

The Greek version of the EuroQol (EQ-5D) instrument

OBJECTIVE The purpose of this paper is to discuss the methodological issues concerning the EuroQol applications in Europe and to present evidence from the translation and validation of the EQ-5D in Greece. **METHOD** The translation process of the EuroQol instrument from English into Greek was conducted according to the EQ-Net published guidelines. Subsequently a pilot study of 30 individuals showed that the EQ-5D Greek version was comprehensive and applicable to the Greek cultural environment. A valuation exercise was conducted using a sample of 487 individuals from different demographic profiles and socio-economic backgrounds. Correlation coefficient matrixes and regression analysis was used in order to establish comparisons with similar valuation exercises conducted in Germany, the UK, Spain and the Netherlands. **RESULTS** The pilot study of 30 individuals showed that the EQ-5D instrument is a comprehensive measure which can be used effectively for health related quality of life estimation in Greece. The results obtained from the valuation exercise with 487 individuals revealed that as many as 76.6% of the sample population found the questionnaire either easy or very easy to administer. Values for 18 selected health states were obtained from the above sample. The Greek values were compared with those from similar valuation exercises conducted in Germany, the UK, Spain and the Netherlands and are found to be very close. The estimated correlation coefficients revealed a high level of association between the Greek values and the corresponding values of other countries under investigation. **CONCLUSIONS** The findings of this study highlight the importance of the EuroQol instrument as a reliable and valid measure for obtaining values of different health states in Greece.

1. INTRODUCTION

Since the 1980s international organizations such as WHO,¹⁻⁶ the European Commission^{7,8} and OECD⁹ have developed methodologies aiming at the conceptual definition and measurement of well-being and quality of life. There is no simple indicator nor an easy way to clearly define and measure well-being and quality of life and it is even more difficult to break them down into manageable and measurable components.

In the literature of health economics there have been reported several attempts to develop methodologies for the measurement of quality of life for a population as a whole (generic measures), and for a specific group of patients (disease specific measures). The EuroQol (EQ-5D),¹⁰⁻¹⁶ the SF-36,¹⁷⁻²³ the SF-12²⁴⁻²⁷ are among the

instruments which are presumed to have universal application.

Health Related Quality of Life (HRQoL) indices have been developed using several techniques in order to describe the outcome of a clinical process, or the health status of a population or a group of people. The data obtained from these studies were further used to investigate the effectiveness of clinical practice or the efficiency of the health care system.

In this paper some methodological issues concerning quality of life measurement and Quality Adjusted Life Years (QALYs) will be examined, focusing on the EuroQol instrument and reporting the progress achieved in the translation and validation of the instrument in Greece.

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Η ελληνική απόδοση
του EuroQol EQ-5D

Περίληψη στο τέλος του άρθρου

Key words

EQ-5D
EuroQol
Quality of life
Translation
Validation

2. METHODOLOGICAL ISSUES

The main problems which have often been reported in the literature of health indicators are related to the following issues:

- a. The specification of the dimensions of well-being and quality of life. This touches upon the basic question of definition of what is quality of life and what is valuable in life.
- b. The second question deals with issues of valuation. How can different aspects of well-being or different dimensions of health status be valued?
- c. What units of measurements should be used, cardinal or ordinal scales?
- d. What method should be developed (i.e. Time Trade-Off Standard Gamble etc.) and how can the investigation go beyond the level of abstract generalities?
- e. The valuation method implies the choice of certain standards (i.e., below a certain standard there is no, or very little, well-being or quality of life, above that standard there is sufficient or plenty of well-being).
- f. The question then arises: "Who decides such standards?" the individual? The Government? The policy makers? The health care providers?
- g. Finally can the same standards be reached and can methodologies be developed for European and International comparisons to be made? Historical developments and cultural values may differ so widely between nations, and even within nations, that attempts to make the concept operational universally may be meaningless.

The whole issue is fraught with value judgments. A value driven approach gives rise to notable dilemmas and certain restrictions concerning the objectivity and the measureability of indicators.

At an international level the OECD Secretariat invited the Ministers of Health of the Member States to review the current state of the art with regard to health status indices and to investigate their relevance to resource allocation issues. It was found that:

- a. The main interest of the Member States since 1960s has been the collection of data showing the dynamics of input (doctors, nurses, hospital beds), expenditure and throughput indicators.
- b. Very little research has been conducted in the measurement of the outputs of the health care system.
- c. The traditional indicators such as life expectancy (at various ages) and mortality are becoming increasingly inadequate for examining issues related to the changing socio-economic and political environment.

On the base of these findings the OECD Secretariat proposed the development of a composite health index able to assist policy makers in priority setting and resource allocation.

3. QALYs

The main purpose of the QALYs indicators is to devise a composite index based on two components representing quantity and quality of life respectively:

- a. The first component deals with issues concerning the quantity of life i.e. life expectancy or length of survival at different ages or disease stages. Quantity of life is usually expressed by "L".
- b. The second component refers to the quality of life $U(H_i)$ and defines the individual's subjective value assigned to a level of health status H_i .

These two elements are incorporated into a single measure which is called QALY and its mathematical expression is the following:

$$U \{L, U(H_i)\} = a L^r U(H_i)$$

where a is a constant, and r is a parameter which measures the individual's attitude to risk (i.e. risk lover, risk neutral, risk averter) and $U(H)$ describes the quality of health or quality of a given level of health status adjusted over a range of values of 0 to 100. As will be discussed below the assumption is made that:

$$U(H_{\text{Worst Imaginable Health State}}) = 0 \text{ and}$$

$$U(H_{\text{Best Imaginable Health State}}) = 100$$

Several instruments have been developed using this methodology. In this analysis the focus will be on the EuroQol methodology which has been used extensively to derive QALY for different populations across the world.

4. THE EUROQOL INSTRUMENT

In 1987 a group of researchers for five European countries representing seven research centers joined together to develop an instrument to measure health related quality of life. The group developed a multidimensional indicator of health based on the valuations of the general public. Pilot studies were launched in the UK, Sweden, Finland, Norway and the Netherlands. The results of these studies showed that the EuroQol methodology was feasible and that the obtained values of health revealed remarkable similarities across the countries studied. Since 1987, several studies have provided empirical and theoretical evidence on the validity and reliability of the EuroQol instrument in various clinical

and health policy applications. Currently there are 30 official translations and cultural adaptations of the EQ-5D, and it has been used in numerous studies.²⁸ EuroQol started in 1987 as a European instrument for assessing quality of life and was then expanded for use in non-European countries. The majority of studies within Europe have been conducted in the UK (fig. 1). However, since 1994 a rapid expansion has been observed in some Eastern European Countries and countries outside Europe such as the USA, Canada, Japan, New Zealand.

In addition to population based studies, EuroQol has been used extensively in a large number of clinical studies.²⁸ Figure 2 shows the clinical areas where the EQ-5D has been used as a disease specific instrument to measure health outcomes. Reviewing the clinical literature,^{28,29} the most frequent applications of the EuroQol instrument were found in the fields of cardiovascular disease, in oncology, musculoskeletal disease, nervous system disease, respiratory disease and mental disorders.

The EuroQol instrument consists of three parts.

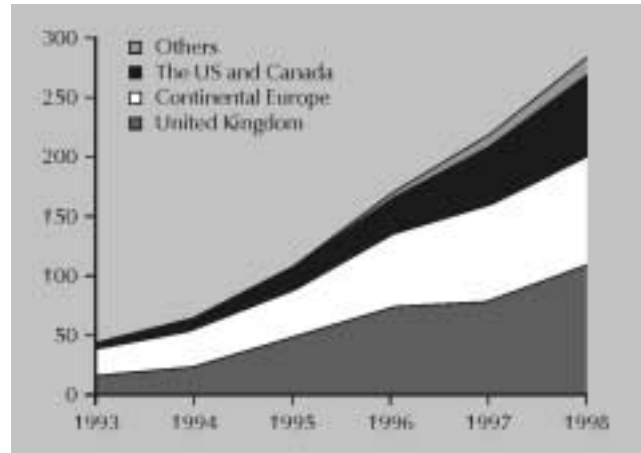


Figure 1. The evolution of EQ-5D studies per country, 1993-1998.

The first part, which is called the EQ-5D self classifier, asks the respondent to provide an answer to each of the following 5 dimensions of health:

1. Mobility
2. Self care
3. Usual activity

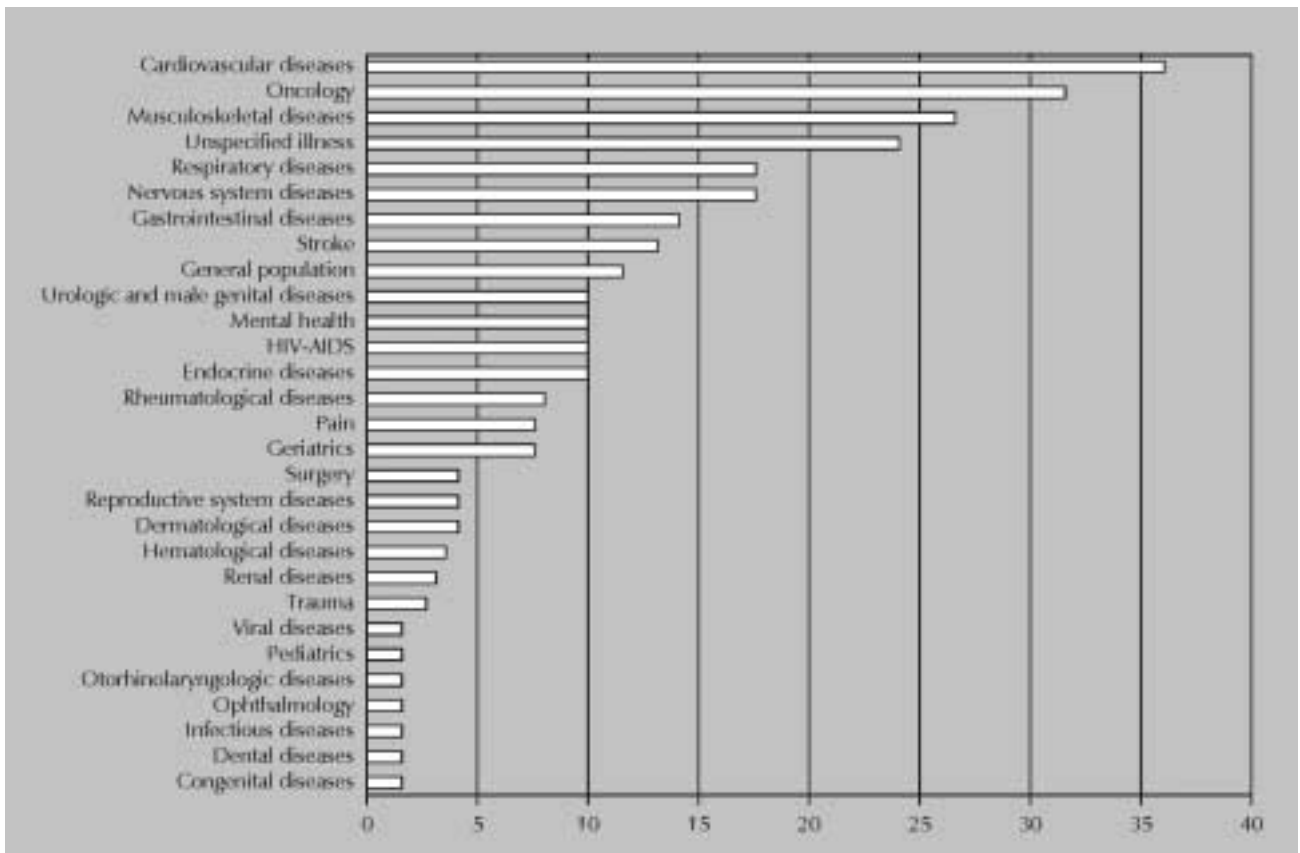


Figure 2. Clinical areas in which EQ-5D has been used.

4. Pain/discomfort and
5. Anxiety/depression.

Each dimension is further subdivided in three levels of severity i.e.

- 1=no problems
- 2=some/moderate problems
- 3=extreme problems.

In total, 243 health states are defined and to these states death and unconscious have been added providing in total 245 states.

The second part constitutes the EQ-VAS which is often presented on page 3 of the questionnaire and asks the respondents to self rate themselves on a “thermometer” scale. A vertical visual analogue scale (VAS) of 20 cm is used as a standard method to capture valuations of health states from 0 to 100. The end values represent 0=“worst imaginable state” and 100=“best imaginable state”.

The above two parts represent the basic EuroQol or EQ-5D instrument. Further sociodemographic information is collected in a supplement. In total the EQ-5D instrument includes four pages. The first presents the logo of the EQ-5D, the second the 5 dimensions of self-classifier, the third the EQ-VAS and the fourth the socio-demographic characteristics. This questionnaire has been widely used in numerous clinical evaluations and population based studies.

The third part constitutes the valuation part. A fully standardised questionnaire is used to collect health values referring to 16 health states. These are presented in two pages of the EuroQol instrument and they are evaluated by the respondent. In the middle of the page there is a standard “thermometer” and four states of health are printed on either side (fig. 3).

Respondents are asked to draw a line each state of health to the corresponding value of thermometer indicating their personal assessment on the level of health under consideration.

5. THE GREEK EUROQOL STUDIES

In 1996, the author visited the University of York where he had the opportunity to exchange ideas with the academic staff of the department of Health Economics on issues related to QALYs and health measurement as a result of which he was invited to undertake the task of translation, validation and launching a population survey on health status valuation using the EuroQol as an

instrument. Subsequently a group of scientists and post-graduate students started the translation and the initial testing for completeness and comprehensiveness of the EuroQol instrument. It became clear that a simple translation of the questionnaire was not adequate for the purpose of the EuroQol group. The translation guidelines for the EuroQol instrument (provided by the EuroQol Project Manager Frank de Charro) required the formation of a translation team and the design of further steps concerning valuation and study in a representative sample of the Greek population. This paper reports the results obtained from the translation process and the initial findings from the valuation process.

5.1. Translation

The translating procedure was conducted according to the instructions of the EuroQol Group. Two forward translations into the target language, namely Greek, were produced by two bilingual translators separately with Greeks as their mother tongue and with knowledge of the medical modalities. The interim Greek version was formed by comparison of the two forward translations, focusing on the best interpretation of the original English version and respecting the particularities of the target language. Two bilingual scholars in medicine and psychology undertook two back translations into English. Finally a pilot study of thirty lay persons was launched to evaluate the semantics and the linguistic adaptations into Greek.

Taking into consideration the differences in the meaning of some terms, when translated into another language and taking into account other valid and reliable questionnaires, the translating group produced a final instrument which renders the original version in the best possible way.

Apart from the so called easy dilemmas for choosing between the translated versions, there were statements which required and extensive collaboration with distinguished scientists.

The most disputable points for each dimension of the EuroQol instrument can be summarized below:

Stage 1: Problems encountered in the forward translation

Page 1 of the EuroQol instrument

Title

“Health Questionnaire”. Translator A used the Greek words corresponding exactly to the English ones «Ερω-

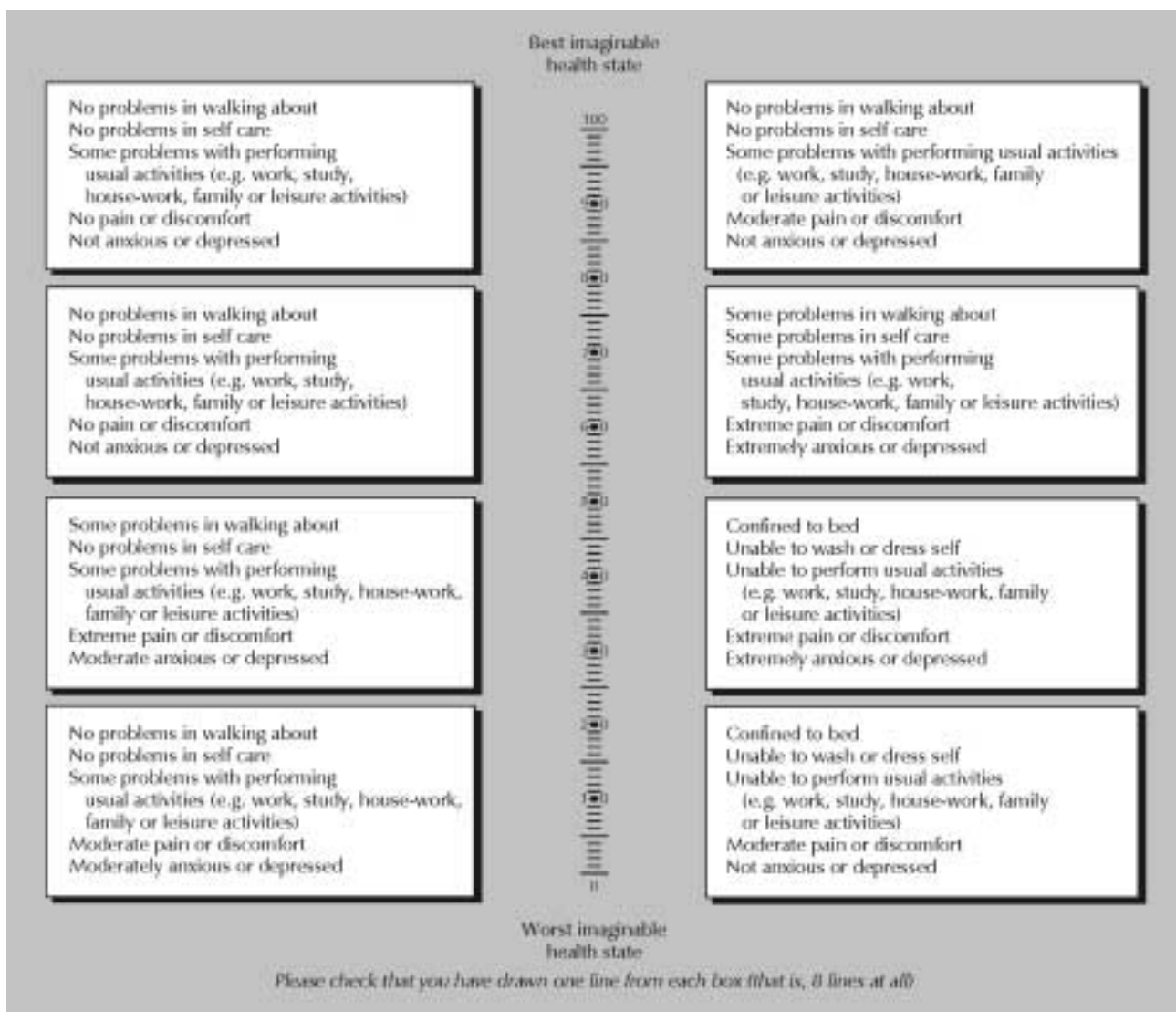


Figure 3. Thermometer and health states.

τηματολόγιο Υγείας» in contrast to the translator B «Ερωτηματολόγιο για την Υγεία» (Questionnaire for Health).

Page 2 of the EuroQol instrument

First sentence

“...in each group below”

The word group on its own does not mean anything special in Greek, as far as the content of the group is concerned. A specification is needed, e.g. group of questions. Both translators replaced the word “group” with the word “question”.

Comments on the forward translation concerning each dimension

Dimension I: Mobility

“...some problems”

The pronoun “some” in this phrase does not indicate a certain quantity or quality. It is more indefinite and uncertain as it is given by the translator B «κάποια προβλήματα».

Dimension II: Self care

“I am not able”

The corresponding Greek phrase is “δεν είμαι ικανός”, but it is used mostly in apologies rather in neutral phrases in a questionnaire, so it is better expressed as «είμαι ανίκανος», where the negative connection (not) is embodied with the noun (αν-ικανός) and this was selected as the most precise.

An alternative suggestion is the verb «αδυνατώ» which has the same meaning but not prejudice negative feel-

ings in the participants who are in this state of health, as translator B claims.

Dimension III: Usual activities

“Usual”

Some words in Greek are easily understandable when they are in the nominative cases such as the adjective «συνήθεις» (usual). For the needs of the instrument this word would have to be used in other cases (grammatically) which was a disputable point. It makes more sense in the Greek language to use the word «καθημερινές» (daily).

Dimension IV: Pain/Discomfort

During the forward translation process this item raised a strong discussion.

In order to evaluate pain, the report of McGill Pain Questionnaire (MPQ) about the measurement of pain was taken into account, and in collaboration with practising physicians it was concluded that the stages described in the instrument correspond to few states of pain only. Special attentions should be paid to the frequency of pain not only to its intensity.

No/Moderate/Extreme

Dimension V: Anxiety/Depression

Both terms were interpreted as psychological states and not as critical states. It was considered that by anxiety or depression, are meant strong feelings which follow an illness or disability of the body.

“Much the same”

“Remains the same” is the respective phrase was been selected from translator B, rather than the single word “the same” from the translator A.

Thermometer

First sentence

“To help people say... We have drawn a scale”

The verb “say” in Greek refers more to oral speech than written so “express” is much better.

Although “drawn” describes best the act of “writing” a line, emphasis must be given to the existence of the scale and not how it was made. In order to avoid confusion among the participants it was considered that the best word is «τοποθετήσαμε» (we have placed/put a scale) from translator B.

“Best/Worst imaginable health state”

The word imaginable was translated periphrastically: “you can imagine”.

Stage II: Problems encountered in the back translation

This procedure was conducted according to the EuroQol guidelines. The two back translations from Greek into English were produced by two bilingual translators, with English as their mother tongue. These translations were individually compared with the original EQ-5D questionnaire and checked for equivalency. All the differences were tackled individually. No significant changes to the first consensus translation from English to Greek were deemed necessary. Specific points raised during the stage II are summarized below:

Mobility

In dimension concerning mobility there is an expression “walking about”. Both translations lack the word “about” which appears in the official English version. This is due to the fact that “walking about” and “walking” translates the same into Greek. Thus the correct meaning has been conveyed to the Greek translation. Similar problems were reported for the Canadian version in which the word “about” was omitted.

“*Everyday activities*” appears in both translations instead of “Usual activities”. The Greek word «καθημερινές» (every day) has the connotation of “usual” in Greek.

“*Placed*” appears instead of “drawn” in both back-translations, but the literal equivalent of “drawn” in Greek does not make sense in this context.

“Your opinion”: The first translator translated the Greek word «εκτίμηση» as evaluation rather than an opinion. This is logical since the Greek word carries both meanings (personal evaluation and opinion).

Stage III: Lay panel testing

According to the EQ-5D instructions, lay panel testing should be pursued, based on a sample of around 8 individuals from a variety of educational and socio-economic classes. The purpose of lay panel testing according to the EuroQol instructions is not to obtain values for the EQ-5D instrument but to test the understandability of the wording.

The sample

A sample was drawn up of 30 individuals from different educational and socio-economic backgrounds. The main aim of the sampling procedure was to obtain a small sample almost double the requested size in order to fulfil as nearly as possible the criteria set by the EuroQol group. Special effort was undertaken during the sampling procedure to ensure participation in the sample of

individuals from various age groups, educational levels and socio-economic backgrounds.

The process

The panel was divided into three randomly selected groups of 10 persons each. After a brief introduction to the concept of the research they were asked to complete the EQ-5D questionnaire. Following completion a discussion was conducted regarding the following topics:

- What items were difficult to answer
- What questions were confusing
- Where was the understanding difficult
- Suggestions for alternative ways to ask the questions.

All the questions and comments of the panel were further discussed within the project team.

Points brought up during panel discussion

The panel members had no difficulty in answering the questionnaire. However, some people reported few slightly confusing elements. Specifically the points brought up were:

- VAS: People understood the question and could imagine “best” and “worst imaginable health state”, but some had difficulties in conceptualising the scaling.
- Page 4 Q1: One person had a broken leg and she stated that this is not objectively a serious illness but she considered it rather serious for herself since she was an athlete.
- Page 4 Q5: One person asked if voluntary work is included.
- Page 4 Q8: People reported that they felt uncertain as to what exactly would constitute “equivalent professional qualification”. The common feeling seemed to be that there should be more information on the wording of the question.

5.2. Results of the panel testing

In this section the results of the lay panel testing are presented. The Greek lay panel consisted of 30 persons (14 men and 16 women) aged from 19 to 70 years old. The average age was 40 years with a standard deviation of plus/minus 12.8 years (tabl. 1).

The educational level was reasonably representative of the general population as 10 persons replied that they had not continued after the minimum school leaving age, 6 replied they had and 14 also had a degree or equivalent professional qualification. The proportional composition of the sample with regard to employment status of the respondents is shown in table 2.

The respondents provided useful answers in the EQ-5D classifier (page 2 of the questionnaire) responding

to each of the 5-dimensional classification categories. The relative frequencies of each dimension are shown in table 3.

On the 3rd page of the EuroQol questionnaire the respondents were asked to use a 20 cm VAS and to indicate “how good or bad” is his/her own health status “today”. The proportional distribution of the relative frequencies of the VAS are shown in table 4.

Table 1. Age structure of the lay panel.

	Descriptive statistics				
	N	Minimum	Maximum	Mean	SD
AGE	30	19.00	70.00	40.3667	12.8506
Valid N (listwise)					

Table 2. Employment status of the lay panel.

Valid	Occupation			
	Frequency	Percent	Valid percent	Cumulative percent
Employed-self employed	20	66.7	66.7	66.7
Retired	2	6.7	6.7	73.3
Housework	4	13.3	13.3	86.7
Student	3	10.0	10.0	96.7
Seeking work	1	3.3	3.3	100.0
Total	30	100.0	100.0	

Table 3. Responses of the lay Panel for each dimension of EQ-5D

Valid	Frequency	Percent	Valid percent	Cumulative percent
<i>Mobility</i>				
No problems	28	93.3	93.3	93.3
Some problems	2	6.7	6.7	100.0
Total	30	100.0	100.0	
<i>Self care</i>				
No problems	30	100.0	100.0	100.0
<i>Usual activities</i>				
No problems	27	90.0	90.0	90.0
Some problems	3	10.0	10.0	100.0
Total	30	100.0	100.0	
<i>Pain/discomfort</i>				
No pain	21	70.0	70.0	70.0
Moderate pain	9	30.0	30.0	100.0
Total	30	100.0	100.0	
<i>Anxiety/depression</i>				
Not anxious	19	63.3	63.3	63.3
Moderately anxious	11	36.7	36.7	100.0
Total	30	100.0	100.0	

The respondents were asked to rate their health status on a thermometer taking the values from 0=worst imaginable health to 100=best imaginable health. The average value of the VAS, the median and the standard deviation of the lay panel are shown in table 5.

The results of the testing by the lay panel confirmed the feasibility of administering the EuroQol instrument in Greece. The translation of the questionnaire into the Greek language was found to be adaptable to the Greek culture and it was reported from all members of the pilot sample to be easily comprehensible.

Emphasis was given to investigation of the level of understanding of participants from low educational and socio-economic backgrounds.

5.3. Valuation

The valuation exercise was carried in 1998 in a selected sample of 500 individuals in Greece. The main goal was to obtain a sample large enough to be as nearly as possible representative of the Greek population. In determining the sample size the critical requirement was to obtain a large enough degree of freedom for statistical analysis to be made. It was also necessary for the sample to be representative across different socio-

economic strata in order to provide a realistic view of opinions among the Greeks on their subjective assessment of their health status. A sample frame from an earlier socio-economic study investigating demand and health utilisation patterns across Greece was used as the basis for selecting the individuals. Twenty interviewers participated in the final field work, each of whom was assigned a list of households from a geographic area in Greece and all the relevant information to contact the head of each selected household. The responsibility of each interviewer was to briefly introduce the objectives of the survey to the head of the household, to explain the need for the study for health policy purposes and to convince the individual to participate in the study. Either an interview was conducted immediately, or in the case of reservations, an appointment was made for a later visit.

5.4. Results from valuation

Here the findings of the valuation exercise are reported. First, the evidence on the perceptions of the Greek people concerning the comprehensibility of the EuroQol questionnaire in the Greek culture are presented. This is followed by a comparison of the Greek findings from the administration of the EQ-5D with other studies launched in Germany, England, Spain and the Netherlands.

The respondents were invited to provide an answer on the extent of the difficulties they confronted during the process of filling in the questionnaire. It should be noted that the experience of the Greek population with self-completion of health interviews is extremely limited. The concepts of subjective health in page 2 and 3 of the questionnaire, as well as the whole process of valuation (Part III of the questionnaire) caused some difficulties in the respondents as depicted in table 4. Around 24.1% of the sample population found the questionnaire very difficult or fairly difficult. The rest found fairly easy, 56.5%, or very easy, 19.1% (tabl. 6).

5.5. International comparison

Using the EuroQol instrument valuations for alternative health states have been calculated in the Netherlands, Sweden, Norway, Finland and the UK. More recently, valuations of the EuroQol values have been obtained for Spain and other countries. In this study use is made of the survey findings for Germany, Spain, UK and Greece for which the standardised values of 16

Table 4. Responses of the lay panel on the Visual Analogue Scale (VAS).

Valid	Frequency	Percent	Valid percent	Cumulative percent
60.00	2	6.7	6.7	6.7
65.00	2	6.7	6.7	13.3
70.00	2	6.7	6.7	20.0
75.00	6	20.0	20.0	40.0
78.00	1	3.3	3.3	43.3
80.00	5	16.7	16.7	60.0
85.00	2	6.7	6.7	66.7
87.00	1	3.3	3.3	70.0
90.00	7	23.3	23.3	93.3
93.00	1	3.3	3.3	96.7
95.00	1	3.3	3.3	100.0
Total	30	100.0	100.0	

Table 5. Descriptive statistics of responses of the lay panel on the VAS.

	Valid
N	30
Mean	79.7667
Median	80.0000
Mode	90.00
Standard deviation	9.8179
Minimum	60.00
Maximum	95.00

Table 6. Respondents perception filling in the EuroQol questionnaire.

Valid	Frequency	Percent	Valid percent	Cumulative percent
Very difficult	10	2.1	2.1	2.1
Fairly difficult	106	21.8	22.0	24.1
Fairly easy	272	55.9	56.5	80.7
Very easy	92	18.9	19.1	99.8
Missing	6	1.2	Missing	
Total	487	100.0	100.0	

health states were considered and compared. The study highlights the importance of the EuroQol instrument as a reliable and valid measure for obtaining values of different health states.

Reliability

The reliability criterion is often used in the quality of life literature, to test the consistency of a measurement in repeated experiments.³⁰ It refers to the stability of the HRQoL values assigned by the same person in repeated exercises. A test which is often explored is the so-called test-retest reliability criterion which is based on the correlation between the values obtained by the same person at two different periods of time.

The reliability of the EQ-5D has been shown for the Greek cultural setting also. In repeated exercises during the pilot phase and the valuation exercise the consistency of the EuroQol instrument was empirically justified. In addition, comparing the Greek with the European values it was found that the scores obtained for different dimensions of health are almost identical to the scores obtained in equivalent testing situations.

Validity

In the majority of the validation exercises validity follows reliability.^{31,32} Establishing the validity of an instrument implies its comparison with a “gold standard”. It has been stated that validity is superior to reliability, but techniques both for validity and reliability are required to assess the usefulness of the applicability of an instrument in different cultural and clinical environments.

Four major procedures are proposed to ensure the validity of an instrument:

- Content validity reveals the extent to which a quality of life instrument measures in a representative and adequate way the range of health states under investigation.
- Construct validity provides evidence on the theoretical and logical consistency of an instrument.
- Criterion validity refers to comparisons of one instrument against others which have been proved as reliable and valid instruments in previous empirical exercises.
- Predictive ability defines the degree to which future values of an individual health state can be predicted by the instrument.

In Greece two methods of validation of the EuroQol instrument were explored based on the correlation coefficient matrix and a regression analysis.

The correlation matrix (tabl. 7) presents pairwise comparison and provides statistical evidence of the strength of association between the different values of the EuroQol indices. The correlation coefficient is used as a summary index to describe the estimated strength of linear association. In table 5 these coefficients are shown together with observed two-tailed significance levels.

The overall impression is that among all European countries under consideration there is a very high correlation of the EuroQol indices. This finding supports a similar hypothesis investigated by Kind (1996) who indicated that for a standard set of EuroQol health states derived from studies launched in Sweden, the UK, the Netherlands, and Norway, similar values were observed.

Table 7. Correlation coefficient matrix.

	Correlation coefficients			
	Germany	Greece	The netherlands	Spain
Germany	1.0000 (15) **	0.9817 (11) **	0.9839 (12) **	0.9808 (13) **
Greece	0.9817 (11) **	1.0000 (11) **	0.9530 (9) **	0.9787 (10) **
Spain	0.9808 (13) **	0.9787 (10) **	0.9441 (11) **	1.0000 (13) **

(Coefficient/cases/2-tailed significance)

** Statistically significance

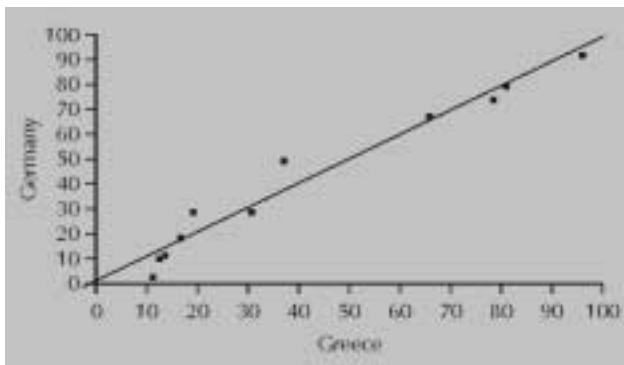


Figure 4. Health status comparison between Germany and Greece.

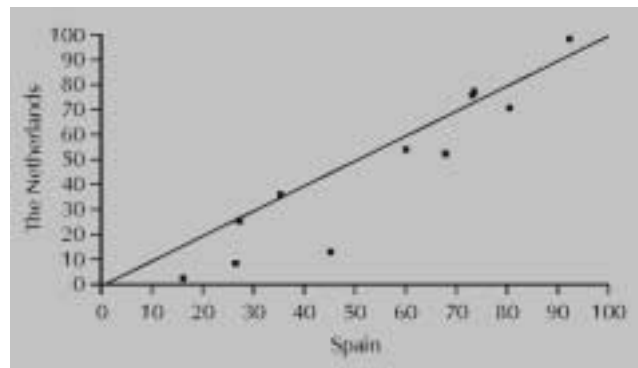


Figure 6. Health status comparison between the Netherlands and Spain.

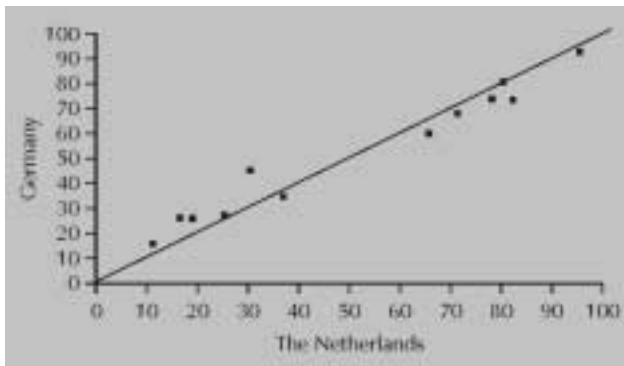


Figure 5. Health status comparison between Germany and the Netherlands.

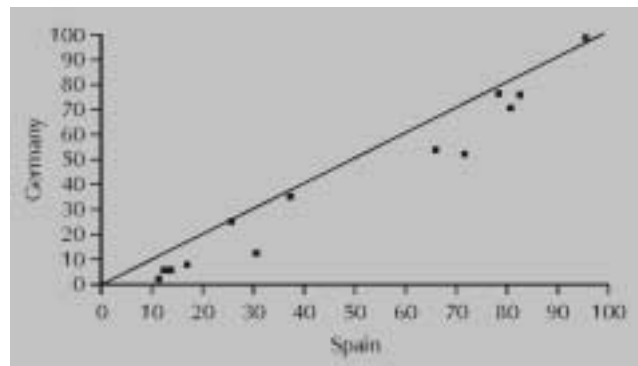


Figure 7. Health status comparison between Germany and Spain.

It is important to examine correlation coefficients together with scatter plots in order to obtain a visual impression of the underlying relationship. Figures 4, 5, 6 and 7 provide a series of pairwise comparisons between Germany, Greece, the UK, Spain and the Netherlands. These figures reveal a high level of association between the Greek values of the EQ-5D instrument and the corresponding values obtained from other European countries using similar methodologies for valuation studies.

6. CONCLUSIONS

During the last ten years the EuroQol instrument has been widely used to measure quality of life in different cultural and socio-economic settings. Recently it was included in health interview surveys in the UK, Canada, the USA and Spain, and valuable information was produced concerning the health status of the population as well as other issues related to health inequalities between socio-economic groups.

In this paper the methodological issues were examined which are often discussed in the literature of quality of life measurement focusing on the description of the EuroQol instrument and its translation and adaptation for the Greek environment. The different phases of translation process were described in detail and evidence was provided of the adaptability of the EuroQol based on testing with a selected lay panel of 30 individuals. A valuation exercise of the EuroQol in a sample of 500 individuals in Greece was reported and Greek values were compared with the corresponding European values using a correlation coefficient matrix and regression charts. A high degree of association was demonstrated between the Greek and the European values. On the basis of these findings it can be argued that EuroQol is a reliable and a valid instrument which can be used effectively in quality of life measurement in Greek clinical trials and population-based exercises.

ΠΕΡΙΛΗΨΗ

Η ελληνική απόδοση του EuroQol EQ-5D

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ΣΚΟΠΟΣ Ο στόχος της μελέτης αυτής είναι διπτός. Αφενός παρουσιάζονται συνοπτικά τα μεθοδολογικά προβλήματα που έχουν συζητηθεί στην Ευρωπαϊκή βιβλιογραφία και αναφέρονται στην επιλεκτικότητα των κατάλληλων εργαλείων για τη μέτρηση της ποιότητας ζωής, κάνοντας ειδική αναφορά στη μεθοδολογία του EuroQol. Αφετέρου, αναλύεται η διαδικασία που έχει υιοθετηθεί στη μελέτη αυτή για τη μετάφραση-απόδοση, την αξιοπιστία και εγκυρότητα του EQ-5D στην Ελληνική γλώσσα, λαμβάνοντας υπόψη το «πολιτισμικό μας περιβάλλον».

ΥΛΙΚΟ-ΜΕΘΟΔΟΣ Η μετάφραση-απόδοση του EuroQol από την Αγγλική γλώσσα στην Ελληνική έγινε ακολουθώντας όλα τα μεθοδολογικά στάδια που προτείνει η ειδική επιτροπή του EuroQol. Αρχικά, ακολουθήθηκαν οι προδιαγραφές για τα στάδια των μεταφράσεων (α) από την Αγγλική προς την Ελληνική και (β) από την Ελληνική προς την Αγγλική και ακολούθησε η πιλοτική έρευνα, η οποία έγινε σε ένα μικρό δείγμα 30 ατόμων. Τα άτομα που συμμετείχαν στην πιλοτική έρευνα, συζήτησαν με τους ερευνητές του EuroQol τη δυνατότητα κατανόησης των ερωτήσεων, τη λειτουργικότητα του ερωτηματολογίου, την εγκυρότητά του, την αξιοπιστία του και διάφορα άλλα δεοντολογικά θέματα, που προέκυψαν κατά τη διάρκεια των συζητήσεων. Στη συνέχεια έγινε έρευνα πεδίου, που κάλυψε 487 άτομα από όλη την Ελλάδα. Έγινε προσπάθεια ώστε να διασφαλιστεί η μέγιστη δυνατή αντιπροσωπευτικότητα του δείγματος ως προς το κριτήριο του φύλου, της δημογραφικής-ηλικιακής σύνθεσης, της εκπαίδευσης και της κοινωνικο-οικονομικής κατηγορίας. Τα αποτελέσματα συγκρίθηκαν με αντίστοιχες έρευνες που έγιναν στη Γερμανία, Μεγάλη Βρετανία, Ισπανία και Ολλανδία. **ΑΠΟΤΕΛΕΣΜΑΤΑ** Τα αποτελέσματα καλύπτουν τόσο τα ευρήματα της πιλοτικής μελέτης των 30 ατόμων, όσο και της έρευνας πεδίου που αναφέρεται σε δείγμα 487 ατόμων από όλη την Ελλάδα. Τα άτομα της πιλοτικής έρευνας έδειξαν ότι η μετάφραση του EuroQol στην Ελληνική γλώσσα είναι κατανοητή και μπορεί να δοκιμαστεί σε μεγαλύτερο δείγμα ατόμων, ώστε να επιδιωχθεί η διερεύνηση των ψυχομετρικών παραμέτρων που αναφέρονται στην αξιοπιστία και εγκυρότητα (εγκυρότητα περιεχομένου, εγκυρότητα όψεως, εγκυρότητα κριτηρίου, εγκυρότητα δομής) του EuroQol στην Ελληνική γλώσσα και το «πολιτισμικό μας περιβάλλον». Τα αποτελέσματα έδειξαν ότι το 76,6% των ατόμων του δείγματος βρήκαν το ερωτηματολόγιο του EuroQol ως σχετικά εύκολο και κατανοητό. Τα άτομα του δείγματος συμμετείχαν σε μια αξιολόγηση 18 επιλεκτικών διαστάσεων του EuroQol. Από την αξιολόγηση αυτή προέκυψε ότι το Ελληνικό σύστημα αξιολόγησης προσεγγίζει πολύ παρόμοια συστήματα, που έχουν αναπτυχθεί στη Γερμανία, την Ισπανία, τη Μεγάλη Βρετανία και την Ολλανδία. **ΣΥΜΠΕΡΑΣΜΑΤΑ** Το EuroQol μπορεί να εφαρμοστεί με αξιοπιστία και εγκυρότητα σε Ελληνικές μελέτες που αποσκοπούν στη μέτρηση της ποιότητας ζωής.

Λέξεις ευρετηρίου: Αξιολόγηση, EQ-5D, EuroQol, Μετάφραση, Ποιότητα ζωής

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