	4	3.5
Unable to	193	81.4	389	80.0	450	67.2	398	66.8	211	55.1	146	45.5	67	37.7
Pain/discomfort	38	17.1	116	19.5	199	31.6	204	32.4	173	41.8	160	49.2	95	57.3
Some	2	1.5	5	0.5	6	1.1	8	0.8	11	3.2	13	5.3	8	4.9
Extreme	206	87.5	438	85.8	549	83.4	516	86.0	322	83.0	279	87.6	147	85.0
Anxiety/depression	24	10.0	69	13.5	100	15.7	88	13.4	66	15.8	36	11.5	21	14.0
Some	3	2.6	3	0.7	6	0.9	6	0.6	7	1.2	4	0.9	2	1.1
Extreme														

(continued)

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	Age													
	18-24		25-34		35-44		45-54		55-64		65-74		75+	
Males	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Mobility														
No problems	109	99.1	222	96.0	302	94.6	262	94.5	152	81.6	94	78.3	45	65.1
Some problems	2	0.9	11	4.0	17	5.4	23	5.3	33	18.4	33	21.7	22	34.9
Confined to bed	0	0.0	0	0.0	0	0.0	1	0.1	0	0.0	0	0.0	0	0.0
Self-care														
No problems	110	98.9	230	98.9	309	98.0	278	98.0	174	94.2	119	93.0	55	77.0
Some problems	1	1.1	3	1.1	9	1.9	7	1.6	11	5.8	8	7.0	12	23.0
Unable to	0	0.0	0	0.0	1	0.1	1	0.5	0	0.0	0	0.0	0	0.0
Usual activities														
No problems	109	96.6	219	95.2	293	92.0	265	94.7	163	86.4	112	89.8	48	69.4
Some problems	2	3.4	13	4.4	24	7.5	18	4.7	20	12.7	14	8.2	18	29.2
Unable to	0	0.0	1	0.4	2	0.5	3	0.6	2	1.0	1	2.1	1	1.4
Pain/discomfort														
No	90	79.4	181	81.4	220	68.1	192	67.2	107	57.8	65	53.9	29	43.0
Some	20	18.4	50	18.3	97	31.2	90	32.2	72	38.2	61	44.0	37	55.6
Extreme	1	2.2	2	0.3	2	0.7	4	0.6	6	3.9	1	2.1	1	1.4
Anxiety/depression														
No	97	86.2	207	89.1	267	83.1	251	86.8	155	83.7	116	90.3	57	84.6
Some	12	11.0	26	10.9	49	15.4	31	12.6	28	15.6	11	9.7	10	15.4
Extreme	2	2.8	0	0.0	3	1.5	4	0.6	2	0.7	0	0.0	0	0.0

Germany**Source:** ESEMeD; König et al. (2009)**Number of respondents**

Age	18–24	25–34	35–44	45–54	55–64	65–74	75+	Total
Total	264	551	838	637	597	418	247	3,552
Males	127	259	389	290	292	205	98	1,660
Females	137	292	449	347	305	213	149	1,892

EQ VAS (self-rated health)

EQ-VAS (self-rated)		Age							Total
		18–24	25–34	35–44	45–54	55–64	65–74	75+	
Total	Mean	85.3	84.0	82.5	78.5	72.9	68.6	60.5	77.3
	Standard error	1.1	0.8	0.6	0.7	1.0	1.1	1.5	0.4
	25th percentile	80	80	80	70	60	60	50	70
	50th percentile	90	90	88	80	80	70	65	80
	75th percentile	95	95	90	90	90	80	75	90
Males	Mean	84.6	84.2	82.3	78.0	73.2	72.0	61.5	78.4
	Standard error	1.7	1.2	0.8	1.1	1.3	1.3	2.2	0.5
	25th percentile	80	80	80	70	60	60	50	70
	50th percentile	90	90	85	80	80	75	60	80
	75th percentile	95	95	90	90	90	80	80	90
Females	Mean	86.0	83.8	82.7	79.0	72.5	66.2	60.0	76.3
	Standard error	1.4	1.0	0.9	1.0	1.4	1.5	1.9	0.5
	25th percentile	80	80	80	70	60	50	50	70
	50th percentile	90	90	90	80	80	70	65	80
	75th percentile	95	95	90	90	90	80	75	90

Problems reported by dimension (raw numbers, weighted proportions)

	Age													
	18–24		25–34		35–44		45–54		55–64		65–74		75+	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Total														
Mobility	257	98.1	529	95.6	794	94.6	547	85.5	468	76.1	276	66.5	115	45.8
Some problems	7	1.9	22	4.4	41	5.0	90	14.5	129	23.9	139	32.9	130	53.5
Confined to bed	0	0.0	0	0.0	3	0.4	0	0.0	0	0.0	3	0.6	2	0.7
Self-care	263	99.8	549	99.8	829	99.1	625	98.3	584	97.6	394	94.4	208	84.0
Some problems	1	0.2	2	0.2	7	0.7	9	1.1	12	2.1	21	4.9	35	14.6
Unable to	0	0.0	0	0.0	2	0.2	3	0.6	1	0.3	3	0.6	4	1.4
Usual activities	254	96.6	533	97.1	806	96.2	587	92.3	518	86.0	340	80.7	164	66.2
Some problems	10	3.4	18	2.9	29	3.5	45	6.9	78	13.8	73	18.2	78	31.9
Unable to	0	0.0	0	0.0	3	0.2	5	0.9	1	0.2	5	1.0	5	1.9
Pain/discomfort	230	84.8	453	83.0	680	81.0	461	72.6	389	65.5	241	56.1	117	47.8
Some	32	13.6	95	16.5	150	18.2	170	26.6	196	32.4	166	41.2	119	47.8
Extreme	2	1.6	3	0.4	8	0.8	6	0.8	12	2.1	11	2.7	11	4.5
Anxiety/depression	252	94.5	531	96.2	810	96.8	606	95.1	571	95.6	398	95.3	232	93.4
Some	12	5.5	18	3.5	27	3.1	29	4.5	23	3.9	17	4.0	14	6.2
Extreme	0	0.0	2	0.3	1	0.1	2	0.4	3	0.5	3	0.7	1	0.4

	Age													
	18-24		25-34		35-44		45-54		55-64		65-74		75+	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Males	126	99.5	251	95.9	364	93.8	240	82.5	231	75.9	143	74.5	57	57.5
Mobility														
No problems	1	0.5	8	4.1	23	5.7	50	17.5	61	24.1	60	24.6	40	41.7
Some problems	0	0.0	0	0.0	2	0.5	0	0.0	0	0.0	2	0.9	1	0.7
Confined to bed	127	100.0	258	99.8	386	99.4	285	98.5	285	97.0	196	96.3	87	88.9
Self-care														
No problems	0	0.0	1	0.2	3	0.6	3	0.7	6	2.4	7	2.8	10	10.4
Some problems	0	0.0	0	0.0	0	0.0	2	0.8	1	0.6	2	0.9	1	0.7
Unable to	123	96.1	254	98.4	374	96.0	259	90.0	260	88.4	169	83.3	73	73.4
Usual activities														
No problems	4	3.9	5	1.6	15	4.0	26	8.2	31	11.2	33	15.5	24	25.8
Some problems	0	0.0	0	0.0	0	0.0	5	1.8	1	0.4	3	1.2	1	0.7
Unable to	115	89.2	213	82.3	325	83.6	208	72.4	199	68.1	129	64.0	57	61.0
Pain/discomfort														
No	10	7.8	45	17.4	62	15.9	79	26.5	88	30.7	72	34.0	37	35.3
Some	2	3.1	1	0.3	2	0.4	3	1.1	5	1.2	4	2.0	4	3.8
Extreme	122	96.2	251	97.1	380	98.0	277	94.9	280	95.4	197	96.7	93	94.5
Anxiety/depression														
No	5	3.8	7	2.7	9	2.0	12	4.5	9	3.6	7	2.8	5	5.5
Some	0	0.0	1	0.3	0	0.0	1	0.6	3	1.0	1	0.6	0	0.0
Extreme														

(continued)

(continued)

	Age													
	18–24		25–34		35–44		45–54		55–64		65–74		75+	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Females	131	96.6	278	95.4	430	95.4	307	88.4	237	76.4	133	60.5	58	40.2
Mobility	6	3.4	14	4.6	18	4.3	40	11.6	68	23.6	79	39.1	90	59.2
No problems	0	0.0	0	0.0	1	0.3	0	0.0	0	0.0	1	0.4	1	0.7
Some problems	6	3.4	14	4.6	18	4.3	40	11.6	68	23.6	79	39.1	90	59.2
Confined to bed	0	0.0	0	0.0	1	0.3	0	0.0	0	0.0	1	0.4	1	0.7
Self-care	136	99.6	291	99.8	443	98.9	340	98.1	299	98.2	198	93.0	121	81.6
No problems	1	0.4	1	0.2	4	0.7	6	1.5	6	1.8	14	6.6	25	16.6
Some problems	0	0.0	0	0.0	2	0.4	1	0.4	0	0.0	1	0.4	3	1.8
Unable to	131	97.1	279	95.7	432	96.5	328	94.4	258	83.6	171	78.8	91	62.7
Usual activities	6	2.9	13	4.3	14	3.0	19	5.6	47	16.4	40	20.2	54	34.8
No problems	0	0.0	0	0.0	3	0.5	0	0.0	0	0.0	2	0.9	4	2.4
Some problems	6	2.9	13	4.3	14	3.0	19	5.6	47	16.4	40	20.2	54	34.8
Unable to	0	0.0	0	0.0	3	0.5	0	0.0	0	0.0	2	0.9	4	2.4
Pain/discomfort	115	80.2	240	83.8	355	78.3	253	72.8	190	62.8	112	50.2	60	41.4
No	22	19.8	50	15.6	88	20.6	91	26.7	108	34.2	94	46.6	82	53.7
Some	0	0.0	2	0.6	6	1.2	3	0.6	7	3.0	7	3.3	7	4.8
Extreme	130	92.8	280	95.3	430	95.6	329	95.4	291	95.8	201	94.3	139	92.8
Anxiety/depression	7	7.2	11	4.3	18	4.3	17	4.4	14	4.2	10	4.9	9	6.5
No	0	0.0	1	0.4	1	0.1	1	0.2	0	0.0	2	0.8	1	0.7
Some	7	7.2	11	4.3	18	4.3	17	4.4	14	4.2	10	4.9	9	6.5
Extreme	0	0.0	1	0.4	1	0.1	1	0.2	0	0.0	2	0.8	1	0.7

EQ-5D index value (VAS value set)

EQ-5D index value (VAS value set)		Age							Total
		18–24	25–34	35–44	45–54	55–64	65–74	75+	
Total	Mean	0.963	0.966	0.962	0.937	0.915	0.882	0.817	0.930
	Standard error	0.009	0.004	0.004	0.005	0.007	0.008	0.013	0.003
	25th percentile	1.00	1.00	1.00	0.90	0.87	0.85	0.75	0.90
	50th percentile	1.00	1.00	1.00	1.00	1.00	0.90	0.85	1.00
	75th percentile	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Males	Mean	0.966	0.969	0.968	0.930	0.919	0.906	0.854	0.941
	Standard error	0.015	0.005	0.005	0.009	0.009	0.011	0.018	0.003
	25th percentile	1.00	1.00	1.00	0.90	0.87	0.85	0.77	0.90
	50th percentile	1.00	1.00	1.00	1.00	1.00	1.00	0.90	1.00
	75th percentile	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Females	Mean	0.959	0.964	0.956	0.944	0.911	0.864	0.799	0.920
	Standard error	0.008	0.006	0.005	0.006	0.010	0.012	0.017	0.004
	25th percentile	0.90	1.00	1.00	0.90	0.85	0.79	0.75	0.90
	50th percentile	1.00	1.00	1.00	1.00	1.00	0.90	0.85	1.00
	75th percentile	1.00	1.00	1.00	1.00	1.00	1.00	0.90	1.00

Greece**Source:** Yfantopoulos et al. (1999)**Number of respondents**

Age	18–24	25–34	35–44	45–54	55–64	65–74	75+	Total
Total	86	97	78	83	60	48	12	464
Males	43	55	37	44	35	29	8	251
Females	43	42	41	39	25	19	4	213

EQ VAS (self-rated health)

EQ-VAS (self-rated)		Age							Total
		18–24	25–34	35–44	45–54	55–64	65–74	75+	
Total	Mean	83.5	85.8	84.7	78.0	69.9	67.0	56.0	79.0
	Standard error	1.5	1.5	1.9	1.9	2.9	2.9	7.8	0.9
	25th percentile	78	80	80	69.75	59.25	58	40	70
	50th percentile	89	90	90	80	73.5	70	53	83
	75th percentile	91	96.5	95	90	90	81.5	70	90
Males	Mean	85.0	85.2	86.5	78.7	77.5	65.3	61.1	80.1
	Standard error	1.9	1.8	2.9	2.5	3.4	3.2	11.0	1.1
	25th percentile	79.5	75	80	69	61	58	40	70
	50th percentile	90	89	90	82	84	61	59	85
	75th percentile	90	96	100	90	91	80	95	92
Females	Mean	82.1	86.5	83.1	77.2	59.4	69.5	47.0	77.8
	Standard error	2.4	2.5	2.4	2.8	4.4	5.4	9.6	1.4
	25th percentile	75	83.75	80	70	45	50	28.75	70
	50th percentile	85	90	87	80	60	79	46.5	80
	75th percentile	95	97	92.5	92	78.5	90	65.75	90

Problems reported by dimension

	Age													
	18-24		25-34		35-44		45-54		55-64		65-74		75+	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Total	71	97.3	84	98.8	64	92.8	68	87.2	40	69.0	31	68.9	6	50.0
Mobility	2	2.7	1	1.2	5	7.2	10	12.8	17	29.3	12	26.7	6	50.0
Confined to bed	0	0.0	0	0.0	0	0.0	0	0.0	1	1.7	2	4.4	0	0.0
Self-care	73	100.0	85	100.0	66	95.7	75	96.2	53	91.4	37	80.4	8	66.7
Some problems	0	0.0	0	0.0	3	4.3	3	3.8	5	8.6	7	15.2	4	33.3
Unable to	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	4.3	0	0.0
Usual activities	71	100.0	84	98.8	67	97.1	73	93.6	43	74.1	31	66.0	7	58.3
Some problems	0	0.0	1	1.2	2	2.9	5	6.4	15	25.9	15	31.9	5	41.7
Unable to	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	2.1	0	0.0
Pain/discomfort	74	92.5	83	94.3	67	91.8	69	85.2	39	65.0	29	61.7	6	50.0
Some	6	7.5	5	5.7	6	8.2	11	13.6	16	26.7	16	34.0	4	33.3
Extreme	0	0.0	0	0.0	0	0.0	1	1.2	5	8.3	2	4.3	2	16.7
Anxiety/depression	70	97.2	79	91.9	65	92.9	68	87.2	47	81.0	35	79.5	11	91.7
Some	1	1.4	6	7.0	4	5.7	8	10.3	9	15.5	6	13.6	1	8.3
Extreme	1	1.4	1	1.2	1	1.4	2	2.6	2	3.4	3	6.8	0	0.0

Males	Age													
	18-24		25-34		35-44		45-54		55-64		65-74		75+	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Mobility	38	97.4	48	98.0	31	88.6	37	90.2	28	82.4	17	63.0	4	50.0
Some problems	1	2.6	1	2.0	4	11.4	4	9.8	6	17.6	9	33.3	4	50.0
Confined to bed	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	3.7	0	0.0
Self-care	39	100.0	49	100.0	34	97.1	41	100.0	34	100.0	23	85.2	6	75.0
Some problems	0	0.0	0	0.0	1	2.9	0	0.0	0	0.0	3	11.1	2	25.0
Unable to	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	3.7	0	0.0
Usual activities	38	100.0	48	98.0	34	97.1	39	95.1	29	85.3	18	64.3	5	62.5
Some problems	0	0.0	1	2.0	1	2.9	2	4.9	5	14.7	10	35.7	3	37.5
Unable to	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Pain/discomfort	40	95.2	46	92.0	35	94.6	36	83.7	29	82.9	18	64.3	5	62.5
No	2	4.8	4	8.0	2	5.4	7	16.3	5	14.3	10	35.7	3	37.5
Some	0	0.0	0	0.0	0	0.0	0	0.0	1	2.9	0	0.0	0	0.0
Extreme	38	97.4	45	90.0	33	94.3	37	90.2	28	82.4	22	84.6	7	87.5
Anxiety/depression	1	2.6	4	8.0	1	2.9	2	4.9	5	14.7	2	7.7	1	12.5
Some	0	0.0	1	2.0	1	2.9	2	4.9	1	2.9	2	7.7	0	0.0
Extreme	0	0.0	1	2.0	1	2.9	2	4.9	1	2.9	2	7.7	0	0.0

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	Age													
	18–24		25–34		35–44		45–54		55–64		65–74		75+	
Females	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Mobility														
No problems	33	97.1	36	100.0	33	97.1	31	83.8	12	50.0	14	77.8	2	50.0
Some problems	1	2.9	0	0.0	1	2.9	6	16.2	11	45.8	3	16.7	2	50.0
Confined to bed	0	0.0	0	0.0	0	0.0	0	0.0	1	4.2	1	5.6	0	0.0
Self-care														
No problems	34	100.0	36	100.0	32	94.1	34	91.9	19	79.2	14	73.7	2	50.0
Some problems	0	0.0	0	0.0	2	5.9	3	8.1	5	20.8	4	21.1	2	50.0
Unable to	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	5.3	0	0.0
Usual activities														
No problems	33	100.0	36	100.0	33	97.1	34	91.9	14	58.3	13	68.4	2	50.0
Some problems	0	0.0	0	0.0	1	2.9	3	8.1	10	41.7	5	26.3	2	50.0
Unable to	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	5.3	0	0.0
Pain/discomfort														
No	34	89.5	37	97.4	32	88.9	33	86.8	10	40.0	11	57.9	1	25.0
Some	4	10.5	1	2.6	4	11.1	4	10.5	11	44.0	6	31.6	1	25.0
Extreme	0	0.0	0	0.0	0	0.0	1	2.6	4	16.0	2	10.5	2	50.0
Anxiety/depression														
No	32	97.0	34	94.4	32	91.4	31	83.8	19	79.2	13	72.2	4	100.0
Some	0	0.0	2	5.6	3	8.6	6	16.2	4	16.7	4	22.2	0	0.0
Extreme	1	3.0	0	0.0	0	0.0	0	0.0	1	4.2	1	5.6	0	0.0

EQ-5D index value (European VAS value set)

EQ-5D index value (European VAS)		Age							Total
		18–24	25–34	35–44	45–54	55–64	65–74	75+	
Total	Mean	0.979	0.972	0.957	0.916	0.817	0.793	0.739	0.913
	Standard error	0.010	0.010	0.016	0.019	0.032	0.040	0.074	0.009
	25th percentile	1.00	1.00	1.00	0.81	0.69	0.71	0.50	1.00
	50th percentile	1.00	1.00	1.00	1.00	1.00	0.85	0.70	1.00
	75th percentile	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Males	Mean	0.989	0.960	0.952	0.923	0.894	0.783	0.818	0.923
	Standard error	0.008	0.017	0.025	0.024	0.032	0.045	0.073	0.011
	25th percentile	1.00	1.00	1.00	0.90	0.81	0.71	0.67	1.00
	50th percentile	1.00	1.00	1.00	1.00	1.00	0.81	0.86	1.00
	75th percentile	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Females	Mean	0.967	0.988	0.963	0.907	0.708	0.809	0.580	0.902
	Standard error	0.020	0.008	0.021	0.029	0.057	0.076	0.153	0.015
	25th percentile	1.00	1.00	1.00	0.81	0.57	0.73	0.32	1.00
	50th percentile	1.00	1.00	1.00	1.00	0.75	1.00	0.52	1.00
	75th percentile	1.00	1.00	1.00	1.00	1.00	1.00	0.89	1.00

Hungary**Source:** Szende and Nemeth (2003)**Number of respondents**

Age	18–24	25–34	35–44	45–54	55–64	65–74	75+	Total
Total	742	907	958	1,022	821	668	385	5,503
Males	369	442	437	480	351	256	132	2,467
Females	373	465	521	542	470	412	253	3,036

EQ VAS (self-rated health)

EQ-VAS (self-rated)		Age							Total
		18–24	25–34	35–44	45–54	55–64	65–74	75+	
Total	Mean	83.3	81.1	75.3	69.1	63.7	59.0	53.9	71.1
	Standard error	0.5	0.5	0.6	0.6	0.7	0.8	1.1	0.3
	25th percentile	80	75	70	50	50	50	40	58
	50th percentile	85	85	80	70	65	60	50	75
	75th percentile	90	90	90	83	80	75	70	89
Males	Mean	84.1	81.9	75.8	70.2	65.7	62.5	55.2	73.3
	Standard error	0.6	0.7	0.8	0.9	1.1	1.3	1.9	0.4
	25th percentile	80	75	70	55	50	50	40	60
	50th percentile	85	85	80	73.5	70	60	50	80
	75th percentile	90	90	86.25	85	80	79.75	70	90
Females	Mean	82.5	80.3	74.9	68.0	62.2	56.8	53.2	69.3
	Standard error	0.7	0.7	0.8	0.8	0.9	1.1	1.4	0.4
	25th percentile	75	70	70	50	50	45	40	50
	50th percentile	85	84	80	70	60	50	50	70.5
	75th percentile	90	90	90	80	80	70	70	85

Problems reported by dimension

	Age													
	18–24		25–34		35–44		45–54		55–64		65–74		75+	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Total	725	99.0	853	95.4	860	91.4	790	78.8	553	69.7	386	60.4	160	42.4
Mobility	6	0.8	36	4.0	71	7.5	199	19.8	236	29.8	241	37.7	213	56.5
Some problems	1	0.1	5	0.6	10	1.1	14	1.4	4	0.5	12	1.9	4	1.1
Confined to bed	729	99.6	889	99.2	922	98.3	944	94.9	713	90.0	547	85.6	271	73.2
Self-care	3	0.4	4	0.4	14	1.5	41	4.1	69	8.7	74	11.6	85	23.0
Some problems	0	0.0	3	0.3	2	0.2	10	1.0	10	1.3	18	2.8	14	3.8
Unable to	717	98.2	871	97.1	872	93.3	826	83.3	611	77.7	452	71.2	206	55.8
Usual activities	10	1.4	22	2.5	52	5.6	145	14.6	146	18.6	145	22.8	131	35.5
Some problems	3	0.4	4	0.4	11	1.2	21	2.1	29	3.7	38	6.0	32	8.7
Unable to	625	85.5	726	81.5	649	69.5	534	53.9	355	45.2	248	38.9	114	30.4
Pain/discomfort	105	14.4	159	17.8	274	29.3	424	42.8	394	50.2	335	52.5	223	59.5
No	1	0.1	6	0.7	11	1.2	33	3.3	36	4.6	55	8.6	38	10.1
Some	604	83.0	675	76.1	653	70.1	598	60.5	415	52.9	337	53.1	167	45.0
Extreme	115	15.8	192	21.6	262	28.1	351	35.5	326	41.6	257	40.5	176	47.4
Anxiety/depression	9	1.2	20	2.3	17	1.8	40	4.0	43	5.5	41	6.5	28	7.5
No														
Some														
Extreme														

(continued)

(continued)

Males	Age													
	18–24		25–34		35–44		45–54		55–64		65–74		75+	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Mobility	360	99.2	421	96.1	393	91.4	384	81.4	245	73.1	163	66.5	63	48.8
Some problems	3	0.8	16	3.7	31	7.2	81	17.2	88	26.3	76	31.0	64	49.6
Confined to bed	0	0.0	1	0.2	6	1.4	7	1.5	2	0.6	6	2.4	2	1.6
Self-care	360	99.2	435	99.1	421	98.4	447	95.3	300	90.1	212	86.9	92	73.0
No problems	3	0.8	3	0.7	6	1.4	17	3.6	26	7.8	23	9.4	30	23.8
Some problems	0	0.0	1	0.2	1	0.2	5	1.1	7	2.1	9	3.7	4	3.2
Unable to	359	98.9	428	97.5	401	93.9	395	84.8	262	79.2	178	73.0	74	59.7
Usual activities	4	1.1	10	2.3	21	4.9	59	12.7	55	16.6	48	19.7	38	30.6
No problems	0	0.0	1	0.2	5	1.2	12	2.6	14	4.2	18	7.4	12	9.7
Some problems	313	86.2	370	84.7	315	73.8	282	60.6	181	54.4	119	49.0	44	34.1
Pain/discomfort	50	13.8	66	15.1	108	25.3	170	36.6	145	43.5	112	46.1	77	59.7
No	0	0.0	1	0.2	4	0.9	13	2.8	7	2.1	12	4.9	8	6.2
Extreme	319	87.9	363	83.1	328	76.5	314	67.4	208	63.2	156	64.7	61	48.0
Anxiety/depression	40	11.0	69	15.8	93	21.7	138	29.6	111	33.7	76	31.5	60	47.2
No	4	1.1	5	1.1	8	1.9	14	3.0	10	3.0	9	3.7	6	4.7
Some	315	87.9	358	81.9	320	75.8	300	66.6	200	61.2	147	58.5	54	42.3
Extreme	40	11.0	69	15.8	93	21.7	138	29.6	111	33.7	76	31.5	60	47.2

	Age													
	18–24		25–34		35–44		45–54		55–64		65–74		75+	
Females	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Mobility														
No problems	365	98.9	432	94.7	467	91.4	406	76.5	308	67.2	223	56.6	97	39.1
Some problems	3	0.8	20	4.4	40	7.8	118	22.2	148	32.3	165	41.9	149	60.1
Confined to bed	1	0.3	4	0.9	4	0.8	7	1.3	2	0.4	6	1.5	2	0.8
Self-care														
No problems	369	100.0	454	99.3	501	98.2	497	94.5	413	90.0	335	84.8	179	73.4
Some problems	0	0.0	1	0.2	8	1.6	24	4.6	43	9.4	51	12.9	55	22.5
Unable to	0	0.0	2	0.4	1	0.2	5	1.0	3	0.7	9	2.3	10	4.1
Usual activities														
No problems	358	97.5	443	96.7	471	92.7	431	81.9	349	76.7	274	70.1	132	53.9
Some problems	6	1.6	12	2.6	31	6.1	86	16.3	91	20.0	97	24.8	93	38.0
Unable to	3	0.8	3	0.7	6	1.2	9	1.7	15	3.3	20	5.1	20	8.2
Pain/discomfort														
No	312	84.8	356	78.4	334	65.9	252	47.9	174	38.5	129	32.7	70	28.5
Some	55	14.9	93	20.5	166	32.7	254	48.3	249	55.1	223	56.5	146	59.3
Extreme	1	0.3	5	1.1	7	1.4	20	3.8	29	6.4	43	10.9	30	12.2
Anxiety/depression														
No	285	78.1	312	69.3	325	64.6	284	54.3	207	45.5	181	45.9	106	43.4
Some	75	20.5	123	27.3	169	33.6	213	40.7	215	47.3	181	45.9	116	47.5
Extreme	5	1.4	15	3.3	9	1.8	26	5.0	33	7.3	32	8.1	22	9.0

EQ-5D index value (European VAS value set)

EQ-5D index value (European VAS)		Age							Total
		18–24	25–34	35–44	45–54	55–64	65–74	75+	
Total	Mean	0.934	0.911	0.873	0.802	0.755	0.716	0.639	0.823
	Standard error	0.005	0.005	0.006	0.007	0.008	0.011	0.014	0.003
	25th percentile	1.00	0.78	0.78	0.69	0.62	0.60	0.48	0.69
	50th percentile	1.00	1.00	1.00	0.78	0.78	0.71	0.69	1.00
	75th percentile	1.00	1.00	1.00	1.00	1.00	1.00	0.78	1.00
Males	Mean	0.946	0.933	0.886	0.828	0.798	0.762	0.666	0.857
	Standard error	0.006	0.006	0.009	0.010	0.013	0.017	0.024	0.004
	25th percentile	1.00	1.00	0.78	0.69	0.69	0.62	0.48	0.75
	50th percentile	1.00	1.00	1.00	1.00	0.78	0.78	0.69	1.00
	75th percentile	1.00	1.00	1.00	1.00	1.00	1.00	0.81	1.00
Females	Mean	0.922	0.889	0.861	0.780	0.724	0.687	0.626	0.796
	Standard error	0.007	0.008	0.008	0.010	0.011	0.013	0.017	0.004
	25th percentile	0.78	0.78	0.71	0.69	0.62	0.55	0.48	0.69
	50th percentile	1.00	1.00	1.00	0.78	0.71	0.69	0.66	0.78
	75th percentile	1.00	1.00	1.00	1.00	1.00	1.00	0.78	1.00

Italy**Source:** ESEMeD; König et al. (2009)**Number of respondents**

Age	18–24	25–34	35–44	45–54	55–64	65–74	75+	Total
Total	425	901	955	874	715	520	319	4,709
Males	201	454	472	434	352	273	133	2,319
Females	224	447	483	440	363	247	186	2,390

EQ VAS (self-rated health)

EQ-VAS (self-rated)		Age							Total
		18–24	25–34	35–44	45–54	55–64	65–74	75+	
Total	Mean	87.5	83.9	81.4	77.0	74.0	67.8	60.0	77.1
	Standard error	0.6	0.6	0.5	0.6	0.8	1.0	1.4	0.3
	25th percentile	80	80	80	70	60	60	50	70
	50th percentile	90	90	80	80	80	70	60	80
	75th percentile	98	95	90	90	90	80	80	90
Males	Mean	89.1	84.3	82.2	78.1	75.5	70.7	61.0	79.0
	Standard error	0.7	0.9	0.8	0.8	1.1	1.3	2.1	0.4
	25th percentile	80	80	80	70	70	60	50	70
	50th percentile	90	90	85	80	80	70	60	80
	75th percentile	99.5	95	90	90	90	85	80	90
Females	Mean	85.8	83.4	80.6	75.9	72.5	65.3	59.5	75.3
	Standard error	1.0	0.9	0.7	0.8	1.0	1.5	1.8	0.5
	25th percentile	80	80	70	70	60	50	50	70
	50th percentile	90	90	80	80	80	70	60	80
	75th percentile	95	95	90	90	90	80	80	90

Problems reported by dimension (raw numbers, weighted proportions)

Total	Age													
	18–24		25–34		35–44		45–54		55–64		65–74		75+	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Mobility	420	99.0	883	98.2	934	97.5	818	93.5	618	86.2	387	72.6	156	47.6
Some problems	4	0.8	16	1.6	21	2.5	54	6.3	95	13.6	132	27.2	157	50.4
Confined to bed	1	0.2	2	0.2	0	0.0	2	0.2	2	0.2	1	0.2	6	2.0
Self-care	422	99.3	892	99.1	952	99.6	860	98.4	684	95.7	481	91.2	253	77.2
Some problems	3	0.7	8	0.8	3	0.4	12	1.3	27	3.8	36	8.2	57	19.8
Unable to	0	0.0	1	0.1	0	0.0	2	0.2	4	0.5	3	0.6	9	3.0
Usual activities	416	98.2	876	97.3	934	97.5	813	92.7	627	87.6	417	78.2	182	55.1
Some problems	8	1.6	22	2.4	20	2.4	59	7.0	81	11.5	96	20.3	117	38.1
Unable to	1	0.2	3	0.4	1	0.1	2	0.3	7	0.9	7	1.5	20	6.8
Pain/discomfort	387	91.4	788	87.8	776	81.6	629	72.3	461	65.0	289	53.7	127	37.1
Some	37	8.5	108	11.6	176	18.2	236	26.6	242	33.3	210	41.5	175	57.1
Extreme	1	0.1	5	0.6	3	0.2	9	1.1	12	1.8	21	4.8	17	5.8
Anxiety/depression	404	94.8	852	94.5	896	93.6	802	91.6	631	88.3	448	84.5	268	82.9
Some	21	5.2	47	5.3	56	6.1	69	8.0	79	11.0	67	14.4	47	15.9
Extreme	0	0.0	2	0.2	3	0.3	3	0.4	5	0.7	5	1.0	4	1.2

Males	Age													
	18–24		25–34		35–44		45–54		55–64		65–74		75+	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Mobility	198	99.0	446	98.4	459	97.0	414	95.5	311	88.8	212	77.7	72	54.2
Some problems	2	0.7	7	1.5	13	3.0	20	4.5	39	10.7	61	22.3	61	45.8
Confined to bed	1	0.3	1	0.2	0	0.0	0	0.0	2	0.5	0	0.0	0	0.0
Self-care	200	99.7	450	99.3	470	99.6	431	99.4	337	95.7	261	95.0	114	84.9
No problems	1	0.3	3	0.5	2	0.4	3	0.6	12	3.5	12	5.0	18	14.3
Some problems	0	0.0	1	0.2	0	0.0	0	0.0	3	0.8	0	0.0	1	0.8
Unable to	197	98.4	441	97.3	464	98.1	415	95.5	317	90.5	230	83.7	89	67.0
Usual activities	3	1.3	11	2.2	7	1.7	18	4.1	32	8.7	42	15.9	37	27.9
Some problems	1	0.3	2	0.5	1	0.3	1	0.3	3	0.8	1	0.4	7	5.1
Unable to	187	93.7	400	88.5	403	85.0	339	79.2	250	70.9	175	64.8	65	47.1
Pain/discomfort	14	6.3	52	11.0	69	15.0	92	20.1	95	26.9	93	33.3	62	47.7
No	0	0.0	2	0.5	0	0.0	3	0.7	7	2.2	5	1.8	6	5.2
Some	195	97.5	439	96.8	450	95.3	412	94.8	320	91.1	248	90.4	121	91.8
Anxiety/depression	6	2.5	15	3.2	21	4.5	21	5.1	30	8.3	24	9.1	10	6.9
No	0	0.0	0	0.0	1	0.2	1	0.1	2	0.6	1	0.5	2	1.3
Some														
Extreme														

(continued)

(continued)

	Age													
	18–24		25–34		35–44		45–54		55–64		65–74		75+	
Females	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Mobility														
No problems	222	99.0	437	98.0	475	98.0	404	91.5	307	83.8	175	68.5	84	44.1
Some problems	2	1.0	9	1.7	8	2.0	34	8.0	56	16.2	71	31.2	96	52.9
Confined to bed	0	0.0	1	0.3	0	0.0	2	0.4	0	0.0	1	0.3	6	3.1
Self-care														
No problems	222	99.0	442	98.8	482	99.5	429	97.4	347	95.6	220	88.1	139	73.1
Some problems	2	1.0	5	1.2	1	0.5	9	2.1	15	4.2	24	10.9	39	22.7
Unable to	0	0.0	0	0.0	0	0.0	2	0.5	1	0.2	3	1.0	8	4.2
Usual activities														
No problems	219	98.0	435	97.2	470	96.9	398	89.8	310	84.9	187	73.8	93	48.7
Some problems	5	2.0	11	2.5	13	3.1	41	9.9	49	14.1	54	23.9	80	43.5
Unable to	0	0.0	1	0.3	0	0.0	1	0.3	4	1.0	6	2.3	13	7.8
Pain/discomfort														
No	200	89.0	388	87.0	373	78.1	290	65.4	211	59.5	114	44.6	62	31.8
Some	23	10.7	56	12.3	107	21.4	144	33.0	147	39.1	117	48.1	113	62.1
Extreme	1	0.3	3	0.7	3	0.5	6	1.5	5	1.4	16	7.3	11	6.1
Anxiety/depression														
No	209	91.9	413	92.1	446	92.0	390	88.4	311	85.6	200	79.7	147	78.2
Some	15	8.1	32	7.4	35	7.6	48	10.9	49	13.4	43	18.8	37	20.6
Extreme	0	0.0	2	0.5	2	0.4	2	0.7	3	0.9	4	1.5	2	1.2

EQ-5D index value (European VAS value set)

EQ-5D index value (European VAS)		Age							Total
		18–24	25–34	35–44	45–54	55–64	65–74	75+	
Total	Mean	0.969	0.956	0.943	0.910	0.877	0.823	0.724	0.899
	Standard error	0.005	0.004	0.004	0.005	0.007	0.010	0.014	0.003
	25th percentile	1.00	1.00	1.00	0.78	0.78	0.71	0.60	0.78
	50th percentile	1.00	1.00	1.00	1.00	1.00	0.81	0.75	1.00
	75th percentile	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Males	Mean	0.978	0.962	0.953	0.935	0.897	0.873	0.777	0.926
	Standard error	0.005	0.005	0.005	0.006	0.009	0.011	0.019	0.003
	25th percentile	1.00	1.00	1.00	0.78	0.78	0.78	0.69	0.78
	50th percentile	1.00	1.00	1.00	1.00	1.00	1.00	0.78	1.00
	75th percentile	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Females	Mean	0.959	0.950	0.933	0.884	0.858	0.783	0.695	0.874
	Standard error	0.007	0.006	0.006	0.008	0.009	0.015	0.018	0.004
	25th percentile	1.00	1.00	0.78	0.78	0.78	0.69	0.57	0.78
	50th percentile	1.00	1.00	1.00	1.00	1.00	0.78	0.71	1.00
	75th percentile	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

EQ-5D index value (TTO value set)

EQ-5D index value (TTO value set)		Age							Total
		18–24	25–34	35–44	45–54	55–64	65–74	75+	
Total	Mean	0.985	0.978	0.973	0.955	0.937	0.904	0.839	0.947
	Standard error	0.003	0.002	0.002	0.003	0.004	0.007	0.011	0.002
	25th percentile	1.00	1.00	1.00	0.90	0.90	0.86	0.78	0.90
	50th percentile	1.00	1.00	1.00	1.00	1.00	0.91	0.87	1.00
	75th percentile	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Males	Mean	0.988	0.981	0.978	0.969	0.944	0.935	0.880	0.962
	Standard error	0.003	0.003	0.002	0.003	0.006	0.006	0.012	0.002
	25th percentile	1.00	1.00	1.00	0.91	0.90	0.90	0.83	0.92
	50th percentile	1.00	1.00	1.00	1.00	1.00	1.00	0.90	1.00
	75th percentile	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Females	Mean	0.981	0.975	0.968	0.941	0.929	0.879	0.817	0.932
	Standard error	0.004	0.004	0.003	0.005	0.005	0.011	0.015	0.003
	25th percentile	1.00	1.00	0.91	0.90	0.90	0.85	0.77	0.90
	50th percentile	1.00	1.00	1.00	1.00	1.00	0.90	0.85	1.00
	75th percentile	1.00	1.00	1.00	1.00	1.00	1.00	0.92	1.00

Korea**Source:** Lee et al. (2009)**Number of respondents**

Age	18–24	25–34	35–44	45–54	55–64	65–74	75+	Total
Total	142	256	353	268	184	99	5	1,307
Males	69	138	174	132	81	44	3	641
Females	73	118	179	136	103	55	2	666

EQ VAS (self-rated health)

EQ-VAS (self-rated)		Age							Total
		18–24	25–34	35–44	45–54	55–64	65–74	75+	
Total	Mean	78.9	80.7	80.6	80.4	76.9	76.5	–	79.5
	Standard error	1.1	0.8	0.7	0.8	1.0	1.6	–	0.4
	25th percentile	70	70	70	70	70	70	–	70
	50th percentile	80	80	80	80	80	80	–	80
	75th percentile	90	90	90	90	90	90	–	90
Males	Mean	78.9	81.7	80.5	79.8	80.8	79.1	–	80.4
	Standard error	1.6	1.1	0.9	1.2	1.5	2.2	–	0.5
	25th percentile	70	73.75	70	70	70	70	–	70
	50th percentile	80	80	80	80	80	80	–	80
	75th percentile	90	90	90	90	90	90	–	90
Females	Mean	78.9	79.4	80.7	81.0	73.8	74.4	–	78.7
	Standard error	1.6	1.1	0.9	1.2	1.3	2.2	–	0.5
	25th percentile	70	70	70	75	70	70	–	70
	50th percentile	80	80	80	80	75	80	–	80
	75th percentile	90	90	90	90	80	90	–	90

Problems reported by dimension

	Age													
	18-24		25-34		35-44		45-54		55-64		65-74		75+	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Total	140	98.6	254	99.2	346	98.0	256	95.5	152	82.6	77	77.8	5	100.0
Mobility														
No problems	2	1.4	2	0.8	7	2.0	12	4.5	32	17.4	22	22.2	0	0.0
Some problems	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Confined to bed	142	100.0	256	100.0	353	100.0	268	100.0	180	97.8	93	93.9	5	100.0
Self-care														
No problems	0	0.0	0	0.0	0	0.0	0	0.0	4	2.2	6	6.1	0	0.0
Some problems	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Unable to	141	99.3	255	99.6	348	98.6	263	98.1	162	88.0	80	80.8	5	100.0
Usual activities														
No problems	1	0.7	1	0.4	5	1.4	5	1.9	20	10.9	19	19.2	0	0.0
Some problems	0	0.0	0	0.0	0	0.0	0	0.0	2	1.1	0	0.0	0	0.0
Unable to	128	90.1	236	92.2	312	88.4	207	77.2	105	57.1	40	40.4	1	20.0
Pain/discomfort														
No	13	9.2	20	7.8	39	11.0	58	21.6	71	38.6	54	54.5	4	80.0
Some	1	0.7	0	0.0	2	0.6	3	1.1	8	4.3	5	5.1	0	0.0
Extreme	126	88.7	222	86.7	312	88.4	223	83.2	129	70.1	65	65.7	2	40.0
Anxiety/depression														
No	16	11.3	34	13.3	39	11.0	43	16.0	54	29.3	34	34.3	3	60.0
Some	0	0.0	0	0.0	2	0.6	2	0.7	1	0.5	0	0.0	0	0.0
Extreme														

(continued)

(continued)

	Age													
	18-24		25-34		35-44		45-54		55-64		65-74		75+	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Males														
Mobility														
No problems	68	98.6	138	100.0	170	97.7	128	97.0	74	91.4	41	93.2	3	100.0
Some problems	1	1.4	0	0.0	4	2.3	4	3.0	7	8.6	3	6.8	0	0.0
Confined to bed	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Self-care														
No problems	69	100.0	138	100.0	174	100.0	132	100.0	80	98.8	44	100.0	3	100.0
Some problems	0	0.0	0	0.0	0	0.0	0	0.0	1	1.2	0	0.0	0	0.0
Unable to	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Usual activities														
No problems	69	100.0	138	100.0	171	98.3	130	98.5	74	91.4	41	93.2	3	100.0
Some problems	0	0.0	0	0.0	3	1.7	2	1.5	6	7.4	3	6.8	0	0.0
Unable to	0	0.0	0	0.0	0	0.0	0	0.0	1	1.2	0	0.0	0	0.0
Pain/discomfort														
No	64	92.8	130	94.2	157	90.2	104	78.8	61	75.3	24	54.5	1	33.3
Some	5	7.2	8	5.8	17	9.8	28	21.2	20	24.7	19	43.2	2	66.7
Extreme	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	2.3	0	0.0
Anxiety/depression														
No	67	97.1	128	92.8	161	92.5	111	84.1	64	79.0	33	75.0	1	33.3
Some	2	2.9	10	7.2	12	6.9	20	15.2	17	21.0	11	25.0	2	66.7
Extreme	0	0.0	0	0.0	1	0.6	1	0.8	0	0.0	0	0.0	0	0.0

	Age													
	18–24		25–34		35–44		45–54		55–64		65–74		75+	
Females	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Mobility														
No problems	72	98.6	116	98.3	176	98.3	128	94.1	78	75.7	36	65.5	2	100.0
Some problems	1	1.4	2	1.7	3	1.7	8	5.9	25	24.3	19	34.5	0	0.0
Confined to bed	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Self-care														
No problems	73	100.0	118	100.0	179	100.0	136	100.0	100	97.1	49	89.1	2	100.0
Some problems	0	0.0	0	0.0	0	0.0	0	0.0	3	2.9	6	10.9	0	0.0
Unable to	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Usual activities														
No problems	72	98.6	117	99.2	177	98.9	133	97.8	88	85.4	39	70.9	2	100.0
Some problems	1	1.4	1	0.8	2	1.1	3	2.2	14	13.6	16	29.1	0	0.0
Unable to	0	0.0	0	0.0	0	0.0	0	0.0	1	1.0	0	0.0	0	0.0
Pain/discomfort														
No	64	87.7	106	89.8	155	86.6	103	75.7	44	42.7	16	29.1	0	0.0
Some	8	11.0	12	10.2	22	12.3	30	22.1	51	49.5	35	63.6	2	100.0
Extreme	1	1.4	0	0.0	2	1.1	3	2.2	8	7.8	4	7.3	0	0.0
Anxiety/depression														
No	59	80.8	94	79.7	151	84.4	112	82.4	65	63.1	32	58.2	1	50.0
Some	14	19.2	24	20.3	27	15.1	23	16.9	37	35.9	23	41.8	1	50.0
Extreme	0	0.0	0	0.0	1	0.6	1	0.7	1	1.0	0	0.0	0	0.0

EQ-5D index value (European VAS value set)

EQ-5D index value (European VAS)		Age							Total
		18–24	25–34	35–44	45–54	55–64	65–74	75+	
Total	Mean	0.957	0.958	0.949	0.915	0.828	0.787	–	0.915
	Standard error	0.009	0.006	0.006	0.008	0.014	0.018	–	0.004
	25th percentile	1.00	1.00	1.00	0.78	0.71	0.69	–	0.78
	50th percentile	1.00	1.00	1.00	1.00	0.78	0.78	–	1.00
	75th percentile	1.00	1.00	1.00	1.00	1.00	1.00	–	1.00
Males	Mean	0.977	0.973	0.961	0.924	0.901	0.853	–	0.942
	Standard error	0.008	0.006	0.007	0.011	0.016	0.023	–	0.004
	25th percentile	1.00	1.00	1.00	0.78	0.78	0.78	–	1.00
	50th percentile	1.00	1.00	1.00	1.00	1.00	0.78	–	1.00
	75th percentile	1.00	1.00	1.00	1.00	1.00	1.00	–	1.00
Females	Mean	0.938	0.941	0.937	0.906	0.771	0.734	–	0.888
	Standard error	0.015	0.010	0.009	0.013	0.019	0.025	–	0.006
	25th percentile	1.00	1.00	1.00	0.78	0.69	0.62	–	0.78
	50th percentile	1.00	1.00	1.00	1.00	0.78	0.71	–	1.00
	75th percentile	1.00	1.00	1.00	1.00	1.00	0.81	–	1.00

EQ-5D index value (TTO value set)

EQ-5D index value (TTO value set)		Age							Total
		18–24	25–34	35–44	45–54	55–64	65–74	75+	
Total	Mean	0.981	0.982	0.976	0.960	0.909	0.888	–	0.958
	Standard error	0.004	0.003	0.003	0.004	0.008	0.011	–	0.002
	25th percentile	1.00	1.00	1.00	0.91	0.87	0.82	–	0.91
	50th percentile	1.00	1.00	1.00	1.00	0.91	0.91	–	1.00
	75th percentile	1.00	1.00	1.00	1.00	1.00	1.00	–	1.00
Males	Mean	0.990	0.989	0.981	0.966	0.949	0.931	–	0.973
	Standard error	0.004	0.003	0.004	0.005	0.009	0.012	–	0.002
	25th percentile	1.00	1.00	1.00	0.91	0.91	0.91	–	1.00
	50th percentile	1.00	1.00	1.00	1.00	1.00	0.91	–	1.00
	75th percentile	1.00	1.00	1.00	1.00	1.00	1.00	–	1.00
Females	Mean	0.972	0.974	0.971	0.955	0.879	0.853	–	0.944
	Standard error	0.007	0.005	0.004	0.007	0.012	0.016	–	0.004
	25th percentile	1.00	1.00	1.00	0.91	0.82	0.77	–	0.91
	50th percentile	1.00	1.00	1.00	1.00	0.91	0.87	–	1.00
	75th percentile	1.00	1.00	1.00	1.00	1.00	0.91	–	1.00

Netherlands**Source:** ESEMeD; König et al. (2009)**Number of respondents**

Age	18–24	25–34	35–44	45–54	55–64	65–74	75+	Total
Total	133	431	495	453	405	286	164	2,367
Males	52	197	199	206	188	133	55	1,030
Females	81	234	296	247	217	153	109	1,337

EQ VAS (self-rated health)

EQ-VAS (self-rated)		Age							Total
		18–24	25–34	35–44	45–54	55–64	65–74	75+	
Total	Mean	85.7	84.6	83.7	81.0	80.7	78.0	72.9	82.0
	Standard error	1.2	0.8	1.1	1.0	1.0	1.4	1.9	0.4
	25th percentile	80	75	75	75	75	70	60	75
	50th percentile	85	90	90	85	85	80	75	85
	75th percentile	95	95	95	95	95	90	90	95
Males	Mean	89.4	85.2	84.9	82.3	80.3	76.7	78.6	83.3
	Standard error	1.3	1.0	1.2	1.2	1.4	2.6	2.6	0.6
	25th percentile	85	80	80	75	70	70	70	77
	50th percentile	90	90	90	85	85	80	85	85
	75th percentile	95	95	95	95	90	90	90	95
Females	Mean	82.3	84.0	82.6	79.6	81.1	79.1	69.8	80.8
	Standard error	1.7	1.3	1.7	1.6	1.5	1.4	2.3	0.6
	25th percentile	75	75	75	70	75	70	60	75
	50th percentile	85	90	90	85	85	80	75	85
	75th percentile	95	95	95	95	95	90	80	95

	Age													
	18–24		25–34		35–44		45–54		55–64		65–74		75+	
Males	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Mobility														
No problems	52	100.0	187	95.8	192	96.6	186	90.4	160	84.2	114	85.1	43	83.9
Some problems	0	0.0	10	4.2	7	3.4	20	9.6	28	15.8	17	13.3	12	16.1
Confined to bed	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	1.7	0	0.0
Self-care														
No problems	52	100.0	196	99.5	198	99.2	199	97.5	184	98.4	125	95.4	51	94.9
Some problems	0	0.0	1	0.5	0	0.0	4	1.5	4	1.6	6	3.1	4	5.1
Unable to	0	0.0	0	0.0	1	0.8	3	1.0	0	0.0	2	1.5	0	0.0
Usual activities														
No problems	51	99.7	185	94.8	192	96.7	178	87.3	164	88.4	108	81.1	47	89.9
Some problems	1	0.3	11	4.7	7	3.3	25	10.3	22	11.0	22	16.4	7	7.9
Unable to	0	0.0	1	0.5	0	0.0	3	2.4	2	0.5	3	2.4	1	2.2
Pain/discomfort														
No	47	88.2	143	72.8	154	77.5	138	67.8	117	60.8	85	64.0	40	75.5
Some	5	11.8	51	26.2	42	21.3	60	27.6	65	36.9	37	27.6	13	20.7
Extreme	0	0.0	3	1.0	3	1.2	8	4.6	6	2.3	11	8.4	2	3.9
Anxiety/depression														
No	51	97.4	193	98.9	199	100.0	197	94.7	184	98.2	130	98.7	53	96.1
Some	1	2.6	3	0.7	0	0.0	8	4.7	4	1.8	2	0.7	1	2.2
Extreme	0	0.0	1	0.4	0	0.0	1	0.6	0	0.0	1	0.6	1	1.7

(continued)

New Zealand**Source:** Devlin et al. (2000)**Number of respondents**

Age	18–24	25–34	35–44	45–54	55–64	65–74	75+	Total
Total	91	177	272	268	220	178	121	1,327
Males	39	73	123	105	97	78	59	574
Females	52	104	149	163	123	100	62	753

EQ VAS (self-rated health)

EQ-VAS (self-rated)		Age							Total
		18–24	25–34	35–44	45–54	55–64	65–74	75+	
Total	Mean	82.4	82.3	82.5	82.2	81.6	79.6	70.8	80.8
	Standard error	1.3	1.0	0.8	1.0	1.1	1.2	1.8	0.4
	25th percentile	73	75	76.5	77	72	70	55	74
	50th percentile	82	85	85	87.5	85	80	75	85
	75th percentile	94	90.5	90	95	95	90	87.5	90
Males	Mean	81.1	82.5	81.2	82.5	80.6	78.6	73.5	80.4
	Standard error	1.9	1.8	1.2	1.5	1.7	2.0	2.6	0.7
	25th percentile	70	75	75	75	70	70	60	73
	50th percentile	80	85	85	85	80	80	79	85
	75th percentile	94	95	90	94.5	95	90	90	90
Females	Mean	83.3	82.3	83.7	82.0	82.3	80.3	68.1	81.2
	Standard error	1.8	1.2	1.1	1.3	1.5	1.5	2.4	0.6
	25th percentile	75.75	75.25	79	78	75	70	50	75
	50th percentile	85	84.5	87	89	90	81.5	70	85
	75th percentile	94.5	90	94.5	95	95	90	83.75	90

Problems reported by dimension

	Age													
	18–24		25–34		35–44		45–54		55–64		65–74		75+	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Total	84	96.6	163	93.1	238	88.8	233	87.3	159	75.4	117	66.5	48	40.7
Mobility														
No problems	3	3.4	12	6.9	29	10.8	34	12.7	51	24.2	59	33.5	68	57.6
Some problems	0	0.0	0	0.0	1	0.4	0	0.0	1	0.5	0	0.0	2	1.7
Confined to bed	87	100.0	174	98.9	263	98.5	257	96.6	198	94.3	160	93.0	97	84.3
Self-care														
No problems	0	0.0	2	1.1	3	1.1	9	3.4	12	5.7	12	7.0	14	12.2
Some problems	0	0.0	0	0.0	1	0.4	0	0.0	0	0.0	0	0.0	4	3.5
Unable to	82	94.3	158	89.8	233	86.9	221	82.8	162	76.4	117	66.9	50	42.4
Usual activities														
No problems	5	5.7	18	10.2	33	12.3	45	16.9	49	23.1	57	32.6	62	52.5
Some problems	0	0.0	0	0.0	2	0.7	1	0.4	1	0.5	1	0.6	6	5.1
Unable to	69	79.3	130	75.6	193	72.3	161	61.0	104	49.3	71	40.6	39	32.8
Pain/discomfort														
No	16	18.4	41	23.8	71	26.6	99	37.5	100	47.4	102	58.3	72	60.5
Some	2	2.3	1	0.6	3	1.1	4	1.5	7	3.3	2	1.1	8	6.7
Extreme	73	83.9	141	80.6	222	83.5	205	77.9	160	76.6	137	78.7	76	67.3
Anxiety/depression														
No	14	16.1	34	19.4	42	15.8	55	20.9	46	22.0	36	20.7	36	31.9
Some	0	0.0	0	0.0	2	0.8	3	1.1	3	1.4	1	0.6	1	0.9
Extreme														

(continued)

(continued)

	Age													
	18-24		25-34		35-44		45-54		55-64		65-74		75+	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Males														
Mobility														
No problems	34	91.9	68	95.8	106	86.9	96	92.3	72	78.3	46	59.7	26	44.8
Some problems	3	8.1	3	4.2	15	12.3	8	7.7	20	21.7	31	40.3	31	53.4
Confined to bed	0	0.0	0	0.0	1	0.8	0	0.0	0	0.0	0	0.0	1	1.7
Self-care														
No problems	37	100.0	72	100.0	119	98.3	99	95.2	86	92.5	67	88.2	51	89.5
Some problems	0	0.0	0	0.0	1	0.8	5	4.8	7	7.5	9	11.8	4	7.0
Unable to	0	0.0	0	0.0	1	0.8	0	0.0	0	0.0	0	0.0	2	3.5
Usual activities														
No problems	35	94.6	66	91.7	106	86.9	92	88.5	72	77.4	45	58.4	28	49.1
Some problems	2	5.4	6	8.3	14	11.5	12	11.5	20	21.5	31	40.3	26	45.6
Unable to	0	0.0	0	0.0	2	1.6	0	0.0	1	1.1	1	1.3	3	5.3
Pain/discomfort														
No	30	81.1	58	80.6	86	70.5	67	65.0	47	50.5	28	36.8	20	34.5
Some	6	16.2	14	19.4	34	27.9	34	33.0	42	45.2	46	60.5	35	60.3
Extreme	1	2.7	0	0.0	2	1.6	2	1.9	4	4.3	2	2.6	3	5.2
Anxiety/depression														
No	31	83.8	63	87.5	106	87.6	82	79.6	74	79.6	59	77.6	40	74.1
Some	6	16.2	9	12.5	14	11.6	20	19.4	18	19.4	16	21.1	14	25.9
Extreme	0	0.0	0	0.0	1	0.8	1	1.0	1	1.1	1	1.3	0	0.0

Females	Age													
	18-24		25-34		35-44		45-54		55-64		65-74		75+	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Mobility	50	100.0	95	91.3	132	90.4	137	84.0	87	73.1	71	71.7	22	36.7
Some problems	0	0.0	9	8.7	14	9.6	26	16.0	31	26.1	28	28.3	37	61.7
Confined to bed	0	0.0	0	0.0	0	0.0	0	0.0	1	0.8	0	0.0	1	1.7
Self-care	50	100.0	102	98.1	144	98.6	158	97.5	112	95.7	93	96.9	46	79.3
Some problems	0	0.0	2	1.9	2	1.4	4	2.5	5	4.3	3	3.1	10	17.2
Unable to	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	3.4
Usual activities	47	94.0	92	88.5	127	87.0	129	79.1	90	75.6	72	73.5	22	36.1
Some problems	3	6.0	12	11.5	19	13.0	33	20.2	29	24.4	26	26.5	36	59.0
Unable to	0	0.0	0	0.0	0	0.0	1	0.6	0	0.0	0	0.0	3	4.9
Pain/discomfort	39	78.0	72	72.0	107	73.8	94	58.4	57	48.3	43	43.4	19	31.1
Some	10	20.0	27	27.0	37	25.5	65	40.4	58	49.2	56	56.6	37	60.7
Extreme	1	2.0	1	1.0	1	0.7	2	1.2	3	2.5	0	0.0	5	8.2
Anxiety/depression	42	84.0	78	75.7	116	80.0	123	76.9	86	74.1	78	79.6	36	61.0
Some	8	16.0	25	24.3	28	19.3	35	21.9	28	24.1	20	20.4	22	37.3
Extreme	0	0.0	0	0.0	1	0.7	2	1.3	2	1.7	0	0.0	1	1.7

EQ-5D index value (European VAS value set)

EQ-5D index value (European VAS)		Age							Total
		18–24	25–34	35–44	45–54	55–64	65–74	75+	
Total	Mean	0.913	0.906	0.893	0.858	0.817	0.800	0.712	0.848
	Standard error	0.014	0.011	0.010	0.010	0.013	0.014	0.022	0.005
	25th percentile	0.78	0.78	0.78	0.78	0.69	0.69	0.60	0.73
	50th percentile	1.00	1.00	1.00	1.00	0.78	0.78	0.70	1.00
	75th percentile	1.00	1.00	1.00	1.00	1.00	1.00	0.85	1.00
Males	Mean	0.912	0.932	0.891	0.872	0.817	0.770	0.750	0.852
	Standard error	0.023	0.014	0.015	0.017	0.021	0.024	0.030	0.008
	25th percentile	0.78	0.78	0.78	0.78	0.71	0.69	0.69	0.75
	50th percentile	1.00	1.00	1.00	1.00	0.78	0.78	0.72	1.00
	75th percentile	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Females	Mean	0.914	0.887	0.897	0.849	0.816	0.825	0.676	0.846
	Standard error	0.018	0.015	0.012	0.013	0.017	0.016	0.032	0.007
	25th percentile	0.78	0.78	0.78	0.75	0.69	0.69	0.60	0.71
	50th percentile	1.00	1.00	1.00	0.78	0.78	0.78	0.69	0.85
	75th percentile	1.00	1.00	1.00	1.00	1.00	1.00	0.78	1.00

EQ-5D index value (VAS value set)

EQ-5D index value (VAS value set)		Age							Total
		18–24	25–34	35–44	45–54	55–64	65–74	75+	
Total	Mean	0.890	0.883	0.869	0.827	0.782	0.763	0.672	0.818
	Standard error	0.018	0.013	0.011	0.012	0.015	0.015	0.023	0.006
	25th percentile	0.72	0.71	0.70	0.70	0.63	0.63	0.55	0.65
	50th percentile	1.00	1.00	1.00	1.00	0.72	0.72	0.63	1.00
	75th percentile	1.00	1.00	1.00	1.00	1.00	1.00	0.78	1.00
Males	Mean	0.889	0.915	0.867	0.845	0.784	0.734	0.710	0.823
	Standard error	0.028	0.017	0.017	0.019	0.023	0.025	0.031	0.009
	25th percentile	0.71	0.72	0.72	0.70	0.64	0.63	0.62	0.70
	50th percentile	1.00	1.00	1.00	1.00	0.72	0.72	0.64	1.00
	75th percentile	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Females	Mean	0.892	0.860	0.873	0.816	0.780	0.787	0.636	0.815
	Standard error	0.023	0.018	0.015	0.015	0.019	0.018	0.032	0.008
	25th percentile	0.72	0.70	0.70	0.70	0.63	0.63	0.54	0.64
	50th percentile	1.00	1.00	1.00	0.72	0.72	0.72	0.63	0.78
	75th percentile	1.00	1.00	1.00	1.00	1.00	1.00	0.71	1.00

Slovenia**Source:** Prevolnik et al. (2001)**Number of respondents**

Age	18–24	25–34	35–44	45–54	55–64	65–74	75+	Total
Total	116	143	148	118	98	77	42	742
Males	47	62	58	57	51	35	14	324
Females	69	81	90	61	47	42	28	418

EQ VAS (self-rated health)

EQ-VAS (self-rated)		Age							Total
		18–24	25–34	35–44	45–54	55–64	65–74	75+	
Total	Mean	85.4	82.6	80.8	75.5	67.9	65.3	55.4	76.4
	Standard error	1.3	1.2	1.4	2.0	1.8	2.1	3.0	0.7
	25th percentile	80	74.5	75	70	56.5	51	40	69.25
	50th percentile	90	85	85	80	70	69	51.5	80
	75th percentile	95	95	92	90	80	80	72	90
Males	Mean	84.4	81.6	79.4	74.9	67.1	66.7	56.0	75.6
	Standard error	2.0	1.8	2.0	2.9	2.4	2.8	6.1	1.0
	25th percentile	75	78	75	62.5	59.5	60	37	70
	50th percentile	90	81.5	80	80	70	70	53	80
	75th percentile	95	90	90	90	80	80	74.5	90
Females	Mean	86.1	83.3	81.7	76.0	68.8	64.2	55.1	77.0
	Standard error	1.7	1.7	1.9	2.6	2.7	3.2	3.4	1.0
	25th percentile	80	70	79	70	51	50	40	69
	50th percentile	90	89	89	80	70	64.5	50	80
	75th percentile	95	95	94.5	90	82.5	80	66	90

Problems reported by dimension

	Age													
	18-24		25-34		35-44		45-54		55-64		65-74		75+	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Total														
Mobility														
No problems	112	96.6	129	90.8	119	80.4	74	62.7	49	50.0	26	34.7	9	22.0
Some problems	4	3.4	13	9.2	28	18.9	44	37.3	48	49.0	48	64.0	32	78.0
Confined to bed	0	0.0	0	0.0	1	0.7	0	0.0	1	1.0	1	1.3	0	0.0
Self-care														
No problems	114	98.3	138	97.2	134	90.5	102	86.4	73	74.5	53	69.7	21	52.5
Some problems	2	1.7	4	2.8	13	8.8	16	13.6	24	24.5	21	27.6	19	47.5
Unable to	0	0.0	0	0.0	1	0.7	0	0.0	1	1.0	2	2.6	0	0.0
Usual activities														
No problems	100	86.2	115	81.0	113	76.4	75	63.6	54	55.1	27	35.5	12	29.3
Some problems	16	13.8	25	17.6	34	23.0	42	35.6	39	39.8	47	61.8	28	68.3
Unable to	0	0.0	2	1.4	1	0.7	1	0.8	5	5.1	2	2.6	1	2.4
Pain/discomfort														
No	85	73.3	99	69.7	92	62.2	56	47.5	32	32.7	19	25.3	7	17.1
Some	30	25.9	40	28.2	54	36.5	56	47.5	63	64.3	56	74.7	32	78.0
Extreme	1	0.9	3	2.1	2	1.4	6	5.1	3	3.1	0	0.0	2	4.9
Anxiety/depression														
No	85	73.3	94	66.2	102	68.9	75	63.6	53	54.1	40	53.3	20	48.8
Some	29	25.0	48	33.8	44	29.7	40	33.9	42	42.9	34	45.3	21	51.2
Extreme	2	1.7	0	0.0	2	1.4	3	2.5	3	3.1	1	1.3	0	0.0

	Age													
	18-24		25-34		35-44		45-54		55-64		65-74		75+	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Males														
Mobility														
No problems	44	93.6	55	88.7	43	74.1	36	63.2	22	43.1	14	41.2	4	30.8
Some problems	3	6.4	7	11.3	14	24.1	21	36.8	29	56.9	20	58.8	9	69.2
Confined to bed	0	0.0	0	0.0	1	1.7	0	0.0	0	0.0	0	0.0	0	0.0
Self-care														
No problems	46	97.9	60	96.8	53	91.4	49	86.0	36	70.6	26	76.5	7	53.8
Some problems	1	2.1	2	3.2	4	6.9	8	14.0	15	29.4	7	20.6	6	46.2
Unable to	0	0.0	0	0.0	1	1.7	0	0.0	0	0.0	1	2.9	0	0.0
Usual activities														
No problems	38	80.9	48	77.4	42	72.4	38	66.7	27	52.9	17	50.0	5	38.5
Some problems	9	19.1	13	21.0	16	27.6	19	33.3	21	41.2	17	50.0	8	61.5
Unable to	0	0.0	1	1.6	0	0.0	0	0.0	3	5.9	0	0.0	0	0.0
Pain/discomfort														
No	31	66.0	42	67.7	38	65.5	31	54.4	17	33.3	10	29.4	3	23.1
Some	15	31.9	18	29.0	19	32.8	22	38.6	33	64.7	24	70.6	10	76.9
Extreme	1	2.1	2	3.2	1	1.7	4	7.0	1	2.0	0	0.0	0	0.0
Anxiety/depression														
No	34	72.3	38	61.3	46	79.3	37	64.9	29	56.9	20	58.8	7	53.8
Some	11	23.4	24	38.7	12	20.7	18	31.6	22	43.1	14	41.2	6	46.2
Extreme	2	4.3	0	0.0	0	0.0	2	3.5	0	0.0	0	0.0	0	0.0

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	Age													
	18-24		25-34		35-44		45-54		55-64		65-74		75+	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Females														
Mobility														
No problems	68	98.6	74	92.5	76	84.4	38	62.3	27	57.4	12	29.3	5	17.9
Some problems	1	1.4	6	7.5	14	15.6	23	37.7	19	40.4	28	68.3	23	82.1
Confined to bed	0	0.0	0	0.0	0	0.0	0	0.0	1	2.1	1	2.4	0	0.0
Self-care														
No problems	68	98.6	78	97.5	81	90.0	53	86.9	37	78.7	27	64.3	14	51.9
Some problems	1	1.4	2	2.5	9	10.0	8	13.1	9	19.1	14	33.3	13	48.1
Unable to	0	0.0	0	0.0	0	0.0	0	0.0	1	2.1	1	2.4	0	0.0
Usual activities														
No problems	62	89.9	67	83.8	71	78.9	37	60.7	27	57.4	10	23.8	7	25.0
Some problems	7	10.1	12	15.0	18	20.0	23	37.7	18	38.3	30	71.4	20	71.4
Unable to	0	0.0	1	1.3	1	1.1	1	1.6	2	4.3	2	4.8	1	3.6
Pain/discomfort														
No	54	78.3	57	71.3	54	60.0	25	41.0	15	31.9	9	22.0	4	14.3
Some	15	21.7	22	27.5	35	38.9	34	55.7	30	63.8	32	78.0	22	78.6
Extreme	0	0.0	1	1.3	1	1.1	2	3.3	2	4.3	0	0.0	2	7.1
Anxiety/depression														
No	51	73.9	56	70.0	56	62.2	38	62.3	24	51.1	20	48.8	13	46.4
Some	18	26.1	24	30.0	32	35.6	22	36.1	20	42.6	20	48.8	15	53.6
Extreme	0	0.0	0	0.0	2	2.2	1	1.6	3	6.4	1	2.4	0	0.0

EQ-5D index value (European VAS value set)

EQ-5D index value (European VAS)		Age							Total
		18–24	25–34	35–44	45–54	55–64	65–74	75+	
Total	Mean	0.879	0.859	0.831	0.772	0.697	0.663	0.621	0.788
	Standard error	0.014	0.015	0.015	0.021	0.022	0.022	0.027	0.008
	25th percentile	0.78	0.75	0.69	0.65	0.57	0.57	0.57	0.66
	50th percentile	1.00	1.00	0.78	0.78	0.69	0.67	0.60	0.78
	75th percentile	1.00	1.00	1.00	1.00	0.81	0.78	0.71	1.00
Males	Mean	0.849	0.840	0.845	0.785	0.699	0.701	0.663	0.788
	Standard error	0.026	0.024	0.025	0.031	0.031	0.027	0.047	0.012
	25th percentile	0.75	0.74	0.69	0.61	0.57	0.60	0.57	0.66
	50th percentile	0.85	0.78	1.00	0.78	0.69	0.69	0.60	0.78
	75th percentile	1.00	1.00	1.00	1.00	0.81	0.78	0.74	1.00
Females	Mean	0.899	0.874	0.822	0.760	0.695	0.630	0.600	0.788
	Standard error	0.015	0.019	0.020	0.027	0.032	0.034	0.033	0.010
	25th percentile	0.78	0.76	0.69	0.66	0.60	0.48	0.48	0.68
	50th percentile	1.00	1.00	0.78	0.78	0.69	0.60	0.60	0.78
	75th percentile	1.00	1.00	1.00	1.00	0.78	0.71	0.71	1.00

EQ-5D index value (VAS value set)

EQ-5D index value (VAS value set)		Age							Total
		18–24	25–34	35–44	45–54	55–64	65–74	75+	
Total	Mean	0.869	0.841	0.794	0.712	0.619	0.554	0.498	0.738
	Standard error	0.015	0.017	0.019	0.025	0.026	0.027	0.032	0.009
	25th percentile	0.76	0.71	0.67	0.49	0.41	0.41	0.41	0.52
	50th percentile	1.00	1.00	0.78	0.76	0.61	0.50	0.41	0.76
	75th percentile	1.00	1.00	1.00	1.00	0.77	0.68	0.64	1.00
Males	Mean	0.839	0.817	0.797	0.729	0.613	0.601	0.545	0.735
	Standard error	0.027	0.026	0.032	0.037	0.037	0.037	0.067	0.014
	25th percentile	0.71	0.67	0.60	0.44	0.41	0.41	0.41	0.50
	50th percentile	0.82	0.78	1.00	0.76	0.56	0.53	0.41	0.76
	75th percentile	1.00	1.00	1.00	1.00	0.78	0.76	0.72	1.00
Females	Mean	0.890	0.859	0.791	0.696	0.626	0.513	0.475	0.740
	Standard error	0.017	0.022	0.024	0.033	0.038	0.039	0.036	0.013
	25th percentile	0.78	0.73	0.67	0.50	0.41	0.32	0.32	0.56
	50th percentile	1.00	1.00	0.78	0.71	0.61	0.41	0.41	0.76
	75th percentile	1.00	1.00	1.00	1.00	0.76	0.65	0.56	1.00

Spain**Source:** ESEMeD; König et al. (2009)**Number of respondents**

Age	18–24	25–34	35–44	45–54	55–64	65–74	75+	Total
Total	568	999	1,050	719	686	867	584	5,473
Males	281	452	442	314	303	382	247	2,421
Females	287	547	608	405	383	485	337	3,052

EQ VAS (self-rated health)

EQ-VAS (self-rated)		Age							Total
		18–24	25–34	35–44	45–54	55–64	65–74	75+	
Total	Mean	82.0	80.0	76.7	73.6	72.0	69.0	62.2	75.0
	Standard error	1.1	0.9	0.9	1.2	1.2	1.2	1.4	0.4
	25th percentile	80	75	70	60	60	55	50	70
	50th percentile	90	90	80	80	80	75	65	80
	75th percentile	95	95	90	90	90	90	80	90
Males	Mean	83.2	82.4	76.9	73.4	73.4	73.1	66.7	77.0
	Standard error	1.3	1.2	1.4	1.8	1.8	1.6	2.1	0.6
	25th percentile	80	80	70	60	65	60	55	70
	50th percentile	90	90	80	80	80	80	70	80
	75th percentile	95	95	90	90	90	90	80	90
Females	Mean	80.8	77.7	76.5	73.8	70.5	65.8	59.4	73.2
	Standard error	1.6	1.3	1.1	1.5	1.6	1.6	1.8	0.6
	25th percentile	80	70	70	60	60	50	50	60
	50th percentile	90	90	80	80	80	70	60	80
	75th percentile	99	93	90	90	90	85	80	90

Problems reported by dimension (raw numbers, weighted proportions)

	Age													
	18-24		25-34		35-44		45-54		55-64		65-74		75+	
Total	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Mobility														
No problems	561	99.0	975	97.6	995	94.7	659	91.7	571	83.2	637	75.4	321	53.7
Some problems	7	1.0	23	2.3	49	4.3	55	7.4	112	16.4	227	24.3	255	45.5
Confined to bed	0	0.0	1	0.0	6	1.0	5	0.9	3	0.4	3	0.3	8	0.8
Self-care														
No problems	567	99.8	990	99.2	1,034	98.1	703	98.0	646	94.9	808	94.5	487	81.6
Some problems	1	0.2	7	0.6	11	1.3	10	1.3	39	4.9	57	5.4	82	15.6
Unable to	0	0.0	2	0.1	5	0.7	6	0.7	1	0.2	2	0.1	15	2.8
Usual activities														
No problems	554	97.7	968	97.6	993	94.1	653	89.9	578	85.2	711	83.8	377	62.8
Some problems	14	2.3	28	2.3	44	4.1	51	7.3	97	13.3	144	15.0	164	30.0
Unable to	0	0.0	3	0.2	13	1.8	15	2.7	11	1.5	12	1.2	43	7.2
Pain/discomfort														
No	516	90.1	880	89.4	894	85.2	554	77.2	467	71.4	573	69.0	335	56.1
Some	52	9.9	113	10.1	144	13.4	145	20.4	199	25.6	266	28.2	216	39.2
Extreme	0	0.0	6	0.5	12	1.4	20	2.4	20	3.0	28	2.8	33	4.6
Anxiety/depression														
No	543	95.8	953	96.1	987	93.1	658	91.6	616	90.8	776	91.2	512	87.4
Some	23	4.0	40	3.5	57	6.3	49	6.7	59	8.2	78	7.7	63	11.4
Extreme	2	0.2	6	0.4	6	0.7	12	1.6	11	1.0	13	1.2	9	1.1

(continued)

Sweden**Source:** Björk et al. (1999)**Number of respondents**

Age	18–24	25–34	35–44	45–54	55–64	65–74	75+	Total
Total	66	100	93	106	70	80	19	534
Males	29	55	40	55	36	43	6	264
Females	37	45	53	51	34	37	13	270

EQ VAS (self-rated health)

EQ-VAS (self-rated)		Age							Total
		18–24	25–34	35–44	45–54	55–64	65–74	75+	
Total	Mean	84.3	86.2	86.2	83.7	79.0	81.5	71.8	83.3
	Standard error	2.1	1.4	1.5	1.7	2.4	1.8	5.4	0.7
	25th percentile	80	80	80	75	70	72.5	55	75
	50th percentile	90	90	90	90	85	85	70	90
	75th percentile	95	98	95	96	90.75	94.5	99	95
Males	Mean	85.7	85.7	87.7	83.2	79.9	83.9	84.2	84.4
	Standard error	2.8	1.6	1.9	2.2	3.1	2.3	6.4	0.9
	25th percentile	80	80	80	72.5	73.75	77	70	79.25
	50th percentile	90	90	90	90	80	90	83	90
	75th percentile	99	95	95.25	95	91.25	95	99.25	95
Females	Mean	83.2	86.7	85.0	84.1	78.1	78.4	66.2	82.2
	Standard error	3.0	2.3	2.1	2.6	3.9	2.9	7.0	1.1
	25th percentile	77.5	77.5	80	80	66.25	62.5	50	75
	50th percentile	90	94	90	90	87.5	80	61	90
	75th percentile	95	99.5	95	100	92.25	90	89.5	95

Problems reported by dimension

	Age													
	18-24		25-34		35-44		45-54		55-64		65-74		75+	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Total	64	98.5	95	97.9	88	95.7	92	88.5	62	92.5	67	85.9	9	47.4
Mobility														
No problems	1	1.5	2	2.1	4	4.3	12	11.5	5	7.5	11	14.1	10	52.6
Some problems	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Confined to bed	65	100.0	96	99.0	92	100.0	102	98.1	66	98.5	77	98.7	16	84.2
Self-care														
No problems	0	0.0	1	1.0	0	0.0	2	1.9	1	1.5	1	1.3	3	15.8
Some problems	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Unable to	63	96.9	92	94.8	88	95.7	92	88.5	59	88.1	73	94.8	13	68.4
Usual activities														
No problems	1	1.5	3	3.1	4	4.3	8	7.7	5	7.5	4	5.2	4	21.1
Some problems	1	1.5	2	2.1	0	0.0	4	3.8	3	4.5	0	0.0	2	10.5
Unable to	50	76.9	68	70.1	57	62.0	59	56.7	33	49.3	36	45.6	6	33.3
Pain/discomfort														
No	15	23.1	29	29.9	34	37.0	40	38.5	31	46.3	43	54.4	10	55.6
Some	0	0.0	0	0.0	1	1.1	5	4.8	3	4.5	0	0.0	2	11.1
Extreme	44	67.7	77	79.4	69	75.0	74	71.8	46	68.7	61	79.2	13	72.2
Anxiety/depression														
No	19	29.2	18	18.6	22	23.9	27	26.2	20	29.9	15	19.5	4	22.2
Some	2	3.1	2	2.1	1	1.1	2	1.9	1	1.5	1	1.3	1	5.6
Extreme														

(continued)

(continued)

	Age													
	18–24		25–34		35–44		45–54		55–64		65–74		75+	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Males														
Mobility														
No problems	27	96.4	55	100.0	38	97.4	47	87.0	32	91.4	39	90.7	3	50.0
Some problems	1	3.6	0	0.0	1	2.6	7	13.0	3	8.6	4	9.3	3	50.0
Confined to bed	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Self-care														
No problems	28	100.0	55	100.0	39	100.0	53	98.1	34	97.1	42	100.0	6	100.0
Some problems	0	0.0	0	0.0	0	0.0	1	1.9	1	2.9	0	0.0	0	0.0
Unable to	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Usual activities														
No problems	27	96.4	52	94.5	38	97.4	47	87.0	30	85.7	39	95.1	5	83.3
Some problems	1	3.6	2	3.6	1	2.6	4	7.4	3	8.6	2	4.9	1	16.7
Unable to	0	0.0	1	1.8	0	0.0	3	5.6	2	5.7	0	0.0	0	0.0
Pain/discomfort														
No	21	75.0	39	70.9	22	56.4	31	57.4	19	54.3	23	53.5	1	20.0
Some	7	25.0	16	29.1	17	43.6	21	38.9	14	40.0	20	46.5	4	80.0
Extreme	0	0.0	0	0.0	0	0.0	2	3.7	2	5.7	0	0.0	0	0.0
Anxiety/depression														
No	22	78.6	45	81.8	30	76.9	40	75.5	25	71.4	36	87.8	5	100.0
Some	5	17.9	9	16.4	9	23.1	12	22.6	9	25.7	5	12.2	0	0.0
Extreme	1	3.6	1	1.8	0	0.0	1	1.9	1	2.9	0	0.0	0	0.0

Females	Age													
	18-24		25-34		35-44		45-54		55-64		65-74		75+	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Mobility														
No problems	37	100.0	40	95.2	50	94.3	45	90.0	30	93.8	28	80.0	6	46.2
Some problems	0	0.0	2	4.8	3	5.7	5	10.0	2	6.3	7	20.0	7	53.8
Confined to bed	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Self-care														
No problems	37	100.0	41	97.6	53	100.0	49	98.0	32	100.0	35	97.2	10	76.9
Some problems	0	0.0	1	2.4	0	0.0	1	2.0	0	0.0	1	2.8	3	23.1
Unable to	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Usual activities														
No problems	36	97.3	40	95.2	50	94.3	45	90.0	29	90.6	34	94.4	8	61.5
Some problems	0	0.0	1	2.4	3	5.7	4	8.0	2	6.3	2	5.6	3	23.1
Unable to	1	2.7	1	2.4	0	0.0	1	2.0	1	3.1	0	0.0	2	15.4
Pain/discomfort														
No	29	78.4	29	69.0	35	66.0	28	56.0	14	43.8	13	36.1	5	38.5
Some	8	21.6	13	31.0	17	32.1	19	38.0	17	53.1	23	63.9	6	46.2
Extreme	0	0.0	0	0.0	1	1.9	3	6.0	1	3.1	0	0.0	2	15.4
Anxiety/depression														
No	22	59.5	32	76.2	39	73.6	34	68.0	21	65.6	25	69.4	8	61.5
Some	14	37.8	9	21.4	13	24.5	15	30.0	11	34.4	10	27.8	4	30.8
Extreme	1	2.7	1	2.4	1	1.9	1	2.0	0	0.0	1	2.8	1	7.7

Thailand**Source:** Tongsiri et al. (2011)**Number of respondents**

Age	18–24	25–34	35–44	45–54	55–64	65–74	75+	Total
Total	76	228	420	379	196	88	22	1,409
Males	32	108	168	187	91	45	13	644
Females	44	120	252	192	105	43	9	765

EQ VAS (self-rated health)

EQ-VAS (self-rated)		Age							Total
		18–24	25–34	35–44	45–54	55–64	65–74	75+	
Total	Mean	82.9	80.9	80.1	78.3	79.3	76.1	72.3	79.4
	Standard error	1.3	1.0	0.7	0.8	1.2	2.1	4.7	0.4
	25th percentile	76.25	70	70	70	70	60	50	70
	50th percentile	82.5	80	80	80	80	80	75	80
	75th percentile	90	90	90	90	90	90	92.5	90
Males	Mean	84.7	79.7	80.9	77.8	77.1	75.1	64.6	78.7
	Standard error	1.9	1.3	1.1	1.1	1.9	2.7	5.7	0.6
	25th percentile	72.5	70	70	70	70	60	50	70
	50th percentile	90	80	80	80	80	70	60	80
	75th percentile	90	90	90	90	90	90	85	90
Females	Mean	81.6	82.0	79.6	78.9	81.1	77.2	83.3	80.0
	Standard error	1.8	1.4	1.0	1.2	1.6	3.2	6.5	0.6
	25th percentile	76.25	70	70	70	70	60	65	70
	50th percentile	80	82.5	80	80	80	80	90	80
	75th percentile	90	90	90	90	97	90	100	90

	Age													
	18–24		25–34		35–44		45–54		55–64		65–74		75+	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Males	29	90.6	91	84.3	142	84.5	127	67.9	70	76.9	22	48.9	6	46.2
Mobility	3	9.4	16	14.8	26	15.5	60	32.1	20	22.0	23	51.1	6	46.2
	0	0.0	1	0.9	0	0.0	0	0.0	1	1.1	0	0.0	1	7.7
Self-care	31	96.9	103	95.4	157	93.5	162	86.6	81	89.0	40	88.9	11	84.6
	1	3.1	5	4.6	10	6.0	19	10.2	7	7.7	4	8.9	1	7.7
	0	0.0	0	0.0	1	0.6	6	3.2	3	3.3	1	2.2	1	7.7
Usual activities	26	81.3	89	82.4	139	82.7	132	70.6	73	80.2	29	64.4	6	46.2
	6	18.8	17	15.7	27	16.1	50	26.7	16	17.6	14	31.1	5	38.5
	0	0.0	2	1.9	2	1.2	5	2.7	2	2.2	2	4.4	2	15.4
Pain/discomfort	20	62.5	55	50.9	76	45.2	56	29.9	30	33.0	7	15.6	3	23.1
	12	37.5	50	46.3	90	53.6	127	67.9	59	64.8	38	84.4	9	69.2
	0	0.0	3	2.8	2	1.2	4	2.1	2	2.2	0	0.0	1	7.7
Anxiety/depression	25	78.1	59	54.6	116	69.0	92	49.2	51	56.0	20	44.4	6	46.2
	7	21.9	48	44.4	50	29.8	93	49.7	37	40.7	24	53.3	5	38.5
	0	0.0	1	0.9	2	1.2	2	1.1	3	3.3	1	2.2	2	15.4

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	Age										
	18-24	25-34	35-44	45-54	55-64	65-74	75+	n	%	n	%
Females	n	n	n	n	n	n	n	n	%	n	%
Mobility	39	103	199	130	56	21	3	33.3		21	48.8
	88.6	85.8	79.0	67.7	53.3	48.8	3	33.3		48.8	33.3
	5	16	51	62	48	22	6	66.7		22	51.2
	11.4	13.3	20.2	32.3	45.7	51.2	6	66.7		51.2	33.3
	0	0.0	0.8	0	1	0	0	0.0		0	0.0
	0.0	0.0	0.8	0	1	0	0	0.0		0	0.0
Self-care	41	118	240	168	92	35	8	88.9		35	81.4
	93.2	98.3	95.2	87.5	87.6	81.4	8	88.9		81.4	88.9
	2	4.5	11	21	13	7	1	11.1		7	16.3
	4.5	1.7	4.4	10.9	12.4	16.3	1	11.1		16.3	11.1
	1	2.3	1	3	0	1	0	0.0		1	2.3
	2.3	0.0	0.4	1.6	0	2.3	0	0.0		2.3	0.0
Usual activities	32	101	203	151	75	28	5	55.6		28	65.1
	72.7	84.2	80.6	78.6	71.4	65.1	5	55.6		65.1	55.6
	12	18	42	32	27	11	4	44.4		11	25.6
	27.3	15.0	16.7	16.7	25.7	25.6	4	44.4		25.6	44.4
	0	0.0	7	9	3	4	0	0.0		4	9.3
	0.0	0.0	2.8	4.7	4.7	9.3	0	0.0		9.3	9.3
Pain/discomfort	21	43	88	57	21	13	3	33.3		13	30.2
	47.7	35.8	34.9	29.7	20.0	30.2	3	33.3		30.2	33.3
	23	76	159	133	74	29	6	66.7		29	67.4
	52.3	63.3	63.1	69.3	70.5	67.4	6	66.7		67.4	66.7
	0	0.0	5	2	10	1	0	0.0		1	2.3
	0.0	0.0	2.0	1.0	9.5	2.3	0	0.0		2.3	0.0
Anxiety/depression	22	69	122	91	39	23	6	66.7		23	53.5
	50.0	57.5	48.4	47.4	37.1	53.5	6	66.7		53.5	66.7
	21	49	127	95	58	16	3	33.3		16	37.2
	47.7	40.8	50.4	49.5	55.2	37.2	3	33.3		37.2	33.3
	1	2.3	3	6	8	4	0	0.0		4	9.3
	2.3	1.7	1.2	3.1	7.6	9.3	0	0.0		9.3	0.0

EQ-5D index value (European VAS value set)

EQ-5D index value (European VAS)		Age							Total
		18–24	25–34	35–44	45–54	55–64	65–74	75+	
Total	Mean	0.814	0.785	0.771	0.717	0.694	0.670	0.657	0.742
	Standard error	0.019	0.011	0.008	0.009	0.014	0.021	0.046	0.005
	25th percentile	0.69	0.69	0.69	0.62	0.60	0.60	0.60	0.66
	50th percentile	0.78	0.78	0.78	0.69	0.69	0.69	0.69	0.71
	75th percentile	1.00	1.00	1.00	0.78	0.78	0.78	0.78	0.81
Males	Mean	0.855	0.786	0.803	0.717	0.733	0.669	0.609	0.754
	Standard error	0.023	0.017	0.013	0.013	0.020	0.022	0.069	0.007
	25th percentile	0.76	0.69	0.69	0.62	0.69	0.61	0.49	0.69
	50th percentile	0.78	0.78	0.78	0.69	0.75	0.69	0.69	0.76
	75th percentile	1.00	1.00	1.00	0.78	0.78	0.77	0.75	0.85
Females	Mean	0.785	0.784	0.750	0.717	0.660	0.670	0.726	0.732
	Standard error	0.028	0.015	0.011	0.014	0.020	0.037	0.049	0.007
	25th percentile	0.69	0.69	0.69	0.62	0.60	0.60	0.64	0.66
	50th percentile	0.78	0.78	0.71	0.69	0.66	0.71	0.71	0.71
	75th percentile	1.00	1.00	0.81	0.78	0.78	0.78	0.81	0.78

EQ-5D index value (TTO value set)

EQ-5D index value (TTO value set)		Age							Total
		18–24	25–34	35–44	45–54	55–64	65–74	75+	
Total	Mean	0.785	0.756	0.740	0.678	0.653	0.617	0.575	0.706
	Standard error	0.021	0.013	0.009	0.010	0.016	0.022	0.055	0.005
	25th percentile	0.69	0.69	0.64	0.57	0.55	0.51	0.51	0.61
	50th percentile	0.73	0.73	0.70	0.69	0.69	0.62	0.60	0.69
	75th percentile	1.00	1.00	1.00	0.73	0.73	0.73	0.70	0.77
Males	Mean	0.820	0.757	0.769	0.674	0.695	0.613	0.528	0.716
	Standard error	0.028	0.019	0.014	0.014	0.022	0.024	0.083	0.008
	25th percentile	0.68	0.68	0.67	0.57	0.57	0.55	0.48	0.61
	50th percentile	0.77	0.73	0.73	0.69	0.69	0.61	0.55	0.69
	75th percentile	1.00	1.00	1.00	0.73	0.77	0.69	0.69	0.77
Females	Mean	0.760	0.755	0.720	0.682	0.616	0.621	0.641	0.698
	Standard error	0.030	0.017	0.012	0.014	0.023	0.038	0.057	0.007
	25th percentile	0.69	0.69	0.64	0.57	0.51	0.50	0.55	0.61
	50th percentile	0.73	0.73	0.69	0.69	0.61	0.64	0.61	0.69
	75th percentile	1.00	1.00	0.77	0.73	0.73	0.73	0.73	0.77

United Kingdom**Source:** Kind et al. (1998)**Number of respondents**

Age	18–24	25–34	35–44	45–54	55–64	65–74	75+	Total
Total	304	753	561	488	484	488	317	3,395
Males	128	330	256	221	196	228	110	1,469
Females	176	423	305	267	288	260	207	1,926

EQ VAS (self-rated health)

EQ-VAS (self-rated)		Age							Total
		18–24	25–34	35–44	45–54	55–64	65–74	75+	
Total	Mean	86.5	86.8	86.6	82.0	81.6	77.3	73.8	82.8
	Standard error	0.8	0.5	0.6	0.8	2.1	0.8	1.1	0.4
	25th percentile	80	80	80	75	70	70	60	75
	50th percentile	90	90	90	90	85	80	75	90
	75th percentile	95	97	95	95	95	90	90	95
Males	Mean	87.1	86.9	86.8	81.6	83.7	78.2	72.9	83.3
	Standard error	1.2	0.8	0.8	1.3	4.9	1.2	1.8	0.8
	25th percentile	80	80	82	75	70	70	60	75
	50th percentile	90	90	90	90	85	80	75	90
	75th percentile	98	96	95	95	93	90	85	95
Females	Mean	86.0	86.8	86.4	82.4	80.3	76.6	74.2	82.4
	Standard error	1.0	0.7	0.9	1.1	1.0	1.2	1.3	0.4
	25th percentile	80	80	80	80	70	65	60	75
	50th percentile	90	90	90	90	85	80	75.5	90
	75th percentile	95	97	95	95	95	90	90	95

Problems reported by dimension

	Age													
	18–24		25–34		35–44		45–54		55–64		65–74		75+	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Total	292	96.4	705	93.8	517	92.3	413	84.6	360	74.7	318	65.2	160	50.8
Mobility	11	3.6	46	6.1	43	7.7	73	15.0	122	25.3	170	34.8	155	49.2
Some problems	0	0.0	1	0.1	0	0.0	2	0.4	0	0.0	0	0.0	0	0.0
Confined to bed	300	99.3	744	98.9	551	98.4	458	94.0	454	94.2	455	93.2	280	88.9
Self-care	2	0.7	7	0.9	9	1.6	28	5.7	28	5.8	31	6.4	34	10.8
Some problems	0	0.0	1	0.1	0	0.0	1	0.2	0	0.0	2	0.4	1	0.3
Unable to	287	94.7	689	91.6	519	92.7	410	84.2	364	75.5	360	73.8	207	65.7
Usual activities	15	5.0	59	7.8	36	6.4	63	12.9	103	21.4	113	23.2	92	29.2
Some problems	1	0.3	4	0.5	5	0.9	14	2.9	15	3.1	15	3.1	16	5.1
Unable to	251	82.8	634	84.3	433	77.5	322	66.1	255	52.8	243	49.8	132	41.9
Pain/discomfort	51	16.8	109	14.5	119	21.3	145	29.8	196	40.6	213	43.6	155	49.2
Some	1	0.3	9	1.2	7	1.3	20	4.1	32	6.6	32	6.6	28	8.9
Extreme	267	88.1	632	84.0	462	82.5	381	78.1	344	71.2	362	74.2	231	73.3
Anxiety/depression	33	10.9	113	15.0	93	16.6	93	19.1	127	26.3	111	22.7	78	24.8
Some	3	1.0	7	0.9	5	0.9	14	2.9	12	2.5	15	3.1	6	1.9
Extreme														

(continued)

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	Age													
	18-24		25-34		35-44		45-54		55-64		65-74		75+	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Males	120	93.8	311	94.2	233	91.4	186	84.2	133	68.2	154	67.5	63	57.8
Mobility	8	6.3	18	5.5	22	8.6	33	14.9	62	31.8	74	32.5	46	42.2
No problems	0	0.0	1	0.3	0	0.0	2	0.9	0	0.0	0	0.0	0	0.0
Some problems	8	6.3	17	5.2	22	8.6	31	14.0	62	31.8	74	32.5	46	42.2
Confined to bed	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Self-care	126	98.4	327	99.1	250	98.0	206	93.2	181	92.8	211	92.5	100	91.7
No problems	2	1.6	2	0.6	5	2.0	15	6.8	14	7.2	15	6.6	9	8.3
Some problems	124	96.4	325	98.5	245	96.0	191	86.4	167	85.6	196	85.9	91	83.4
Unable to	0	0.0	1	0.3	0	0.0	0	0.0	0	0.0	2	0.9	0	0.0
Usual activities	119	93.0	304	92.1	236	92.5	185	84.1	135	69.2	171	75.0	73	67.0
No problems	9	7.0	23	7.0	16	6.3	24	10.9	48	24.6	50	21.9	28	25.7
Some problems	110	86.0	281	85.1	220	86.2	161	73.2	87	42.6	121	53.1	45	41.3
Unable to	0	0.0	3	0.9	3	1.2	11	5.0	12	6.2	7	3.1	8	7.3
Pain/discomfort	103	80.5	282	85.5	198	78.0	151	68.3	99	50.8	117	51.3	52	47.7
No	25	19.5	44	13.3	52	20.5	60	27.1	83	42.6	94	41.2	50	45.9
Some	78	61.0	238	72.2	146	57.5	91	41.4	16	8.0	23	10.0	2	1.9
Extreme	0	0.0	4	1.2	4	1.6	10	4.5	13	6.7	17	7.5	7	6.4
Anxiety/depression	116	90.6	286	86.7	218	85.5	181	81.9	136	69.7	182	79.8	88	80.7
No	11	8.6	40	12.1	35	13.7	32	14.5	54	27.7	37	16.2	17	15.6
Some	105	82.0	246	74.6	183	71.8	149	67.4	82	42.0	145	63.6	71	65.1
Extreme	1	0.8	4	1.2	2	0.8	8	3.6	5	2.6	9	3.9	4	3.7

EQ-5D index value (European VAS value set)

EQ-5D index value (European VAS)		Age							Total
		18–24	25–34	35–44	45–54	55–64	65–74	75+	
Total	Mean	0.934	0.922	0.905	0.849	0.804	0.785	0.734	0.856
	Standard error	0.007	0.005	0.006	0.010	0.010	0.010	0.013	0.003
	25th percentile	0.96	0.78	0.78	0.78	0.69	0.69	0.62	0.76
	50th percentile	1.00	1.00	1.00	1.00	0.78	0.78	0.75	1.00
	75th percentile	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Males	Mean	0.929	0.927	0.909	0.851	0.783	0.791	0.761	0.860
	Standard error	0.011	0.008	0.010	0.016	0.017	0.015	0.022	0.005
	25th percentile	0.79	1.00	0.78	0.78	0.69	0.69	0.68	0.78
	50th percentile	1.00	1.00	1.00	1.00	0.78	0.78	0.78	1.00
	75th percentile	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Females	Mean	0.937	0.918	0.901	0.847	0.818	0.779	0.720	0.852
	Standard error	0.009	0.007	0.009	0.012	0.012	0.013	0.015	0.004
	25th percentile	1.00	0.78	0.78	0.78	0.69	0.69	0.60	0.75
	50th percentile	1.00	1.00	1.00	1.00	0.78	0.78	0.71	1.00
	75th percentile	1.00	1.00	1.00	1.00	1.00	1.00	0.85	1.00

EQ-5D index value (TTO value set)

EQ-5D index value (TTO value set)		Age							Total
		18–24	25–34	35–44	45–54	55–64	65–74	75+	
Total	Mean	0.940	0.927	0.911	0.847	0.799	0.779	0.726	0.856
	Standard error	0.007	0.006	0.007	0.011	0.012	0.012	0.015	0.004
	25th percentile	0.97	0.85	0.85	0.80	0.73	0.69	0.66	0.80
	50th percentile	1.00	1.00	1.00	1.00	0.85	0.80	0.76	1.00
	75th percentile	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Males	Mean	0.935	0.930	0.914	0.845	0.777	0.781	0.753	0.858
	Standard error	0.011	0.009	0.011	0.018	0.020	0.018	0.026	0.006
	25th percentile	0.85	1.00	0.85	0.80	0.69	0.69	0.69	0.80
	50th percentile	1.00	1.00	1.00	1.00	0.81	0.80	0.80	1.00
	75th percentile	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Females	Mean	0.943	0.925	0.909	0.849	0.815	0.777	0.712	0.854
	Standard error	0.009	0.007	0.009	0.014	0.015	0.016	0.019	0.005
	25th percentile	1.00	0.85	0.85	0.80	0.73	0.69	0.63	0.76
	50th percentile	1.00	1.00	1.00	1.00	0.85	0.80	0.73	1.00
	75th percentile	1.00	1.00	1.00	1.00	1.00	1.00	0.89	1.00

EQ-5D index value (VAS value set)

EQ-5D index value (VAS value set)		Age							Total
		18–24	25–34	35–44	45–54	55–64	65–74	75+	
Total	Mean	0.931	0.920	0.902	0.846	0.799	0.778	0.726	0.852
	Standard error	0.007	0.005	0.007	0.010	0.010	0.010	0.012	0.003
	25th percentile	0.95	0.78	0.78	0.76	0.69	0.66	0.63	0.74
	50th percentile	1.00	1.00	1.00	1.00	0.78	0.76	0.73	1.00
	75th percentile	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Males	Mean	0.925	0.925	0.907	0.848	0.779	0.784	0.752	0.856
	Standard error	0.011	0.008	0.010	0.015	0.017	0.015	0.022	0.005
	25th percentile	0.78	1.00	0.78	0.76	0.66	0.67	0.66	0.76
	50th percentile	1.00	1.00	1.00	1.00	0.76	0.76	0.76	1.00
	75th percentile	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Females	Mean	0.936	0.915	0.898	0.844	0.813	0.773	0.712	0.848
	Standard error	0.009	0.007	0.009	0.012	0.012	0.013	0.015	0.004
	25th percentile	1.00	0.78	0.78	0.76	0.70	0.66	0.60	0.73
	50th percentile	1.00	1.00	1.00	1.00	0.78	0.76	0.70	1.00
	75th percentile	1.00	1.00	1.00	1.00	1.00	1.00	0.84	1.00

United States**Source:** Medical Expenditure Panel Survey; AHRQ (2000–2002)**Number of respondents**

Age	18–24	25–34	35–44	45–54	55–64	65–74	75+	Total
Total	4,584	7,168	8,288	7,350	4,894	3,441	2,953	38,678
Males	2,125	3,359	3,799	3,427	2,303	1,508	1,177	17,698
Females	2,459	3,809	4,489	3,923	2,591	1,933	1,776	20,980

EQ VAS (self-rated health)

EQ-VAS (self-rated)		Age							Total
		18–24	25–34	35–44	45–54	55–64	65–74	75+	
Total	Mean	86.2	83.5	81.8	79.2	76.9	75.1	68.5	80.0
	Standard error	0.3	0.2	0.2	0.2	0.3	0.4	0.5	0.1
	25th percentile	80	80	75	72	70	65	53	73
	50th percentile	90	88	85	84	80	80	72	85
	75th percentile	95	94	92	90	90	90	84	91
Males	Mean	88.0	84.5	82.9	79.6	77.8	75.3	69.2	81.0
	Standard error	0.3	0.3	0.3	0.4	0.5	0.6	0.8	0.2
	25th percentile	82	80	78	75	70	65	59	75
	50th percentile	90	90	85	85	83	80	75	85
	75th percentile	97	95	93	90	90	90	85	92
Females	Mean	84.5	82.6	80.8	78.9	76.1	74.9	68.1	79.0
	Standard error	0.4	0.3	0.3	0.3	0.5	0.5	0.6	0.2
	25th percentile	80	80	75	71	70	65	51	70
	50th percentile	90	85	85	82	80	80	70	84
	75th percentile	95	92	91	90	90	90	82	90

Problems reported by dimension (raw numbers, weighted proportions)

	Age													
	18-24		25-34		35-44		45-54		55-64		65-74		75+	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Total	4,357	95.4	6,673	93.6	7,384	89.8	5,862	80.7	3,468	73.6	2,116	62.6	1,235	42.1
Mobility	207	4.4	466	6.0	877	10.0	1,455	19.0	1,400	26.0	1,302	36.8	1,668	56.6
Confined to bed	20	0.3	29	0.3	27	0.2	33	0.3	26	0.4	23	0.6	50	1.3
Self-care	4,535	99.1	7,061	98.7	8,075	97.8	6,998	96.2	4,544	94.1	3,171	93.7	2,386	82.4
Some problems	39	0.8	93	1.1	185	1.9	317	3.4	299	5.1	246	5.7	469	14.7
Unable to	10	0.2	14	0.2	28	0.3	35	0.3	51	0.8	24	0.5	98	2.9
Usual activities	4,247	93.3	6,501	91.1	7,185	87.5	5,842	81.1	3,448	73.0	2,222	66.0	1,404	49.0
Some problems	315	6.4	629	8.2	1,022	11.6	1,367	17.4	1,290	24.4	1,111	31.3	1,277	42.9
Unable to	22	0.4	38	0.6	81	0.9	141	1.5	156	2.6	108	2.8	272	8.1
Pain/discomfort	3,485	76.5	5,067	71.5	5,093	61.6	3,564	49.3	1,913	41.2	1,170	34.3	807	27.9
Some	1,049	22.6	1,971	26.7	2,921	35.5	3,395	46.0	2,621	52.5	2,068	60.3	1,899	64.9
Extreme	50	0.9	130	1.8	274	2.9	391	4.7	360	6.3	203	5.5	247	7.3
Anxiety/depression	3,599	78.7	5,520	77.2	6,096	73.9	5,148	71.5	3,274	68.7	2,361	70.4	1,821	62.8
Some	887	19.3	1,495	20.9	1,973	23.9	1,967	25.8	1,454	28.3	993	27.3	1,037	34.2
Extreme	98	2.0	153	1.9	219	2.2	235	2.8	166	3.0	87	2.3	95	3.0

(continued)

(continued)

	Age									
	18-24	25-34	35-44	45-54	55-64	65-74	75+	n	%	%
Males	n	n	n	n	n	n	n	n	%	%
Mobility										
No problems	2,031	3,156	3,453	2,823	1,696	963	544	544	65.4	44.2
Some problems	85	190	335	584	597	531	615	615	33.8	54.6
Confined to bed	9	13	11	20	10	14	18	18	0.9	1.2
Self-care										
No problems	2,100	3,313	3,706	3,259	2,142	1,388	973	973	93.9	83.5
Some problems	19	41	77	147	136	105	165	165	5.4	13.2
Unable to	6	5	16	21	25	15	39	39	0.7	3.2
Usual activities										
No problems	2,002	3,143	3,403	2,830	1,699	1,008	628	628	68.9	53.0
Some problems	114	198	365	531	539	450	458	458	28.1	39.9
Unable to	9	18	31	66	65	50	91	91	3.0	7.2
Pain/discomfort										
No	1,692	2,488	2,450	1,791	1,004	557	379	379	37.5	31.8
Some	409	815	1,244	1,483	1,147	873	730	730	57.9	62.6
Extreme	24	56	105	153	152	78	68	68	4.6	5.6
Anxiety/depression										
No	1,769	2,758	3,009	2,560	1,646	1,087	777	777	74.0	67.2
Some	318	553	718	776	590	393	375	375	24.4	30.7
Extreme	38	48	72	91	67	28	25	25	1.7	2.1

Females	Age													
	18-24		25-34		35-44		45-54		55-64		65-74		75+	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Mobility														
No problems	2,326	95.1	3,517	93.2	3,931	88.1	3,039	78.6	1,772	71.8	1,153	60.2	691	40.8
Some problems	122	4.6	276	6.6	542	11.7	871	21.2	803	27.6	771	39.4	1,053	57.9
Confined to bed	11	0.3	16	0.3	16	0.3	13	0.2	16	0.6	9	0.4	32	1.4
Self-care														
No problems	2,435	99.1	3,748	98.7	4,369	97.8	3,739	96.4	2,402	94.0	1,783	93.6	1,413	81.7
Some problems	20	0.7	52	1.1	108	2.1	170	3.4	163	5.1	141	6.0	304	15.7
Unable to	4	0.2	9	0.2	12	0.2	14	0.2	26	0.9	9	0.4	59	2.7
Usual activities														
No problems	2,245	92.1	3,358	88.9	3,782	84.8	3,012	78.5	1,749	70.3	1,214	63.5	776	46.3
Some problems	201	7.6	431	10.6	657	14.3	836	20.0	751	26.7	661	33.8	819	44.9
Unable to	13	0.4	20	0.6	50	1.0	75	1.4	91	3.0	58	2.6	181	8.8
Pain/discomfort														
No	1,793	74.1	2,579	69.2	2,643	58.8	1,773	46.5	909	37.0	613	31.6	428	25.2
Some	640	24.8	1,156	29.0	1,677	37.9	1,912	48.3	1,474	56.1	1,195	62.3	1,169	66.4
Extreme	26	1.1	74	1.8	169	3.4	238	5.2	208	7.0	125	6.2	179	8.4
Anxiety/depression														
No	1,830	74.2	2,762	73.8	3,087	69.4	2,588	68.4	1,628	64.5	1,274	67.4	1,044	59.8
Some	569	23.4	942	24.0	1,255	28.0	1,191	28.8	864	31.9	600	29.7	662	36.6
Extreme	60	2.4	105	2.2	147	2.6	144	2.9	99	3.6	59	2.9	70	3.6

EQ-5D index value (European VAS value set)

EQ-5D index value (European VAS)		Age							Total
		18–24	25–34	35–44	45–54	55–64	65–74	75+	
Total	Mean	0.899	0.883	0.851	0.809	0.773	0.752	0.676	0.823
	Standard error	0.003	0.002	0.002	0.003	0.004	0.004	0.005	0.001
	25th percentile	0.78	0.78	0.78	0.69	0.69	0.69	0.60	0.69
	50th percentile	1.00	1.00	1.00	0.78	0.78	0.78	0.69	0.78
	75th percentile	1.00	1.00	1.00	1.00	1.00	1.00	0.78	1.00
Males	Mean	0.914	0.896	0.868	0.822	0.793	0.768	0.699	0.841
	Standard error	0.004	0.004	0.003	0.004	0.005	0.006	0.008	0.002
	25th percentile	0.78	0.78	0.78	0.71	0.69	0.69	0.60	0.75
	50th percentile	1.00	1.00	1.00	0.78	0.78	0.78	0.71	1.00
	75th percentile	1.00	1.00	1.00	1.00	1.00	1.00	0.78	1.00
Females	Mean	0.885	0.872	0.836	0.797	0.754	0.739	0.660	0.806
	Standard error	0.004	0.003	0.003	0.004	0.005	0.005	0.006	0.002
	25th percentile	0.78	0.78	0.71	0.69	0.69	0.66	0.60	0.69
	50th percentile	1.00	1.00	0.78	0.78	0.78	0.75	0.69	0.78
	75th percentile	1.00	1.00	1.00	1.00	1.00	0.85	0.78	1.00

EQ-5D index value (TTO value set)

EQ-5D index value (TTO value set)		Age							Total
		18–24	25–34	35–44	45–54	55–64	65–74	75+	
Total	Mean	0.925	0.912	0.888	0.855	0.827	0.813	0.754	0.866
	Standard error	0.002	0.002	0.002	0.002	0.003	0.003	0.004	0.001
	25th percentile	0.83	0.83	0.83	0.80	0.78	0.78	0.71	0.80
	50th percentile	1.00	1.00	1.00	0.83	0.83	0.83	0.80	0.84
	75th percentile	1.00	1.00	1.00	1.00	1.00	1.00	0.83	1.00
Males	Mean	0.935	0.921	0.900	0.864	0.842	0.825	0.773	0.880
	Standard error	0.003	0.003	0.003	0.003	0.004	0.005	0.007	0.001
	25th percentile	0.84	0.83	0.83	0.81	0.80	0.78	0.71	0.82
	50th percentile	1.00	1.00	1.00	0.84	0.83	0.83	0.81	1.00
	75th percentile	1.00	1.00	1.00	1.00	1.00	1.00	0.84	1.00
Females	Mean	0.914	0.904	0.877	0.846	0.812	0.803	0.741	0.854
	Standard error	0.003	0.003	0.003	0.003	0.004	0.005	0.005	0.001
	25th percentile	0.83	0.83	0.81	0.80	0.78	0.77	0.71	0.80
	50th percentile	1.00	1.00	0.84	0.83	0.83	0.82	0.78	0.84
	75th percentile	1.00	1.00	1.00	1.00	1.00	0.86	0.83	1.00

Annex 2: EQ-5D Population Norms – Regional Surveys

Armenia (five regions)

Source: Gharagebakyan et al. (2003)

Number of respondents

Age	18–24	25–34	35–44	45–54	55–64	65–74	75+	Total
Total	297	339	473	414	227	287	180	2,217
Males	77	114	127	115	78	93	57	661
Females	220	225	346	299	149	194	123	1,556

EQ VAS (self-rated health)

EQ-VAS (self-rated)		Age							Total
		18–24	25–34	35–44	45–54	55–64	65–74	75+	
Total	Mean	87.8	78.4	68.0	62.3	55.3	50.1	43.8	65.7
	Standard error	0.8	1.0	0.9	0.9	1.3	1.1	1.6	0.5
	25th percentile	80	70	50	50	40	40	30	50
	50th percentile	90	80	70	60	53	50	45	70
	75th percentile	100	90	80	80	70	60	58	84
Males	Mean	88.7	78.8	71.2	63.1	55.8	55.5	49.0	67.3
	Standard error	1.6	2.1	1.8	2.0	2.3	2.1	2.7	0.9
	25th percentile	80	65	60	50	40	40	40	50
	50th percentile	95	85	78	65	60	60	50	70
	75th percentile	100	100	90	80	70	70	60	90
Females	Mean	87.5	78.1	66.9	62.1	55.0	47.5	41.5	65.0
	Standard error	1.0	1.1	1.1	1.1	1.6	1.2	1.9	0.6
	25th percentile	80	70	50	50	40	40	30	50
	50th percentile	90	80	70	60	51	50	40	70
	75th percentile	100	90	80	75	70	60	50	80

Problems reported by dimension

	Age													
	18–24		25–34		35–44		45–54		55–64		65–74		75+	
Total	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Mobility														
No problems	283	95.3	296	87.3	397	83.9	321	77.5	128	56.4	127	44.3	58	32.2
Some problems	13	4.4	42	12.4	74	15.6	92	22.2	95	41.9	149	51.9	111	61.7
Confined to bed	1	0.3	1	0.3	2	0.4	1	0.2	4	1.8	11	3.8	11	6.1
Self-care														
No problems	291	98.3	320	94.4	449	94.9	382	92.3	180	79.3	195	67.9	83	46.1
Some problems	3	1.0	18	5.3	22	4.7	28	6.8	42	18.5	75	26.1	79	43.9
Unable to	2	0.7	1	0.3	2	0.4	4	1.0	5	2.2	17	5.9	18	10.0
Usual activities														
No problems	278	93.6	282	83.2	364	77.0	308	74.6	124	54.9	132	46.0	59	32.8
Some problems	18	6.1	52	15.3	99	20.9	96	23.2	92	40.7	131	45.6	91	50.6
Unable to	1	0.3	5	1.5	10	2.1	9	2.2	10	4.4	24	8.4	30	16.7
Pain/discomfort														
No	219	73.7	184	54.3	176	37.2	116	28.0	35	15.4	27	9.4	17	9.4
Some	71	23.9	138	40.7	259	54.8	246	59.4	143	63.0	181	63.1	109	60.6
Extreme	7	2.4	17	5.0	38	8.0	52	12.6	49	21.6	79	27.5	54	30.0
Anxiety/depression														
No	209	70.8	196	58.3	224	47.8	168	40.7	85	37.8	78	27.5	64	35.6
Some	81	27.5	123	36.6	205	43.7	202	48.9	100	44.4	143	50.4	72	40.0
Extreme	5	1.7	17	5.1	40	8.5	43	10.4	40	17.8	63	22.2	44	24.4

	Age													
	18-24		25-34		35-44		45-54		55-64		65-74		75+	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Males	71	92.2	98	86.0	108	85.0	89	77.4	44	56.4	47	50.5	24	42.1
Mobility	5	6.5	15	13.2	17	13.4	25	21.7	32	41.0	44	47.3	30	52.6
	1	1.3	1	0.9	2	1.6	1	0.9	2	2.6	2	2.2	3	5.3
Self-care	73	94.8	104	91.2	120	94.5	101	87.8	58	74.4	63	67.7	31	54.4
	2	2.6	9	7.9	7	5.5	12	10.4	18	23.1	26	28.0	21	36.8
	2	2.6	1	0.9	0	0.0	2	1.7	2	2.6	4	4.3	5	8.8
Usual activities	67	87.0	91	79.8	103	81.1	81	70.4	42	53.8	43	46.2	25	43.9
	9	11.7	21	18.4	19	15.0	28	24.3	32	41.0	39	41.9	27	47.4
	1	1.3	2	1.8	5	3.9	6	5.2	4	5.1	11	11.8	5	8.8
Pain/discomfort	64	83.1	72	63.2	59	46.5	41	35.7	18	23.1	15	16.1	8	14.0
	11	14.3	33	28.9	56	44.1	55	47.8	44	56.4	54	58.1	35	61.4
	2	2.6	9	7.9	12	9.4	19	16.5	16	20.5	24	25.8	14	24.6
Anxiety/depression	55	72.4	73	64.0	67	53.2	54	47.0	36	46.2	30	33.0	26	45.6
	21	27.6	31	27.2	48	38.1	49	42.6	31	39.7	44	48.4	21	36.8
	0	0.0	10	8.8	11	8.7	12	10.4	11	14.1	17	18.7	10	17.5

(continued)

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	Age													
	18-24		25-34		35-44		45-54		55-64		65-74		75+	
Females	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Mobility														
No problems	212	96.4	198	88.0	289	83.5	232	77.6	84	56.4	80	41.2	34	27.6
Some problems	8	3.6	27	12.0	57	16.5	67	22.4	63	42.3	105	54.1	81	65.9
Confined to bed	0	0.0	0	0.0	0	0.0	0	0.0	2	1.3	9	4.6	8	6.5
Self-care														
No problems	218	99.5	216	96.0	329	95.1	281	94.0	122	81.9	132	68.0	52	42.3
Some problems	1	0.5	9	4.0	15	4.3	16	5.4	24	16.1	49	25.3	58	47.2
Unable to	0	0.0	0	0.0	2	0.6	2	0.7	3	2.0	13	6.7	13	10.6
Usual activities														
No problems	211	95.9	191	84.9	261	75.4	227	76.2	82	55.4	89	45.9	34	27.6
Some problems	9	4.1	31	13.8	80	23.1	68	22.8	60	40.5	92	47.4	64	52.0
Unable to	0	0.0	3	1.3	5	1.4	3	1.0	6	4.1	13	6.7	25	20.3
Pain/discomfort														
No	155	70.5	112	49.8	117	33.8	75	25.1	17	11.4	12	6.2	9	7.3
Some	60	27.3	105	46.7	203	58.7	191	63.9	99	66.4	127	65.5	74	60.2
Extreme	5	2.3	8	3.6	26	7.5	33	11.0	33	22.1	55	28.4	40	32.5
Anxiety/depression														
No	154	70.3	123	55.4	157	45.8	114	38.3	49	33.3	48	24.9	38	30.9
Some	60	27.4	92	41.4	157	45.8	153	51.3	69	46.9	99	51.3	51	41.5
Extreme	5	2.3	7	3.2	29	8.5	31	10.4	29	19.7	46	23.8	34	27.6

EQ-5D index value (European VAS value set)

EQ-5D index value (European VAS)		Age							Total
		18–24	25–34	35–44	45–54	55–64	65–74	75+	
Total	Mean	0.881	0.798	0.736	0.690	0.600	0.521	0.473	0.693
	Standard error	0.010	0.012	0.010	0.011	0.017	0.016	0.021	0.006
	25th percentile	0.78	0.69	0.66	0.61	0.48	0.28	0.18	0.60
	50th percentile	1.00	0.78	0.75	0.69	0.68	0.60	0.49	0.69
	75th percentile	1.00	1.00	1.00	0.78	0.78	0.69	0.69	1.00
Males	Mean	0.887	0.804	0.752	0.699	0.620	0.546	0.537	0.704
	Standard error	0.022	0.024	0.021	0.025	0.031	0.029	0.037	0.011
	25th percentile	0.78	0.69	0.62	0.60	0.48	0.30	0.29	0.58
	50th percentile	1.00	1.00	0.78	0.69	0.69	0.62	0.60	0.75
	75th percentile	1.00	1.00	1.00	1.00	0.78	0.75	0.71	1.00
Females	Mean	0.879	0.794	0.730	0.686	0.589	0.509	0.443	0.688
	Standard error	0.011	0.013	0.011	0.012	0.020	0.019	0.026	0.006
	25th percentile	0.78	0.69	0.66	0.62	0.45	0.26	0.15	0.60
	50th percentile	1.00	0.78	0.69	0.69	0.66	0.60	0.48	0.69
	75th percentile	1.00	1.00	0.85	0.78	0.75	0.69	0.66	0.78

Problems reported by dimension

	18-24		25-34		35-44		45-54		55-64		65-74		75+	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Total	424	91.7	785	91.4	940	89.0	781	79.2	660	79.5	325	69.3	156	51.9
Mobility	33	7.7	73	8.2	125	10.5	207	20.7	182	20.0	147	30.4	141	48.1
Some problems	2	0.5	2	0.4	5	0.5	2	0.1	4	0.5	3	0.2	0	0.0
Confined to bed	456	99.1	842	98.0	1,042	97.4	947	96.0	816	95.9	445	93.8	273	91.8
Self-care	3	0.9	14	1.7	26	2.4	42	3.7	34	4.1	30	5.8	25	8.2
Some problems	0	0.0	3	0.3	2	0.2	2	0.2	0	0.0	2	0.4	0	0.0
Unable to	413	89.6	766	89.2	933	88.5	767	75.9	665	79.0	364	75.9	201	66.7
Usual activities	44	9.7	83	9.1	120	10.0	203	21.5	176	19.6	109	23.3	94	32.9
Some problems	2	0.7	12	1.6	14	1.5	20	2.6	9	1.4	4	0.8	3	0.4
Unable to	317	67.3	570	66.6	574	56.0	440	43.6	379	45.5	207	43.6	97	31.5
Pain/discomfort	138	31.7	267	30.9	465	41.8	498	51.2	435	50.3	248	51.5	185	63.3
Some	4	1.1	22	2.6	28	2.2	52	5.2	36	4.2	22	4.9	16	5.2
Extreme	352	77.3	661	77.3	815	77.9	742	74.9	639	76.8	368	77.6	239	82.0
Anxiety/depression	97	20.7	178	20.9	227	20.0	218	22.8	186	21.7	100	20.6	53	17.4
Some	9	2.0	18	1.8	23	2.1	22	2.3	17	1.5	6	1.8	1	0.6
Extreme														

(continued)

(continued)

Males	Age													
	18-24		25-34		35-44		45-54		55-64		65-74		75+	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Mobility	204	91.8	338	89.7	450	91.3	393	82.6	340	79.3	160	72.8	74	55.4
Some problems	16	8.2	39	9.9	56	8.6	99	17.4	94	20.7	66	27.2	53	44.6
Confined to bed	0	0.0	1	0.5	1	0.1	0	0.0	0	0.0	0	0.0	0	0.0
Self-care	219	99.7	368	97.8	494	97.9	468	95.9	418	94.9	218	96.7	122	95.8
Some problems	1	0.3	8	2.0	12	2.0	24	4.0	19	5.1	8	2.6	5	4.2
Unable to	0	0.0	1	0.1	1	0.1	1	0.1	0	0.0	1	0.7	0	0.0
Usual activities	194	86.1	337	88.5	451	90.5	390	79.3	342	80.1	182	81.5	100	80.2
Some problems	25	13.3	35	9.2	50	8.2	94	18.4	89	18.3	42	17.0	24	18.8
Unable to	1	0.6	7	2.3	5	1.2	9	2.4	6	1.6	2	1.5	3	1.0
Pain/discomfort	152	67.2	251	69.3	272	58.8	226	46.0	203	47.4	115	52.7	47	37.2
Some	65	31.4	119	29.1	224	40.1	249	50.8	213	47.5	104	43.8	75	60.6
Extreme	3	1.3	8	1.6	10	1.1	17	3.2	21	5.0	8	3.5	5	2.2
Anxiety/depression	171	76.1	297	79.5	415	83.8	389	78.4	342	79.8	185	82.3	103	82.3
Some	44	22.4	67	17.8	83	14.6	93	20.0	83	18.8	38	16.2	23	17.7
Extreme	5	1.5	13	2.7	7	1.6	7	1.6	7	1.4	3	1.6	0	0.0

Females	Age													
	18-24		25-34		35-44		45-54		55-64		65-74		75+	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Mobility	220	91.7	447	93.0	490	86.5	388	76.0	320	79.8	165	66.2	82	49.4
Some problems	17	7.3	34	6.6	69	12.5	108	23.9	88	19.1	81	33.4	88	50.6
Confined to bed	2	1.1	1	0.4	4	1.0	2	0.1	4	1.0	3	0.5	0	0.0
Self-care	237	98.6	474	98.2	548	96.9	479	96.2	398	97.0	227	91.2	151	88.8
Some problems	2	1.4	6	1.4	14	2.8	18	3.4	15	3.0	22	8.7	20	11.2
Unable to	0	0.0	2	0.4	1	0.3	1	0.4	0	0.0	1	0.1	0	0.0
Usual activities	219	93.0	429	89.9	482	86.3	377	72.7	323	77.8	182	70.8	101	56.8
Some problems	19	6.1	48	9.0	70	11.9	109	24.5	87	21.0	67	28.9	70	43.2
Unable to	1	0.8	5	1.0	9	1.8	11	2.8	3	1.1	2	0.2	0	0.0
Pain/discomfort	165	67.3	319	63.9	302	53.0	214	41.3	176	43.4	92	35.3	50	27.4
Some	73	31.9	148	32.6	241	43.6	249	51.6	222	53.3	144	58.6	110	65.3
Extreme	1	0.8	14	3.5	18	3.4	35	7.1	15	3.3	14	6.1	11	7.3
Anxiety/depression	181	78.5	364	75.2	400	71.6	353	71.4	297	73.5	183	73.4	136	81.8
Some	53	19.0	111	23.9	144	25.8	125	25.6	103	24.8	62	24.6	30	17.1
Extreme	4	2.5	5	0.9	16	2.6	15	2.9	10	1.6	3	2.0	1	1.0

EQ-5D index value (European VAS value set)

EQ-5D index value (European VAS)		Age							Total
		18–24	25–34	35–44	45–54	55–64	65–74	75+	
Total	Mean	0.873	0.864	0.843	0.798	0.805	0.793	0.756	0.828
	Standard error	0.009	0.007	0.007	0.008	0.008	0.010	0.012	0.003
	25th percentile	0.779	0.779	0.779	0.690	0.690	0.690	0.687	0.713
	50th percentile	1.000	1.000	0.783	0.779	0.779	0.779	0.753	0.783
	75th percentile	1.00	1.00	1.00	1.00	1.00	1.00	0.81	1.00
Males	Mean	0.871	0.871	0.866	0.814	0.811	0.826	0.784	0.842
	Standard error	0.012	0.011	0.009	0.010	0.012	0.015	0.016	0.004
	25th percentile	0.78	0.78	0.78	0.71	0.71	0.71	0.69	0.75
	50th percentile	1.00	1.00	1.00	0.78	0.78	0.78	0.78	0.78
	75th percentile	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Females	Mean	0.876	0.856	0.820	0.782	0.799	0.762	0.736	0.813
	Standard error	0.013	0.010	0.010	0.012	0.011	0.014	0.017	0.005
	25th percentile	0.78	0.78	0.71	0.69	0.69	0.69	0.69	0.71
	50th percentile	1.00	0.81	0.78	0.78	0.78	0.78	0.71	0.78
	75th percentile	1.00	1.00	1.00	1.00	1.00	1.00	0.78	1.00

		Age													
		18-24		25-34		35-44		45-54		55-64		65-74		75+	
Males		n	%	n	%	n	%	n	%	n	%	n	%	n	%
Mobility	No problems	20	95.2	43	97.7	44	100.0	49	100.0	57	90.5	25	75.8	8	72.7
	Some problems	1	4.8	1	2.3	0	0.0	0	0.0	6	9.5	8	24.2	3	27.3
	Confined to bed	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Self-care	No problems	20	95.2	44	100.0	44	100.0	49	100.0	62	98.4	33	100.0	10	90.9
	Some problems	1	4.8	0	0.0	0	0.0	0	0.0	1	1.6	0	0.0	1	9.1
	Unable to	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Usual activities	No problems	20	95.2	44	100.0	44	100.0	48	98.0	61	96.8	28	84.8	8	72.7
	Some problems	1	4.8	0	0.0	0	0.0	1	2.0	2	3.2	5	15.2	3	27.3
	Unable to	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Pain/discomfort	No	20	95.2	39	88.6	43	97.7	45	91.8	51	81.0	26	78.8	6	54.5
	Some	0	0.0	5	11.4	1	2.3	3	6.1	11	17.5	7	21.2	5	45.5
	Extreme	1	4.8	0	0.0	0	0.0	1	2.0	1	1.6	0	0.0	0	0.0
Anxiety/depression	No	21	100.0	42	95.5	42	95.5	44	89.8	59	93.7	31	93.9	8	72.7
	Some	0	0.0	2	4.5	2	4.5	3	6.1	3	4.8	2	6.1	3	27.3
	Extreme	0	0.0	0	0.0	0	0.0	2	4.1	1	1.6	0	0.0	0	0.0

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EQ-5D index value (European VAS value set)

EQ-5D index value (European VAS)		Age							Total
		18–24	25–34	35–44	45–54	55–64	65–74	75+	
Total	Mean	0.961	0.961	0.965	0.938	0.908	0.886	0.758	0.927
	Standard error	0.021	0.011	0.008	0.012	0.014	0.017	0.041	0.006
	25th percentile	1.00	1.00	1.00	1.00	0.78	0.78	0.71	0.88
	50th percentile	1.00	1.00	1.00	1.00	1.00	1.00	0.78	1.00
	75th percentile	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Males	Mean	0.965	0.964	0.985	0.955	0.930	0.912	0.805	0.945
	Standard error	0.035	0.013	0.008	0.019	0.017	0.023	0.047	0.008
	25th percentile	1.00	1.00	1.00	1.00	0.81	0.78	0.78	1.00
	50th percentile	1.00	1.00	1.00	1.00	1.00	1.00	0.78	1.00
	75th percentile	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Females	Mean	0.957	0.958	0.952	0.928	0.886	0.867	0.727	0.914
	Standard error	0.024	0.016	0.012	0.015	0.022	0.023	0.062	0.008
	25th percentile	1.00	1.00	1.00	0.78	0.78	0.71	0.54	0.78
	50th percentile	1.00	1.00	1.00	1.00	1.00	1.00	0.78	1.00
	75th percentile	1.00	1.00	1.00	1.00	1.00	1.00	0.96	1.00

EQ-5D index value (TTO value set)

EQ-5D index value (TTO value set)		Age							Total
		18–24	25–34	35–44	45–54	55–64	65–74	75+	
Total	Mean	0.967	0.963	0.965	0.941	0.912	0.881	0.768	0.929
	Standard error	0.017	0.009	0.008	0.010	0.012	0.017	0.034	0.005
	25th percentile	1.00	1.00	1.00	1.00	0.77	0.74	0.69	0.85
	50th percentile	1.00	1.00	1.00	1.00	1.00	1.00	0.77	1.00
	75th percentile	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Males	Mean	0.975	0.962	0.985	0.963	0.930	0.904	0.799	0.946
	Standard error	0.025	0.013	0.008	0.015	0.016	0.025	0.045	0.007
	25th percentile	1.00	1.00	1.00	1.00	0.79	0.77	0.73	1.00
	50th percentile	1.00	1.00	1.00	1.00	1.00	1.00	0.77	1.00
	75th percentile	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Females	Mean	0.958	0.964	0.951	0.928	0.895	0.865	0.747	0.917
	Standard error	0.024	0.013	0.012	0.014	0.019	0.023	0.049	0.007
	25th percentile	1.00	1.00	1.00	0.77	0.77	0.71	0.59	0.77
	50th percentile	1.00	1.00	1.00	1.00	1.00	1.00	0.77	1.00
	75th percentile	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00

Spain (Canary Islands)**Source:** Canary Islands Health Survey (2009)**Number of respondents**

Age	18–24	25–34	35–44	45–54	55–64	65–74	75+	Total
Total	290	705	1,021	798	624	568	462	4,468
Males	129	327	431	339	237	240	150	1,853
Females	161	378	590	459	387	328	312	2,615

EQ VAS (self-rated health)

EQ-VAS (self-rated)		Age							Total
		18–24	25–34	35–44	45–54	55–64	65–74	75+	
Total	Mean	83.3	79.7	77.4	71.6	66.1	64.4	56.4	71.7
	Standard error	1.0	0.6	0.6	0.7	0.9	0.9	1.0	0.3
	25th percentile	77.5	70	70	60	50	50	40	60
	50th percentile	90	80	80	75	70	65	50	75
	75th percentile	99.5	90	90	90	80	80	70	90
Males	Mean	85.3	81.9	80.0	73.9	69.4	68.7	58.2	75.0
	Standard error	1.3	0.9	0.8	1.0	1.4	1.3	1.8	0.5
	25th percentile	80	70	70	60	50	50	50	60
	50th percentile	90	80	80	80	70	70	60	80
	75th percentile	100	95	90	90	80	80	70	90
Females	Mean	81.7	77.8	75.4	69.8	64.0	61.2	55.5	69.3
	Standard error	1.4	0.9	0.8	1.0	1.1	1.2	1.2	0.4
	25th percentile	72.5	70	60	50	50	50	40	50
	50th percentile	80	80	80	70	60	60	50	70
	75th percentile	95	90	90	85	80	80	70	90

Problems reported by dimension

	18-24		25-34		35-44		45-54		55-64		65-74		75+	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Total	285	98.3	683	97.0	969	95.3	706	88.5	492	78.8	368	64.8	197	42.6
Mobility	5	1.7	19	2.7	46	4.5	85	10.7	129	20.7	193	34.0	239	51.7
Some problems	0	0.0	2	0.3	2	0.2	7	0.9	3	0.5	7	1.2	26	5.6
Confined to bed														
Self-care	287	99.0	690	98.0	1,007	98.6	770	96.5	581	93.1	519	91.4	331	71.6
No problems	2	0.7	11	1.6	12	1.2	23	2.9	39	6.3	37	6.5	92	19.9
Some problems	1	0.3	3	0.4	2	0.2	5	0.6	4	0.6	12	2.1	39	8.4
Usual activities	283	97.6	682	96.7	966	94.6	718	90.0	515	82.5	417	73.4	229	49.6
No problems	4	1.4	17	2.4	52	5.1	69	8.6	94	15.1	129	22.7	172	37.2
Some problems	3	1.0	6	0.9	3	0.3	11	1.4	15	2.4	22	3.9	61	13.2
Pain/discomfort	244	84.4	560	79.4	720	70.5	496	62.2	298	47.8	240	42.3	145	31.4
No	42	14.5	131	18.6	254	24.9	244	30.6	238	38.1	250	44.0	232	50.2
Some	3	1.0	14	2.0	47	4.6	58	7.3	88	14.1	78	13.7	85	18.4
Extreme	251	86.6	597	84.9	815	80.1	569	71.3	395	63.3	403	71.0	284	61.7
Anxiety/depression	34	11.7	89	12.7	175	17.2	177	22.2	172	27.6	130	22.9	141	30.7
No	5	1.7	17	2.4	27	2.7	52	6.5	57	9.1	35	6.2	35	7.6
Some														
Extreme														

(continued)

(continued)

Males	Age													
	18-24		25-34		35-44		45-54		55-64		65-74		75+	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Mobility	127	98.4	316	96.9	415	96.7	309	91.2	196	82.7	180	75.0	81	54.0
Some problems	2	1.6	8	2.5	14	3.3	26	7.7	40	16.9	57	23.8	62	41.3
Confined to bed	0	0.0	2	0.6	0	0.0	4	1.2	1	0.4	3	1.3	7	4.7
Self-care	128	99.2	319	97.9	428	99.3	330	97.3	224	94.5	225	93.8	120	80.0
Some problems	1	0.8	5	1.5	3	0.7	5	1.5	12	5.1	10	4.2	20	13.3
Unable to	0	0.0	2	0.6	0	0.0	4	1.2	1	0.4	5	2.1	10	6.7
Usual activities	127	98.4	316	96.6	415	96.3	313	92.3	207	87.3	197	82.1	89	59.3
Some problems	1	0.8	6	1.8	15	3.5	18	5.3	25	10.5	34	14.2	50	33.3
Unable to	1	0.8	5	1.5	1	0.2	8	2.4	5	2.1	9	3.8	11	7.3
Pain/discomfort	117	90.7	277	84.7	322	74.7	239	70.5	135	57.0	132	55.0	62	41.3
Some	12	9.3	44	13.5	94	21.8	88	26.0	80	33.8	92	38.3	70	46.7
Extreme	0	0.0	6	1.8	15	3.5	12	3.5	22	9.3	16	6.7	18	12.0
Anxiety/depression	116	89.9	280	86.2	362	84.4	270	79.6	180	75.9	202	84.2	116	77.9
Some	12	9.3	40	12.3	62	14.5	56	16.5	47	19.8	31	12.9	30	20.1
Extreme	1	0.8	5	1.5	5	1.2	13	3.8	10	4.2	7	2.9	3	2.0

Females	Age													
	18-24		25-34		35-44		45-54		55-64		65-74		75+	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Mobility	158	98.1	367	97.1	554	94.2	397	86.5	296	76.5	188	57.3	116	37.2
Some problems	3	1.9	11	2.9	32	5.4	59	12.9	89	23.0	136	41.5	177	56.7
Confined to bed	0	0.0	0	0.0	2	0.3	3	0.7	2	0.5	4	1.2	19	6.1
Self-care	159	98.8	371	98.1	579	98.1	440	95.9	357	92.2	294	89.6	211	67.6
Some problems	1	0.6	6	1.6	9	1.5	18	3.9	27	7.0	27	8.2	72	23.1
Unable to	1	0.6	1	0.3	2	0.3	1	0.2	3	0.8	7	2.1	29	9.3
Usual activities	156	96.9	366	96.8	551	93.4	405	88.2	308	79.6	220	67.1	140	44.9
Some problems	3	1.9	11	2.9	37	6.3	51	11.1	69	17.8	95	29.0	122	39.1
Unable to	2	1.2	1	0.3	2	0.3	3	0.7	10	2.6	13	4.0	50	16.0
Pain/discomfort	127	79.4	283	74.9	398	67.5	257	56.0	163	42.1	108	32.9	83	26.6
Some	30	18.8	87	23.0	160	27.1	156	34.0	158	40.8	158	48.2	162	51.9
Extreme	3	1.9	8	2.1	32	5.4	46	10.0	66	17.1	62	18.9	67	21.5
Anxiety/depression	135	83.9	317	83.9	453	77.0	299	65.1	215	55.6	201	61.3	168	54.0
Some	22	13.7	49	13.0	113	19.2	121	26.4	125	32.3	99	30.2	111	35.7
Extreme	4	2.5	12	3.2	22	3.7	39	8.5	47	12.1	28	8.5	32	10.3

EQ-5D index value (European VAS value set)

EQ-5D index value (European VAS)		Age							Total
		18–24	25–34	35–44	45–54	55–64	65–74	75+	
Total	Mean	0.930	0.910	0.878	0.825	0.753	0.736	0.619	0.815
	Standard error	0.008	0.006	0.006	0.008	0.010	0.011	0.013	0.003
	25th percentile	1.00	0.78	0.78	0.69	0.63	0.66	0.42	0.69
	50th percentile	1.00	1.00	1.00	1.00	0.78	0.78	0.69	1.00
	75th percentile	1.00	1.00	1.00	1.00	1.00	1.00	0.78	1.00
Males	Mean	0.953	0.921	0.901	0.866	0.813	0.814	0.710	0.863
	Standard error	0.010	0.009	0.008	0.010	0.014	0.014	0.021	0.005
	25th percentile	1.00	0.78	0.78	0.78	0.71	0.71	0.60	0.78
	50th percentile	1.00	1.00	1.00	1.00	0.78	0.78	0.75	1.00
	75th percentile	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Females	Mean	0.911	0.902	0.862	0.794	0.716	0.679	0.575	0.780
	Standard error	0.012	0.008	0.008	0.011	0.013	0.014	0.016	0.005
	25th percentile	0.78	0.78	0.78	0.69	0.57	0.48	0.33	0.69
	50th percentile	1.00	1.00	1.00	0.78	0.78	0.71	0.62	0.78
	75th percentile	1.00	1.00	1.00	1.00	1.00	0.78	0.78	1.00

Spain (Catalonia)**Source:** Catalunya Health Survey (2010–2011)**Number of respondents**

Age	18–24	25–34	35–44	45–54	55–64	65–74	75+	Total
Total	454	1,015	970	842	968	563	791	5,603
Males	228	525	506	426	483	274	368	2,810
Females	226	490	464	416	485	289	423	2,793

EQ VAS (self-rated health)

EQ-VAS (self-rated)		Age							Total
		18–24	25–34	35–44	45–54	55–64	65–74	75+	
Total	Mean	82.4	79.3	77.5	72.7	67.6	63.6	54.4	72.3
	Standard error	0.8	0.6	0.6	0.7	0.7	1.0	0.9	0.3
	25th percentile	80	70	70	65	60	50	40	60
	50th percentile	85	80	80	80	70	70	60	80
	75th percentile	90	90	90	85	80	80	70	90
Males	Mean	83.1	79.7	78.9	74.4	69.6	66.8	58.5	74.6
	Standard error	1.1	0.8	0.8	0.9	0.9	1.3	1.2	0.4
	25th percentile	80	75	70	70	60	50	50	70
	50th percentile	85	80	80	80	70	70	60	80
	75th percentile	90	90	90	85	80	80	70	90
Females	Mean	81.7	79.0	76.0	70.9	65.6	60.8	51.9	70.0
	Standard error	1.0	0.8	0.8	1.0	1.0	1.4	1.2	0.4
	25th percentile	75	70	70	60	50	50	40	60
	50th percentile	80	80	80	75	70	60	50	75
	75th percentile	90	90	90	80	80	80	70	85

Problems reported by dimension (raw numbers, weighted proportions)

	Age													
	18-24		25-34		35-44		45-54		55-64		65-74		75+	
Total	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Mobility	443	97.7	986	96.5	927	95.7	771	91.4	804	82.5	410	72.1	315	43.1
No problems	10	2.2	28	3.4	41	4.0	69	8.3	159	17.0	148	27.1	439	53.0
Some problems	1	0.1	1	0.1	2	0.3	2	0.3	5	0.5	5	0.8	37	3.9
Confined to bed	450	99.1	1,003	98.7	958	99.0	821	97.3	932	96.3	519	91.8	527	70.7
Self-care	3	0.8	9	1.0	10	0.7	17	2.2	32	3.4	37	7.2	153	17.9
No problems	1	0.1	3	0.4	2	0.2	4	0.6	4	0.4	7	1.0	111	11.3
Some problems	450	98.9	984	96.5	938	96.8	787	93.2	860	87.5	472	83.1	420	56.5
Usual activities	4	1.1	23	2.5	29	2.9	44	5.4	95	10.9	70	13.3	206	24.9
No problems	0	0.0	8	1.0	3	0.3	11	1.4	13	1.6	21	3.7	165	18.6
Some problems	403	88.6	869	85.2	774	78.4	593	70.2	545	54.4	283	49.1	295	37.1
Pain/discomfort	51	11.4	130	12.9	177	19.8	214	25.5	348	37.2	211	37.6	366	45.3
No	0	0.0	16	1.9	19	1.8	35	4.2	75	8.4	69	13.3	130	17.6
Extreme	426	93.2	898	87.7	842	85.3	673	79.4	734	75.0	399	70.9	537	66.0
Anxiety/depression	26	6.3	98	10.2	115	13.6	142	17.1	191	20.1	131	22.5	209	27.3
No	2	0.6	19	2.2	13	1.1	27	3.6	43	4.9	33	6.6	45	6.7
Some	426	93.2	898	87.7	842	85.3	673	79.4	734	75.0	399	70.9	537	66.0
Extreme	26	6.3	98	10.2	115	13.6	142	17.1	191	20.1	131	22.5	209	27.3

	Age													
	18-24		25-34		35-44		45-54		55-64		65-74		75+	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Males														
Mobility														
No problems	222	97.9	508	96.3	490	97.1	394	92.7	411	85.4	221	81.0	157	49.2
Some problems	5	1.9	16	3.5	15	2.7	31	6.9	69	14.0	51	18.2	199	48.3
Confined to bed	1	0.2	1	0.3	1	0.3	1	0.3	3	0.6	2	0.8	12	2.6
Self-care														
No problems	225	98.9	516	98.0	501	99.1	419	98.5	469	97.0	257	93.2	264	79.2
Some problems	2	0.9	6	1.2	4	0.7	5	1.1	13	2.7	14	6.1	58	13.7
Unable to	1	0.2	3	0.7	1	0.3	2	0.4	1	0.3	3	0.7	46	7.1
Usual activities														
No problems	225	98.5	506	95.7	493	97.4	398	93.4	446	91.4	244	88.8	224	68.9
Some problems	3	1.5	13	2.8	11	2.3	22	5.3	30	6.9	22	8.3	81	19.4
Unable to	0	0.0	6	1.5	2	0.4	6	1.3	7	1.7	8	2.9	63	11.7
Pain/discomfort														
No	206	89.9	466	89.1	427	84.4	335	79.2	327	67.2	171	61.7	170	49.8
Some	22	10.1	52	9.3	74	14.9	84	19.5	138	29.0	85	31.8	165	42.4
Extreme	0	0.0	7	1.5	5	0.7	7	1.3	18	3.8	18	6.5	33	7.8
Anxiety/depression														
No	216	95.1	484	92.3	452	87.6	363	85.1	392	81.1	210	76.8	279	76.6
Some	11	4.4	33	6.0	48	11.3	54	12.6	80	16.4	56	20.1	77	20.6
Extreme	1	0.6	8	1.7	6	1.1	9	2.3	11	2.5	8	3.0	12	2.7

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	Age													
	18-24		25-34		35-44		45-54		55-64		65-74		75+	
Females	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Mobility														
No problems	221	97.4	478	96.8	437	94.1	377	90.0	393	79.8	189	64.3	158	39.4
Some problems	5	2.6	12	3.2	26	5.5	38	9.6	90	19.9	97	34.9	240	55.9
Confined to bed	0	0.0	0	0.0	1	0.3	1	0.3	2	0.3	3	0.8	25	4.7
Self-care														
No problems	225	99.4	487	99.3	457	99.0	402	96.0	463	95.6	262	90.6	263	65.5
Some problems	1	0.6	3	0.7	6	0.8	12	3.3	19	4.0	23	8.1	95	20.6
Unable to	0	0.0	0	0.0	1	0.1	2	0.7	3	0.4	4	1.2	65	13.9
Usual activities														
No problems	225	99.4	478	97.3	445	96.2	389	93.0	414	83.9	228	78.0	196	48.7
Some problems	1	0.6	10	2.1	18	3.7	22	5.4	65	14.7	48	17.6	125	28.4
Unable to	0	0.0	2	0.5	1	0.1	5	1.6	6	1.4	13	4.3	102	22.9
Pain/discomfort														
No	197	87.3	403	81.0	347	71.9	258	61.3	218	42.3	112	37.9	125	29.2
Some	29	12.7	78	16.7	103	25.2	130	31.5	210	45.0	126	42.7	201	47.1
Extreme	0	0.0	9	2.3	14	2.9	28	7.2	57	12.7	51	19.4	97	23.7
Anxiety/depression														
No	210	91.2	414	82.7	390	82.8	310	73.6	342	69.2	189	65.7	258	59.4
Some	15	8.3	65	14.6	67	16.1	88	21.6	111	23.5	75	24.6	132	31.4
Extreme	1	0.6	11	2.7	7	1.1	18	4.8	32	7.3	25	9.7	33	9.2

EQ-5D index value (European VAS value set)

EQ-5D index value (European VAS)		Age							Total
		18–24	25–34	35–44	45–54	55–64	65–74	75+	
Total	Mean	0.958	0.929	0.914	0.871	0.807	0.762	0.623	0.853
	Standard error	0.005	0.005	0.005	0.007	0.008	0.012	0.012	0.003
	25th percentile	1.00	1.00	0.78	0.78	0.71	0.69	0.39	0.78
	50th percentile	1.00	1.00	1.00	1.00	0.78	0.78	0.69	1.00
	75th percentile	1.00	1.00	1.00	1.00	1.00	1.00	0.81	1.00
Males	Mean	0.962	0.944	0.932	0.908	0.859	0.829	0.715	0.895
	Standard error	0.007	0.007	0.007	0.008	0.009	0.014	0.016	0.004
	25th percentile	1.00	1.00	0.85	0.78	0.78	0.71	0.60	0.78
	50th percentile	1.00	1.00	1.00	1.00	1.00	1.00	0.78	1.00
	75th percentile	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Females	Mean	0.954	0.913	0.895	0.835	0.758	0.703	0.566	0.812
	Standard error	0.008	0.008	0.008	0.012	0.012	0.017	0.017	0.005
	25th percentile	1.00	0.78	0.78	0.75	0.69	0.48	0.30	0.69
	50th percentile	1.00	1.00	1.00	1.00	0.78	0.78	0.62	1.00
	75th percentile	1.00	1.00	1.00	1.00	1.00	1.00	0.78	1.00

Problems reported by dimension

	Age													
	18-24		25-34		35-44		45-54		55-64		65-74		75+	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Total	2,611	97.2	5,145	97.1	6,178	94.7	5,055	89.9	5,220	84.2	3,121	79.5	1,488	63.7
Mobility	73	2.7	148	2.8	341	5.2	562	10.0	972	15.7	795	20.3	830	35.5
Some problems	2	0.1	6	0.1	4	0.1	8	0.1	11	0.2	9	0.2	18	0.8
Confined to bed	2,664	99.2	5,276	99.6	6,446	98.8	5,494	97.7	6,037	97.3	3,822	97.4	2,161	92.5
Self-care	16	0.6	16	0.3	64	1.0	110	2.0	131	2.1	87	2.2	123	5.3
Some problems	6	0.2	7	0.1	13	0.2	21	0.4	35	0.6	16	0.4	52	2.2
Unable to	2,517	93.7	5,004	94.4	6,033	92.5	4,967	88.3	5,312	85.6	3,518	89.6	1,852	79.3
Usual activities	156	5.8	260	4.9	426	6.5	579	10.3	788	12.7	348	8.9	366	15.7
Some problems	13	0.5	35	0.7	64	1.0	79	1.4	103	1.7	59	1.5	118	5.1
Unable to	2,012	74.9	3,665	69.2	4,017	61.6	2,904	51.6	2,785	44.9	1,641	41.8	826	35.4
Pain/discomfort	652	24.3	1,558	29.4	2,326	35.7	2,477	44.0	3,081	49.7	2,112	53.8	1,347	57.7
Some	22	0.8	76	1.4	180	2.8	244	4.3	337	5.4	172	4.4	163	7.0
Extreme	1,603	59.7	3,309	62.4	4,395	67.4	3,755	66.8	4,338	69.9	2,928	74.6	1,598	68.4
Anxiety/depression	993	37.0	1,863	35.2	1,971	30.2	1,667	29.6	1,700	27.4	934	23.8	688	29.5
Some	90	3.4	127	2.4	157	2.4	203	3.6	165	2.7	63	1.6	50	2.1
Extreme														

(continued)

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	Age													
	18-24		25-34		35-44		45-54		55-64		65-74		75+	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Males														
Mobility														
No problems	1,130	97.8	2,111	97.3	2,767	95.4	2,328	90.8	2,562	86.2	1,519	81.9	691	67.9
Some problems	23	2.0	53	2.4	131	4.5	233	9.1	404	13.6	331	17.8	320	31.4
Confined to bed	2	0.2	5	0.2	3	0.1	4	0.2	7	0.2	5	0.3	7	0.7
Self-care														
No problems	1,141	98.8	2,163	99.7	2,864	98.7	2,505	97.7	2,903	97.6	1,814	97.8	950	93.3
Some problems	12	1.0	2	0.1	29	1.0	50	2.0	54	1.8	38	2.1	49	4.8
Unable to	2	0.2	4	0.2	8	0.3	10	0.4	16	0.5	3	0.2	19	1.9
Usual activities														
No problems	1,082	93.7	2,068	95.3	2,748	94.7	2,315	90.3	2,630	88.5	1,689	91.1	842	82.7
Some problems	70	6.1	92	4.2	131	4.5	217	8.5	297	10.0	144	7.8	137	13.5
Unable to	3	0.3	9	0.4	22	0.8	33	1.3	46	1.6	22	1.2	39	3.8
Pain/discomfort														
No	916	79.3	1,590	73.3	1,896	65.4	1,416	55.2	1,494	50.3	895	48.3	425	41.8
Some	233	20.2	556	25.6	942	32.5	1,072	41.8	1,343	45.2	899	48.5	539	53.0
Extreme	6	0.5	23	1.1	63	2.2	77	3.0	136	4.6	61	3.3	54	5.3
Anxiety/depression														
No	818	70.8	1,482	68.3	2,103	72.5	1,819	70.9	2,245	75.5	1,478	79.7	770	75.6
Some	309	26.8	640	29.5	739	25.5	673	26.2	651	21.9	354	19.1	235	23.1
Extreme	28	2.4	47	2.2	59	2.0	73	2.8	77	2.6	23	1.2	13	1.3

Females	Age													
	18-24		25-34		35-44		45-54		55-64		65-74		75+	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Mobility														
No problems	1,481	96.7	3,034	96.9	3,411	94.2	2,727	89.1	2,658	82.3	1,602	77.4	797	60.5
Some problems	50	3.3	95	3.0	210	5.8	329	10.8	568	17.6	464	22.4	510	38.7
Confined to bed	0	0.0	1	0.0	1	0.0	4	0.1	4	0.1	4	0.2	11	0.8
Self-care														
No problems	1,523	99.5	3,113	99.5	3,582	98.9	2,989	97.7	3,134	97.0	2,008	97.0	1,211	91.9
Some problems	4	0.3	14	0.4	35	1.0	60	2.0	77	2.4	49	2.4	74	5.6
Unable to	4	0.3	3	0.1	5	0.1	11	0.4	19	0.6	13	0.6	33	2.5
Usual activities														
No problems	1,435	93.7	2,936	93.8	3,285	90.7	2,652	86.7	2,682	83.0	1,829	88.4	1,010	76.6
Some problems	86	5.6	168	5.4	295	8.1	362	11.8	491	15.2	204	9.9	229	17.4
Unable to	10	0.7	26	0.8	42	1.2	46	1.5	57	1.8	37	1.8	79	6.0
Pain/discomfort														
No	1,096	71.6	2,075	66.3	2,121	58.6	1,488	48.6	1,291	40.0	746	36.0	401	30.4
Some	419	27.4	1,002	32.0	1,384	38.2	1,405	45.9	1,738	53.8	1,213	58.6	808	61.3
Extreme	16	1.0	53	1.7	117	3.2	167	5.5	201	6.2	111	5.4	109	8.3
Anxiety/depression														
No	785	51.3	1,827	58.4	2,292	63.3	1,936	63.3	2,093	64.8	1,450	70.1	828	62.8
Some	684	44.7	1,223	39.1	1,232	34.0	994	32.5	1,049	32.5	580	28.0	453	34.4
Extreme	62	4.1	80	2.6	98	2.7	130	4.3	88	2.7	40	1.9	37	2.8

EQ-5D index value (European VAS value set)

EQ-5D index value (European VAS)		Age							Total
		18–24	25–34	35–44	45–54	55–64	65–74	75+	
Total	Mean	0.860	0.860	0.850	0.820	0.800	0.800	0.740	0.824
	Standard error	0.003	0.002	0.002	0.003	0.003	0.003	0.005	0.001
	25th percentile	0.85	0.78	0.78	0.78	0.78	0.78	0.78	0.79
	50th percentile	0.78	0.78	0.78	0.69	0.69	0.71	0.69	0.73
	75th percentile	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Males	Mean	0.890	0.880	0.870	0.830	0.820	0.830	0.780	0.845
	Standard error	0.004	0.003	0.003	0.004	0.003	0.004	0.007	0.001
	25th percentile	1.00	1.00	1.00	0.78	0.78	0.78	0.78	0.87
	50th percentile	0.78	0.78	0.78	0.75	0.71	0.71	0.69	0.75
	75th percentile	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Females	Mean	0.840	0.840	0.830	0.800	0.780	0.780	0.720	0.805
	Standard error	0.004	0.003	0.003	0.004	0.004	0.004	0.007	0.001
	25th percentile	0.78	0.78	0.78	0.78	0.78	0.78	0.76	0.78
	50th percentile	0.78	0.78	0.71	0.69	0.69	0.69	0.62	0.71
	75th percentile	1.00	1.00	1.00	1.00	1.00	1.00	0.78	0.98

Zimbabwe (Harare)**Source:** Jelsma (2003)**Number of respondents**

Age	18–24	25–34	35–44	45–54	55–64	65–74	75+	Total
Total	1,087	772	264	162	49	16	0	2,350
Males	408	308	95	62	20	8	0	901
Females	679	464	169	100	29	8	0	1,449

EQ VAS (self-rated health)

EQ-VAS (self-rated)		Age							Total
		18–24	25–34	35–44	45–54	55–64	65–74	75+	
Total	Mean	81.8	79.8	76.6	75.1	70.5	61.5	–	79.8
	Standard error	0.5	0.6	1.2	1.6	2.6	4.5	–	0.4
	25th percentile	70	70	61	60	50	50	–	70
	50th percentile	90	80	80	80	78	65	–	84
	75th percentile	96	91.25	90	90	82	72	–	94
Males	Mean	83.0	81.7	77.9	79.0	79.9	65.2	–	81.5
	Standard error	0.8	0.9	2.1	2.3	2.9	7.2	–	0.6
	25th percentile	71.5	70	70	67	79.5	50	–	70
	50th percentile	90	84	84	84	80	60	–	87
	75th percentile	96	92	92	91	86	80.75	–	94
Females	Mean	81.2	78.6	75.8	72.8	64.1	58.3	–	78.7
	Standard error	0.7	0.8	1.5	2.1	3.4	5.9	–	0.5
	25th percentile	70	70	60	50	50	40	–	66
	50th percentile	88	80	80	76	58	66	–	80
	75th percentile	96	90	90	90	80	72	–	92

Males	Age													
	18-24		25-34		35-44		45-54		55-64		65-74		75+	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Mobility	358	96.0	261	94.2	76	89.4	47	85.5	16	88.9	3	50.0	-	-
	15	4.0	15	5.4	9	10.6	8	14.5	2	11.1	3	50.0	-	-
Confined to bed	0	0.0	1	0.4	0	0.0	0	0.0	0	0.0	0	0.0	-	-
Self-care	357	96.2	269	98.2	76	90.5	51	92.7	17	94.4	5	100.0	-	-
	14	3.8	4	1.5	8	9.5	4	7.3	1	5.6	0	0.0	-	-
Unable to	0	0.0	1	0.4	0	0.0	0	0.0	0	0.0	0	0.0	-	-
Usual activities	348	93.5	250	90.6	69	81.2	48	87.3	17	94.4	5	83.3	-	-
	24	6.5	24	8.7	15	17.6	6	10.9	1	5.6	1	16.7	-	-
Unable to	0	0.0	2	0.7	1	1.2	1	1.8	0	0.0	0	0.0	-	-
Pain/discomfort	298	79.9	205	74.3	54	63.5	34	61.8	11	61.1	2	33.3	-	-
	64	17.2	66	23.9	25	29.4	21	38.2	7	38.9	3	50.0	-	-
Extreme	11	2.9	5	1.8	6	7.1	0	0.0	0	0.0	1	16.7	-	-
Anxiety/depression	288	77.2	200	72.5	54	63.5	33	60.0	8	44.4	1	16.7	-	-
	73	19.6	64	23.2	22	25.9	18	32.7	8	44.4	4	66.7	-	-
Extreme	12	3.2	12	4.3	9	10.6	4	7.3	2	11.1	1	16.7	-	-

(continued)

(continued)

Females	Age	18-24		25-34		35-44		45-54		55-64		65-74		75+	
		n	%	n	%	n	%	n	%	n	%	n	%	n	%
Mobility	No problems	585	92.3	395	91.9	129	83.8	58	65.9	11	42.3	2	28.6	-	-
	Some problems	49	7.7	34	7.9	25	16.2	30	34.1	15	57.7	4	57.1	-	-
	Confined to bed	0	0.0	1	0.2	0	0.0	0	0.0	0	0.0	1	14.3	-	-
Self-care	No problems	618	97.5	421	97.9	149	98.0	83	94.3	21	80.8	4	57.1	-	-
	Some problems	15	2.4	9	2.1	3	2.0	5	5.7	5	19.2	2	28.6	-	-
	Unable to	1	0.2	0	0.0	0	0.0	0	0.0	0	0.0	1	14.3	-	-
Usual activities	No problems	582	92.2	384	89.3	130	85.0	64	73.6	11	42.3	3	42.9	-	-
	Some problems	47	7.4	44	10.2	23	15.0	21	24.1	15	57.7	3	42.9	-	-
	Unable to	2	0.3	2	0.5	0	0.0	2	2.3	0	0.0	1	14.3	-	-
Pain/discomfort	No	456	71.6	298	69.5	95	61.7	35	39.8	8	30.8	1	14.3	-	-
	Some	160	25.1	110	25.6	44	28.6	46	52.3	15	57.7	5	71.4	-	-
	Extreme	21	3.3	21	4.9	15	9.7	7	8.0	3	11.5	1	14.3	-	-
Anxiety/depression	No	468	73.5	300	69.6	82	53.6	45	51.7	9	34.6	5	71.4	-	-
	Some	129	20.3	107	24.8	42	27.5	29	33.3	15	57.7	1	14.3	-	-
	Extreme	40	6.3	24	5.6	29	19.0	13	14.9	2	7.7	1	14.3	-	-

EQ-5D index value (European VAS value set)

EQ-5D index value (European VAS)		Age							Total
		18–24	25–34	35–44	45–54	55–64	65–74	75+	
Total	Mean	0.867	0.859	0.774	0.750	0.697	0.607	–	0.842
	Standard error	0.006	0.007	0.015	0.019	0.030	0.086	–	0.004
	25th percentile	0.78	0.78	0.63	0.62	0.60	0.46	–	0.72
	50th percentile	1.00	1.00	0.78	0.75	0.69	0.61	–	1.00
	75th percentile	1.00	1.00	1.00	1.00	0.78	0.78	–	1.00
Males	Mean	0.889	0.880	0.803	0.815	0.770	0.625	–	0.868
	Standard error	0.009	0.011	0.025	0.026	0.036	0.125	–	0.006
	25th percentile	0.78	0.78	0.65	0.69	0.68	0.36	–	0.78
	50th percentile	1.00	1.00	0.89	0.78	0.78	0.62	–	1.00
	75th percentile	1.00	1.00	1.00	1.00	0.85	0.89	–	1.00
Females	Mean	0.854	0.846	0.757	0.709	0.647	0.594	–	0.826
	Standard error	0.007	0.009	0.019	0.026	0.042	0.125	–	0.006
	25th percentile	0.78	0.76	0.62	0.58	0.59	0.57	–	0.69
	50th percentile	1.00	1.00	0.78	0.71	0.62	0.60	–	0.81
	75th percentile	1.00	1.00	1.00	1.00	0.78	0.78	–	1.00

EQ-5D index value (TTO value set)

EQ-5D index value (TTO value set)		Age							Total
		18–24	25–34	35–44	45–54	55–64	65–74	75+	
Total	Mean	0.906	0.898	0.834	0.820	0.775	0.678	–	0.886
	Standard error	0.004	0.005	0.012	0.014	0.024	0.087	–	0.003
	25th percentile	0.83	0.83	0.73	0.73	0.69	0.64	–	0.79
	50th percentile	1.00	1.00	0.85	0.80	0.79	0.71	–	1.00
	75th percentile	1.00	1.00	1.00	1.00	0.85	0.85	–	1.00
Males	Mean	0.920	0.914	0.854	0.868	0.843	0.740	–	0.905
	Standard error	0.006	0.008	0.020	0.018	0.023	0.092	–	0.005
	25th percentile	0.83	0.83	0.73	0.79	0.78	0.56	–	0.83
	50th percentile	1.00	1.00	0.93	0.85	0.83	0.73	–	1.00
	75th percentile	1.00	1.00	1.00	1.00	0.89	0.93	–	1.00
Females	Mean	0.897	0.887	0.824	0.789	0.727	0.634	–	0.874
	Standard error	0.005	0.007	0.015	0.019	0.034	0.138	–	0.004
	25th percentile	0.83	0.81	0.73	0.69	0.68	0.64	–	0.79
	50th percentile	1.00	1.00	0.84	0.79	0.73	0.69	–	0.85
	75th percentile	1.00	1.00	1.00	1.00	0.84	0.83	–	1.00

References

- Augustovski FA, Irazola VE, Velazquez AP, Gibbons L, Craig BM (2009) Argentine valuation of the EQ-5D health states. *Value Health* 12(4):587–596
- Badia X et al (1998) The Spanish VAS tariff based on valuation of EQ-5D health states from the general population. In: Rabin RE et al (eds) EuroQol plenary meeting, Rotterdam, 2–3 Oct 1997. Discussion papers. Centre for Health Policy & Law, Erasmus University, Rotterdam, pp 93–114
- Badia X et al (2001a) A comparison of GB and Spanish general population time trade-off values for EQ-5D health states. *Med Decis Making* 21:7–16
- Badia X, Roset M, Herdman M, Kind P (2001b) A comparison of United Kingdom and Spanish general population time trade-off values for EQ-5D health states. *Med Decis Making* 21(1):7–16
- Bjork S, Norinder A (1999) The weighting exercise for the Swedish version of the EuroQol. *Health Econ* 8(2):117–126
- Blakely T, Woodward A, Pearce N, Salmond C, Kiro C, Davis P (2002) Socio-economic factors and mortality among 25–64 year olds followed from 1991 to 1994: the New Zealand Census-Mortality Study. *N Z Med J* 115:93–97
- Borrell C, Regidor E, Arias LC, Navarro P, Puigpinós R, Domínguez V, Plasència A (1999) Inequalities in mortality according to educational level in two large Southern European cities. *Int J Epidemiol* 28:58–63
- Canary Health Survey (2009) Canary Islands health service and ISTAC
- Catalunya Health Survey (2011) Health plan service. Department of Health, Government of Catalonia
- Chevalier J, de Pourville G (2013) Valuing EQ-5D using time trade-off in France. *Eur J Health Econ* 14:57–66
- Claes C et al (1999a) An interview-based comparison of the TTO and VAS values given to EuroQol states of health by the general German population. In: Greiner W, Schulenburg J-M, Graf v.d. et al (eds) EQ plenary meeting, Hannover, 1–2 Oct 1998. Discussion papers, pp 13–39
- Claes C, Greiner W, Uber A, Schulenburg J-M Gvd (1999b) An interview-based comparison of the TTO and VAS values given to EuroQol states of health by the general German population. In: Greiner W, Schulenburg J-M Gvd, Piercy J (eds). (EuroQol) Plenary meeting. Discussion papers. Uni-Verlag Witte, Hannover, pp 13–39
- Clarke P, van Ourti T (2010) Calculating the concentration index when income is grouped. *J Health Econ* 29(1):151–157
- Cleemput I (2003) Economic evaluation in renal transplantation: outcome assessment and cost-utility of non-compliance. Acco, Leuven

- Cleemput I et al (2004a) Re-scaling social preference data: implications for modelling. In: Kind P, Macran S (eds) Proceedings of the 19th plenary meeting of the EuroQol Group 2002. York Centre for Health Economics, pp 113–122
- Cleemput I, Kind P, Kesteloot K (2004b) Re-scaling social preference data: implications for modelling. In: Kind P, Macran S (eds) 19th plenary meeting of the EuroQol Group. Discussion papers. Centre for Health Economics, University of York, pp 13–123
- Dalstra JAA, Kunst AE, Geurts JJM, Frenken FJM, Mackenbach JP (2002) Trends in socioeconomic health inequalities in the Netherlands, 1981–1999. *J Epidemiol Community Health* 56:927–934
- Devlin NJ, Hansen P, Kind P, Williams A (2000) The health state preferences and logical inconsistencies of New Zealanders: a tale of two tariffs. York Centre for Health Economics/University of Otago, New Zealand. Discussion paper no 180
- Devlin NJ, Hansen P, Kind P, Williams A (2003) Logical inconsistencies in survey respondents' health state valuations – a methodological challenge for estimating social tariffs. *Health Econ* 12(7):529–544
- Dolan P (1997) Modeling valuations for EuroQol health states. *Med Care* 35(11):1095–1108
- Eachus J, Chan P, Pearson N, Propper C, Smith GD (1999) An additional dimension to health inequalities: disease severity and socio-economic position. *J Epidemiol Community Health* 53:603–611
- EuroQol Group (1990) EuroQol – a new facility for the measurement of health-related quality of life. *Health Policy* 16:199–208
- Gaminde I, Cabasés J (1996) Measuring valuations for health states among the general population in Navarra (Spain). In: Badia X, Herdman M, Segura A (eds) EuroQol plenary meeting. Discussion papers. Institut Universitari de Salut Publica de Catalunya, Barcelona, pp 113–123
- Gharagebakyan G, Ghukasyan H, Williams A, Szende A (2003) Social inequalities in self-reported health: is Armenia different from Slovenia? In: Rupel VP (ed) 20th plenary meeting of the EuroQol Group. Discussion papers. Republic of Slovenia, Ministry of Health, pp 79–87
- Goldman DP, Smith JP (2002) Can patient self-management help explain the SES health gradient? *Proc Natl Acad Sci U S A* 99:10929–10934
- Greiner W, The Rotterdam Analysis Team (2003) A European EQ-5D VAS valuation set. Chapter 8. In: Brooks R, Rabin R, Charro F (eds) The measurement and valuation of health status using EQ-5D: a European perspective. Kluwer, Dordrecht
- Greiner W et al (2003) A European EQ-5D VAS valuation set. In: Brooks R et al (eds) The measurement and valuation of health status using EQ-5D: a European perspective. Kluwer, Dordrecht
- Greiner W, Claes C, Busschbach JJ, von der Schulenburg JM (2005) Validating the EQ-5D with time trade off for the German population. *Eur J Health Econ* 6(2):124–130
- Health Quality Council Alberta (HQCA) (2010) Satisfaction and experience with health care services: a survey with Albertans in 2010
- Household Health Survey (2010) National Natural Science Foundation of China 70873064, Nanjing Medical University
- Jelsma J, Hansen K, de Weerdt W, Cock P, Kind P (2003) How do Zimbabweans value health states? *Popul Health Metrics* 1:11
- Johnson JA, Pickard AS (2000) Comparison of the EQ-5D and SF-12 health surveys in a general population survey in Alberta, Canada. *Med Care* 38(1):115–121
- Kakwani NC, Wagstaff A, Doorsaler EV (1997) Socioeconomic inequalities in health: measurement, computation and statistical inference. *J Economet* 77:87–103
- Karter AJ, Ferrara A, Darbinian JA, Ackerson LM, Selby JV (2000) Self-monitoring of blood glucose: language and financial barriers in a managed care population with diabetes. *Diabetes Care* 23:477–483
- Katz PP (1998) Education and self-care activities among persons with rheumatoid arthritis. *Soc Sci Med* 46:1057–1066

- Kind P, Dolan P, Gudex C, Williams A (1998) Variations in population health status: results from a United Kingdom national questionnaire survey. *BMJ* 316(7133):736–741
- König HH, Bernert S, Angermeyer MC, Matschinger H, Martinez M, Vilagut G, Haro JM, de Girolamo G, de Graaf R, Kovess V, Alonso J, ESEMeD/MHEDEA 2000 Investigators (2000) Comparison of population health status in six European countries: results of a representative survey using the EQ-5D questionnaire. *Med Care* 47(2):255–261
- Koolman X, van Doorslaer E (2004) On the interpretation of a concentration index of inequality. *Health Econ* 13:649–656
- Kunst AE, Geurts JJM, van de Berg J (1995) International variation in socio-economic inequalities in self reported health. *J Epidemiol Community Health* 49:117–123
- Lamers LM, McDonnell J, Stalmeier PFM, Krabbe PFM, Busschbach JJV (2006) The Dutch tariff: results and arguments for a cost-effective design for national EQ-5D valuation studies. *Health Econ* 15(10):1121–1132
- Lee YK, Nam HS, Chuang LH, Kim KY, Yang HK, Kwon IS, Kind P, Kweon SS, Kim YT (2009) South Korean time trade-off values for EQ-5D health states: modeling with observed values for 101 health states. *Value Health* 12(8):1187–1193
- Mackenbach JP, Kunst AE, Cavelaars AEJM, Groenhouf F, Geurts JJM (1997) EU working group on socioeconomic inequalities in health. Socioeconomic inequalities in morbidity and mortality in western Europe. *Lancet* 349:1655–1659
- Ministerio de Salud de Argentina (2005) ¿Qué es la Encuesta Nacional de Factores de Riesgo? Buenos Aires
- MVH Group (1995) The measurement and valuation of health. Final report on the modelling of valuation tariffs. MVH Group, Centre for Health Economics, York
- National Centre for Social Research and University College London. Department of Epidemiology and Public Health (2011) Health survey for England, 2008 [computer file], 3rd edn. UK Data Archive [distributor], Colchester, July 2011. SN: 6397, <http://dx.doi.org/test>
- Nishi N, Makino K, Fukuda H, Tataru K (2004) Effects of socio-economic indicators on coronary risk factors, self-rated health and psychological well-being among urban Japanese civil servants. *Soc Sci Med* 58:1159–1170
- Ohinmaa A et al (1996) Modelling EuroQol values of Finnish adult population. In: Badia X et al (eds) EuroQol plenary meeting 1995 discussion papers. Institut Universitari de Salut Publica de Catalunya, Barcelona, pp 67–76. ISBN: 84-477-0574-9
- Ohinmaa A et al (1999) Inconsistencies and modelling of the Finnish EuroQol (EQ-5D) preference values. In: Greiner W, Schulenburg J-M Gvd et al (eds) EQ plenary meeting, Hannover, 1–2 Oct 1998. Discussion papers. ISBN3-932152-32-8, pp 57–74
- Prevolnik Rupel V, Rebolj M (2001) The Slovenian VAS tariff based on valuations of EQ-5D health states from the general population. In: Cabasés J, Gaminde I (eds) 17th plenary meeting of the EuroQol Group. Discussion papers. Universidad Pública de Navarra, pp 11–23
- Regidor E, Barrio G, de la Fuente L, Domingo A, Rodriguez C, Alonso J (1999) Association between educational level and health related quality of life in Spanish adults. *J Epidemiol Community Health* 53:75–82
- Regidor E, Calle ME, Navarro P, Domínguez V (2003) The size of educational differences in mortality from specific causes of death in men and women. *Eur J Epidemiol* 18:395–400
- Saarni SI, Härkänen T, Sintonen H, Suvisaari J, Koskinen S, Aromaa A, Lönnqvist J (2006) The impact of 29 chronic conditions on health-related quality of life: a general population survey in Finland using 15D and EQ-5D. *Qual Life Res* 15:1403–1414
- Scalone L, Cortesi PA, Ciampichini R, Belisari A, D'Angiolella LS, Cesana G, Mantovani LG (2013) Italian population-based values of EQ-5D health states. *Value Health* (in press)
- Shaw JW, Johnson JA, Coons SJ (2005) US valuation of the EQ-5D health states: development and testing of the D1 valuation model. *Med Care* 43(3):203–220
- Simon JG (2002) How is your health in general? Qualitative and quantitative studies on self-assessed health and socioeconomic differences herein [thesis]. Erasmus University Rotterdam, Rotterdam

- Singh-Manoux A, Clarke P, Marmot M (2002) Multiple measures of socio-economic position and psychosocial health: proximal and distal measures. *Int J Epidemiol* 31:1192–1199
- Sintonen H, Weijnen T, Nieuwenhuizen M, Oppe S, Badia X, Busschbach J, Greiner W, Krabbe P, Ohinmaa A, Roset M, de Charro F (2003) Comparison of EQ-5D VAS valuations: analysis of background variables. In: Brooks R, Rabin R, de Charro F (eds) *The measurement and valuation of health status using EQ-5D: a European perspective*. Kluwer Academic, pp 81–103
- Sørensen J, Davidsen M, Gudex C, Pedersen KM, Brønnum-Hansen H (2009) Danish EQ-5D population norms. *Scand J Public Health* 37(5):467–474
- Sullivan PW, Lawrence WF, Ghushchyan V (2005) A national catalog of preference-based scores for chronic conditions in the United States. *Med Care* 43(7):736–749
- Sun S, Chen J, Johannesson M, Kind P, Xu L, Zhang Y, Burström K (2011) Population health status in China: EQ-5D results, by age, sex and socio-economic status, from the National Health Services Survey 2008. *Qual Life Res* 20(3):309–320
- Sun S, Irestig R, Burström B, Beijer U, Burström K (2012) Health-related quality of life (EQ-5D) among homeless persons compared to a general population sample in Stockholm County, 2006. *Scand J Public Health* 40:115–125
- Szende A, Nemeth R (2003) Health-related quality of life of the Hungarian population. *Orv Hetil* 144(34):1667–1674
- Szende A, Williams A (eds) (2004) *Measuring self-reported population health: an international perspective based on EQ-5D*. EuroQol Group
- Szende A, Oppe M, Devlin N (eds) (2007) *EQ-5D value sets: inventory, comparative review and user guide*. (EuroQol Group monographs). Springer
- Tongsiri S, Cairns J (2011) Estimating population-based values for EQ-5D health states in Thailand. *Value Health* 14(8):1142–1145
- Torrance GW (1986) Measurement of health state utilities for economic appraisal. *J Health Econ* 5:1–30
- Tsuchiya A, Ikeda S, Ikegami N, Nishimura S, Sakai I, Fukuda T, Hamashima C, Hisashige A, Tamura M (2002) Estimating an EQ-5D population value set: the case of Japan. *Health Econ* 11(4):341–353
- von dem Knesebeck O, Lüschen G, Cockerham WC, Siegrist J (2003) Socioeconomic status and health among the aged in the United States and Germany: a comparative cross-sectional study. *Soc Sci Med* 57:1643–1652
- Wagstaff A, van Doorslaer E (2004) Overall versus socioeconomic health inequality: a measurement framework and two empirical illustrations. *Health Econ* 13:297–301
- Wagstaff A, Paci P, Doorslaer E (1991) On the measurement of inequalities in health. *Soc Sci Med* 33:545–557
- Weijnen T, Nieuwenhuizen M, Ohinmaa A, de Charro F (2003) Construction of the EQ-net VAS and TTO databases. In: Brooks R, Rabin R, de Charro F (eds) *The measurement and valuation of health status using EQ-5D: a European perspective*. Kluwer Academic Publishers, pp 55–81
- Wittrup-Jensen KU et al (2002) Estimating Danish EQ-5D tariffs using TTO and VAS. In: Norinder A et al (eds) *Proceedings of the 18th plenary meeting of the EuroQol Group, Copenhagen, 2001*. IHE, The Swedish Institute for Health Economics, pp 257–292
- Yfantopoulos Y (1999) Quality of life measurement and health production in Greece. In: Greiner W, Schulenburg J-M, Graf v.d., Piercy J (eds) *(EuroQol) Plenary meeting. Discussion papers*. Uni-Verlag Witte, Hannover, pp 100–114

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