

THE UNIVERSITY *of York*

CENTRE FOR HEALTH ECONOMICS

## **UK Population Norms for EQ-5D**

*Paul Kind*

*Geoffrey Hardman*

*Susan Macran*

***DISCUSSION PAPER 172***



# **UK Population Norms for EQ-5D**

**Paul Kind**

**Geoffrey Hardman**

**Susan Macran**

**November 1999**

## **CENTRE FOR HEALTH ECONOMICS DISCUSSION PAPER SERIES**

The Discussion Paper (DP) Series was established in 1984 to make research available quickly to a broad readership drawn from the academic community, professional health care staff and policy makers, both within the UK and internationally. Material published in DP form ranges from work in progress, to edited versions of completed project reports, from papers intended ultimately for journal publication, to those which seek to stimulate immediate debate. Hence the variation in length and complexity of DPs.

In the past, DPs have been subject to a minimum of editorial revision, it being principally seen as the responsibility of individual authors to ensure that appropriate standards were met. Since June 1996, a more formal system of internal peer-review has been introduced to consolidate the high levels of quality that have been achieved in the past. That system involves the refereeing of DPs in draft form, with any recommended revisions being verified independently by a senior member of staff.

DPS are not a substitute for publication in peer-reviewed journals. It is to be hoped that journal editors will recognise the nature of the DP series, and accept that this does not compromise the status of those papers published by the Centre which may later be submitted for consideration in more formal publications. Comments and suggestions on DPs encouraged and should be sent directly to the authors.

### **THE AUTHORS**

Paul Kind (Senior Research Fellow) and Susan Macran (Research Fellow) are members of the York Health Outcomes Research Group at the Centre for Health Economics. Geoff Hardman (Research Fellow) is a member of the Statistical Support Group, also at the Centre for Health Economics.

### **ACKNOWLEDGEMENTS**

The data reported in this Discussion Paper were collected as part of a national survey commissioned by the Department of Health.

### **FURTHER COPIES**

Further copies of this document (at price £12.50 to cover the cost of publication, postage and packing) are available from:

The Publications Office  
Centre for Health Economics  
University of York  
York YO10 5DD

Please make cheques payable to 'The University of York'. Details of other papers can be obtained from the same address or telephone (01904) 433648.

## **ABSTRACT**

This discussion paper presents data from the Department of Health funded Measurement and Valuation of Health survey conducted at the Centre for Health Economics in 1993. This was a nationally representative interview survey of 3395 men and women aged 18 or over living in the UK. Amongst other things, the survey collected information on health status using the EuroQoL (EQ-5D) descriptive system. The data is presented as a series of tables of age/sex population norms for the EQ-5D, for both self rated health status and weighted health state index. The tables are likely to be useful for researchers, clinicians, health care providers and policy makers, who are using EQ-5D to evaluate health care and who require baseline values for comparative purposes or for monitoring population variations in health.

## INTRODUCTION

The Measurement and Valuation of Health (MVH) project was funded at the Centre for Health Economics between 1987-1995, by the Department of Health with the remit of developing practical ways for measuring health-related quality of life. Part of that task involved undertaking a national survey to elicit health state valuations from a representative sample of the UK population. The findings from the project have already been extensively reported (Dolan et al, 1995; Williams et al, 1995; Kind et al, 1998).

The survey's principal objective was to collect data on health state valuations using a Time Trade Off (TTO) procedure. However, the survey also gathered data on self-reported health status using the EuroQoL EQ-5D descriptive classification system. EQ-5D is a generic measure of health status which defines health in terms of five dimensions: mobility, self-care, usual activities, pain or discomfort and anxiety or depression. Each dimension is subdivided into three levels which correspond to whether a respondent has no problems, moderate problems or extreme problems. EQ-5D also requires respondents to indicate how good or bad their current health state is on a visual analogue scale (VAS), where 0 represents their worst imagined health state and 100 represents their best imagined health state.

Respondents "health status" can be expressed as their score on the visual analogue scale (EQ-5D<sub>vas</sub>), as a health profile of their scores on the five dimensions or as a unique health state, by combining the different levels from each dimension; EQ-5D defines a total of 243 theoretically possible health states. Each unique health state can be transformed into a weighted health state index score (EQ-5D<sub>index</sub>) using one of the tariffs which were derived from the health valuation part of the survey (Dolan, et al 1995).

This discussion paper presents a series of tables of age/sex population norms for EQ-5D, for both self rated health status (EQ-5D<sub>vas</sub>) using the visual analogue scale and weighted health state index score (EQ-5D<sub>index</sub>)<sup>1</sup>. The tables are likely to be useful for researchers, clinicians health care providers and policy makers who maybe using EQ-5D to evaluate health care and who require baseline values for comparative purposes.

## METHOD

### Sampling

A total of 6080 addresses in the UK were selected using a strategy designed to generate a sample which was representative of the general population with respect to age, gender and social class (see Erens, 1994). Twelve percent of the selected addresses were non-productive in that they were non-residential, empty or untraceable. Individuals in institutions, hostels, homes for the elderly, or bed and breakfast accommodation, were excluded from the sample. Twenty-four percent of individuals who were contacted refused to take part. The final sample consisted of 3395 individuals aged 18 or over. The characteristics of the achieved sample were very similar to those of the general population, as can be seen in Table 1.

---

<sup>1</sup> The data was weighted using the tariff derived from mean values based on individual TTO scores. This is the basic tariff recommended by the MVH group when a weighting system is required for use in economic evaluation.

**Table 1 : Characteristics of MVH survey population compared to general population**

	<b>Health Related Quality of Life survey<sup>1</sup></b>	<b>General population</b>
<b>Men</b>	46%	48% (1991 census)
aged under 60	34%	37%
<b>Women</b>	54%	52%
aged under 60	41%	37%
<b>Social class</b>		
I/II	30%	30% (1991 census)
IIIN/IIIM	46%	43%
IV/V	25%	24%
<b>Marital status</b>		
single	17%	21% (1992 GHS)
married/cohabiting	60%	64%
separated/divorced/ widowed	15%	23%
<b>Housing tenure</b>		
owner occupier	70%	70% (1991 Census)
<b>Economic activity</b>		
In employment/seeking employment	59%	61% (1991 Census)
retired	19%	20%
permanently sick/disabled	4%	4%
other	19%	17%

<sup>1</sup> For comparison with the Census, the MVH survey data has been weighted to account for the effect of household size on selection probabilities. For comparison with the GHS, data is unweighted contained fewer individuals who were married or cohabiting and more divorced and widowed respondents than in the general population.

The proportion of men included in the survey is slightly lower than that found in the general population, and this under-sampling extends to the older aged male respondents. Correspondingly there is a higher proportions of women respondents. The sample also contained fewer individuals who were married or cohabiting and more divorced and widowed responders than in the general population.

## Data Collection

Face-to-face interviews were conducted in the respondent's home. As part of the initial phase of the interview respondents were asked to complete a 2-page questionnaire based on the standard format adopted by the EuroQoL Group (see Appendix A). The first of these pages is designed to record information on self-reported problems with each of the 5 dimensions. The second page of the questionnaire records the respondent's self-perceived health status on a standardised 20 centimetre visual analogue scale. Details about the personal background of each respondent were recorded separately by the interviewer. This included information on age, sex, marital status, educational attainment, employment status, housing tenure and smoking behaviour. Interviews took place during the last quarter of 1993. Fieldwork was conducted in association with Social and Community Planning and Research based in London.

Table 2 shows the item response rates for each EQ-5D dimension and for the visual analogue scale.

### Calculating the weighted health state index score (EQ-5D<sub>index</sub>)

The 243 health states defined by the EuroQoL classification can be converted into a weighted health state index score using the table of values in Appendix B. These values were calculated using a regression model developed using the TTO data collected by the MVH survey (Dolan et al, 1995). The following worked example demonstrates how the coefficients obtained from the regression model (shown in table 3) were used to compute the weighted value for each health state.

**Table 2: Item response rates**

Item	Number of cases responding to this item	Number of cases missing on this item
Mobility	3388	7
Self Care	3386	9
Usual Activities	3387	8
Pain/Discomfort	3387	8
Anxiety/Depression	3389	6
Visual Analogue Scale	3381	14

**Table 3: Coefficients for EQ-5D health states**

EuroQoL dimension	Coefficient Level 2	Coefficient Level 3
Mobility	0.069	0.314
Self-care	0.104	0.214
Usual activity	0.036	0.094
Pain / discomfort	0.123	0.386
Anxiety / depression	0.071	0.236
	Constant = 0.081	N3 = 0.269

**Calculating a weighted health state index (EQ-5D<sub>index</sub>) score for health state 11223.**

Full health (11111) = 1.0

Subtract 0.081 (constant) for any state other than 11111.

Subtract zero for level 1 on any dimension (in this example mobility and self care).

Subtract the appropriate value for each dimension at level 2 or level 3 (in this case 0.036 for usual activity, 0.123 for pain/discomfort and 0.236 for anxiety and depression).

Subtract 0.269 if any dimension has a level 3 problem (in this example, anxiety/depression).

Hence the weighted health state index score for health state 11223 is given by

$$1.0 - 0.081 - 0.036 - 0.123 - 0.236 - 0.269 = \mathbf{0.255}$$

## THE TABLES

The tables are divided into two sections:

- Section 1, presents data on health state expressed as a weighted health state index (EQ-5D<sub>index</sub>);
- Section 2, presents data on self-rated health status as measured by the visual analogue scale (EQ-5D<sub>vas</sub>).

Each section provides data for the whole sample, and then for males and female separately. There are separate tables for educational level, marital status, housing tenure, standard economic region, social class and smoking status and for each table the data is presented in 10 year age bands.

***Educational level*** is divided into 5 categories: higher education; further education/ 'A' level or equivalent; 'O' level/CSE or equivalent; no qualifications; other qualifications not specified elsewhere.

***Marital status*** is divided into 5 categories: married; cohabiting; separated or divorced; widowed and single.

***Smoking status*** is divided into three categories: non-smoker; smoker less than 20 cigarettes per day; smoker more than 20 cigarettes per day. Unfortunately the data does not allow us to distinguish which of the non-smokers are ex-smokers. As many individuals cease smoking because of relatively poor health, it is possible that our figures give a slightly pessimistic view of the health of non-smokers who have never smoked.

***Housing tenure*** is divided into 4 categories: owner occupied which includes those individuals who own their property outright or who are buying their property with a mortgage or loan; private rented; public rented which includes individuals who are renting from a local authority, New Town or Housing Association; other household tenure not specified elsewhere.

***Social class*** is presented as two categories: non-manual workers and manual workers and is derived from respondents' current or last main job.

**Standard Region** divides Great Britain into 10 geographical areas: North, Yorkshire and Humberside, East Midlands, East Anglia, South East, South West, West Midlands, North West, Wales, Scotland.

### How to use the tables

The tables are designed to be used as population norms for comparative purposes. The following points are intended to act as guidelines for users who may be less confident about using the tables and interpreting the data they present.

- Each cell presents the mean, number of cases (n) and standard deviation for the particular population sub-group that it represents.
- Some of the cells, particularly in the tables for males and females contain relatively few cases. As it is sensitive to extreme scores, the mean can be a less useful summary measure of the scores of a population when there are relatively few cases. As a guide, it is suggested that the mean scores presented for cells containing around 30 cases or less be interpreted with caution.
- F ratios (ANOVA) were calculated for each row and column to test for differences between cell means. Significance levels for the F ratios are presented as a p-value at the end of each row and column. Conventionally only p-values of 0.05 or less are considered to be statistically significant. As ANOVA is a comparison of cell means, it is suggested that the significance levels presented for cells which contain around 30 cases or less be interpreted with caution.
- P-values could not be calculated for some rows or columns because they contained empty cells.
- When comparing the data in the tables with any other data, the effect of sample bias should be accounted for where possible. For example, consider the case where a GP with a practice in an area where 65% of the population are in manual occupations wishes to compare the EQ-5D scores obtained from a sample of her patients with the national data presented here. The GP may have established that the age/sex distribution of her sample is not significantly different from the age/sex distribution of the national population, but still needs to account for differences in social class, given that there is a significant difference in the EQ-5D scores for people in non-manual and manual occupations. Instead of using tables A and B to make her comparison, the GP should more appropriately use Tables 1.1.5 and 2.1.5. However if the GP was unsure whether the age/sex distribution of her sample was the same as that of the national sample, it would be more appropriate for her to use tables 1.2.5, 1.3.5, 2.2.5 and 2.3.5 to make comparisons. In principle, any factor that is known to significantly affect an individual's health score (such as social class or education) should be controlled for in the comparison. Of course this is not always possible, which is partly why any comparisons made using these tables should be done with caution.

## 6 UK Population Norms for EQ-5D

- Individual scores can be compared with the group means presented in the tables by transforming the individual score into a  $z$  score (or standard score) which indicates where that score stands in relation to all the other scores. A  $z$  score is a measure of how many standard deviations an individual score is from the mean of the distribution. The formula for calculating a  $z$  score is as follows:

$$z \text{ score} = \frac{X - \mu}{\sigma}$$

$X$  = the individual score to be transformed  
 $\mu$  = population mean  
 $\sigma$  = population standard deviation

A  $z$  score of  $\pm 2$  or is generally considered to be an extreme high or low score.

### Example

If a 21 year old woman has a weighted health state index (EQ-5D<sub>index</sub>) score of 0.88, is her score high or low compared to women of a similar age? To calculate her  $z$  score we use the mean (0.94) and standard deviation (0.12) for women aged less than 25 from Table A thus:

$$z \text{ score} = \frac{0.88 - 0.94}{0.12} = -0.5$$

Her score is 0.5 standard deviations below the mean score for women aged 18-25 years. Approximately 68% of scores for a group will fall between plus and minus one standard deviation from the mean (i.e. between 0.94-0.12 and 0.94+0.12), assuming the scores are normally distributed. Therefore, our 21 year old woman's score is not particularly low as compared to the scores of women of a similar age group.

- Group mean scores can be compared with the population means presented in the tables to test whether or not the two groups are significantly different or not, using a two-tailed t-test for independent samples. The formula for the t-test statistic is given below:

$$t = \frac{\bar{X}_1 - \bar{X}_2}{s\bar{x}_1 - s\bar{x}_2}$$

where

$$s\bar{x}_1 - s\bar{x}_2 = \sqrt{\frac{\sigma_1^2(n_1-1) + \sigma_2^2(n_2-1)}{n_1 + n_2 - 2} \left( \frac{1}{n_1} + \frac{1}{n_2} \right)}$$

$\bar{X}_1$  = study group mean

$\bar{X}_2$  = population mean

$s\bar{x}_1 - s\bar{x}_2$  = estimated standard error

$\sigma_1$  = study group standard deviation

$\sigma_2$  = population standard deviation

$n_1$  = study group number of cases

$n_2$  = population number of cases

**Example**

A GP wishes to compare the self-rated health status (EQ-5D<sub>vas</sub>) scores of elderly men registered with his practice, with the national data for men of a similar age. The GP has data from 132 men aged 75 years or more and their mean self-rated health score is 78.26 with a standard deviation of 20. Table B shows that the mean self-rated health score for men aged 75 years or more is 72.90 with a standard deviation of 18.99, based on 107 cases. The score from our GP's sample is higher by 5 points (78.26 - 72.90=5.36); but is that difference meaningful? Applying a t-test to the comparison will give an indication of the statistical significance of that difference. Thus:

$$t = \frac{78.26 - 72.90}{\sqrt{\frac{(20)^2(132 - 1) + (18.99)^2(107 - 1)}{132 + 107 - 2} \left( \frac{1}{132} + \frac{1}{107} \right)}} = 2.17$$

The value of the t-test statistic is 2.17 with 237 degrees of freedom ( $n_1+n_2 - 2$ ). Using tables of the t distribution it can be seen that the probability that the mean scores of the two groups are not different from each other is less than 0.05. Therefore it can be suggested that the two groups are statistically significant from each other.

*Users are cautioned against performing a large number of multiple t-tests to compare the means of different groups, as this increases the probability that the results of the t-tests will be significant simply by chance.*

## Index of Tables

Table A: EQ-5D<sub>index</sub> by age and sex

Table B: EQ-5D<sub>VAS</sub> by age and sex

### Section 1

- |             |  |
|-------------|--|
| Table 1.1.1 | EQ-5D <sub>index</sub> by age and educational qualifications             |
| Table 1.1.2 | EQ-5D <sub>index</sub> by age and marital status                         |
| Table 1.1.3 | EQ-5D <sub>index</sub> by age and smoking status                         |
| Table 1.1.4 | EQ-5D <sub>index</sub> by age and housing tenure                         |
| Table 1.1.5 | EQ-5D <sub>index</sub> by age and social class                           |
| Table 1.1.6 | EQ-5D <sub>index</sub> by age and standard region                        |
| Table 1.2.1 | EQ-5D <sub>index</sub> by age and educational qualifications for males   |
| Table 1.2.2 | EQ-5D <sub>index</sub> by age and marital status for males               |
| Table 1.2.3 | EQ-5D <sub>index</sub> by age and smoking status for males               |
| Table 1.2.4 | EQ-5D <sub>index</sub> by age and housing tenure for males               |
| Table 1.2.5 | EQ-5D <sub>index</sub> by age and social class for males                 |
| Table 1.2.6 | EQ-5D <sub>index</sub> by age and standard region for males              |
| Table 1.3.1 | EQ-5D <sub>index</sub> by age and educational qualifications for females |
| Table 1.3.2 | EQ-5D <sub>index</sub> by age and marital status for females             |
| Table 1.3.3 | EQ-5D <sub>index</sub> by age and smoking status for females             |
| Table 1.3.4 | EQ-5D <sub>index</sub> by age and housing tenure for females             |
| Table 1.3.5 | EQ-5D <sub>index</sub> by age and social class for females               |
| Table 1.3.6 | EQ-5D <sub>index</sub> by age and standard region for females            |

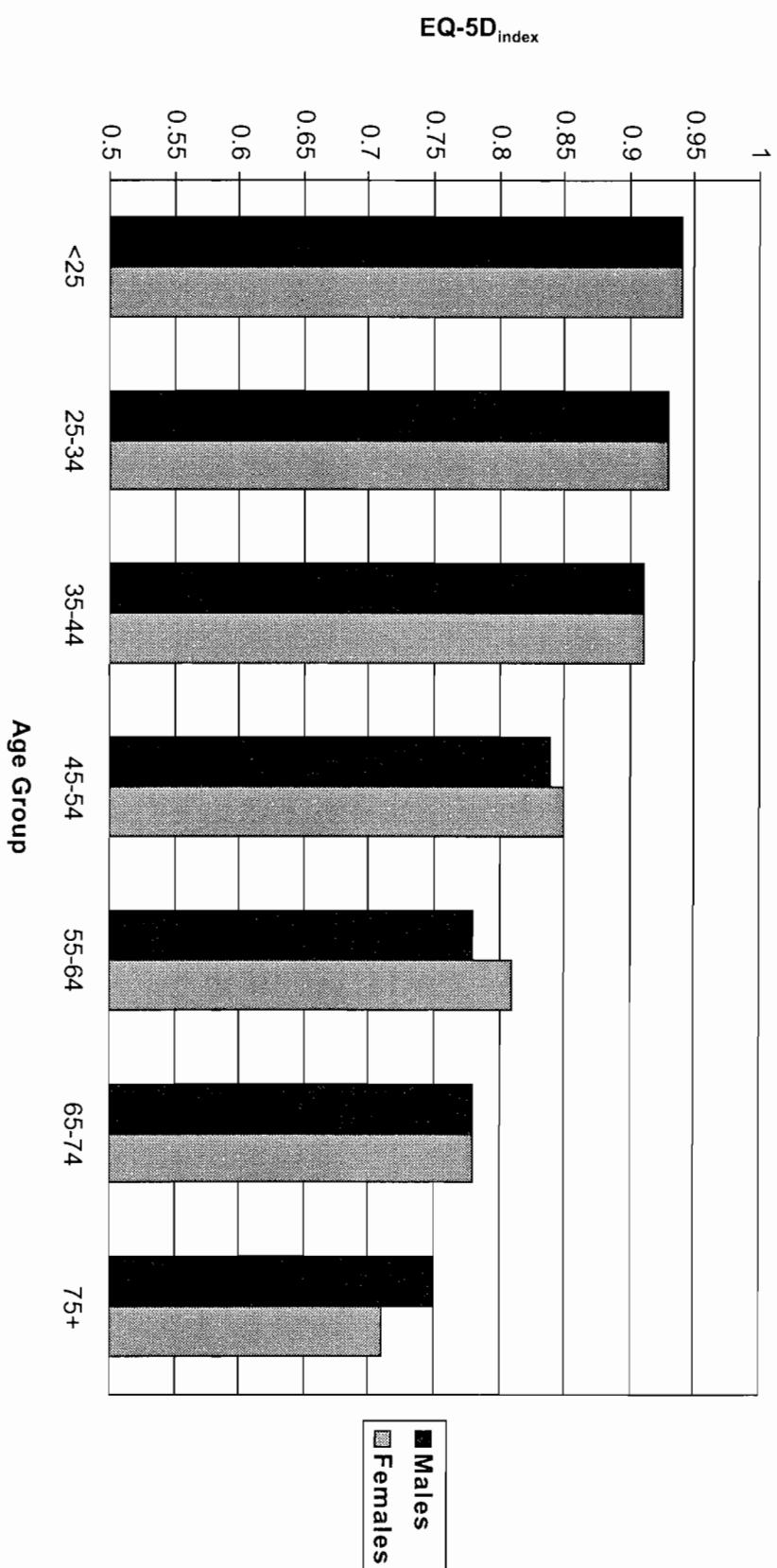
### Section 2

- |             |  |
|-------------|--|
| Table 2.1.1 | EQ-5D <sub>vas</sub> by age and educational qualifications             |
| Table 2.1.2 | EQ-5D <sub>vas</sub> by age and marital status                         |
| Table 2.1.3 | EQ-5D <sub>vas</sub> by age and smoking status                         |
| Table 2.1.4 | EQ-5D <sub>vas</sub> by age and housing tenure                         |
| Table 2.1.5 | EQ-5D <sub>vas</sub> by age and social class                           |
| Table 2.1.6 | EQ-5D <sub>vas</sub> by age and standard region                        |
| Table 2.2.1 | EQ-5D <sub>vas</sub> by age and educational qualifications for males   |
| Table 2.2.2 | EQ-5D <sub>vas</sub> by age and marital status for males               |
| Table 2.2.3 | EQ-5D <sub>vas</sub> by age and smoking status for males               |
| Table 2.2.4 | EQ-5D <sub>vas</sub> by age and housing tenure for males               |
| Table 2.2.5 | EQ-5D <sub>vas</sub> by age and social class for males                 |
| Table 2.2.6 | EQ-5D <sub>vas</sub> by age and standard region for males              |
| Table 2.3.1 | EQ-5D <sub>vas</sub> by age and educational qualifications for females |
| Table 2.3.2 | EQ-5D <sub>vas</sub> by age and marital status for females             |
| Table 2.3.3 | EQ-5D <sub>vas</sub> by age and smoking status for females             |
| Table 2.3.4 | EQ-5D <sub>vas</sub> by age and housing tenure for females             |
| Table 2.3.5 | EQ-5D <sub>vas</sub> by age and social class for females               |
| Table 2.3.6 | EQ-5D <sub>vas</sub> by age and standard region for females            |

# **TABLES**

**Figure A**

**Weighted Health State Index by Age and Sex**

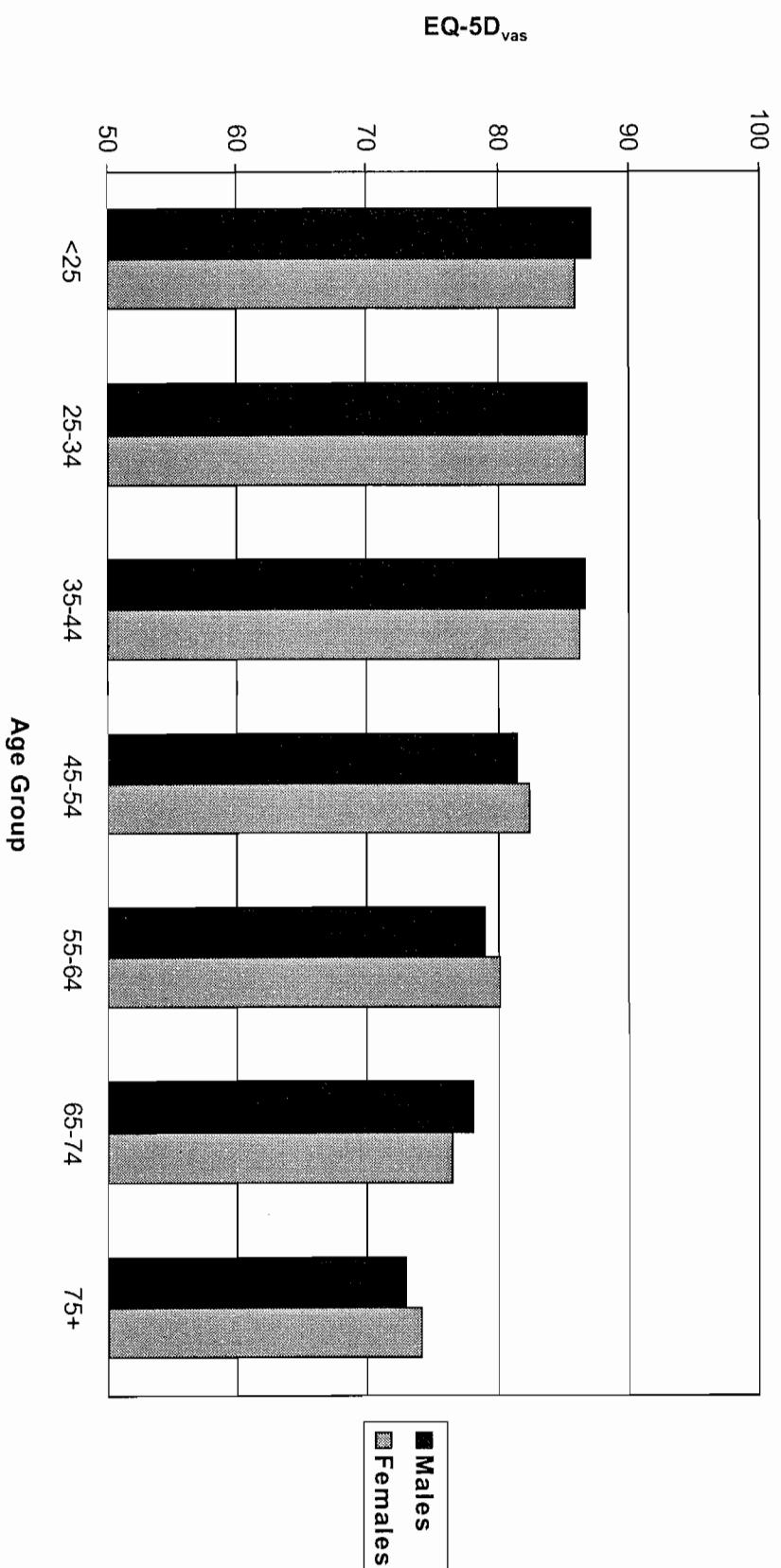


**Table A****Weighted Health State Index by Age and Sex**

			Sex		Sig. Level of F Test
			Males	Females	
All	All		All		
	Mean	0.86	0.86	0.85	
	Count	3392	1467	1925	0.504
	Std Deviation	0.23	0.24	0.22	
Age	Under 25	0.94	0.94	0.94	
	Mean	0.93	0.93	0.93	
	Count	304	128	176	0.654
	Std Deviation	0.12	0.12	0.12	
25-34	0.93	0.93	0.93	0.93	
	Mean	753	330	423	0.631
	Count	0.15	0.16	0.15	
	Std Deviation	0.16	0.17	0.15	
35-44	0.91	0.91	0.91	0.91	
	Mean	561	256	305	0.691
	Count	0.16	0.17	0.15	
	Std Deviation	0.16	0.17	0.15	
45-54	0.85	0.84	0.85	0.85	
	Mean	488	221	267	0.915
	Count	0.25	0.27	0.23	
	Std Deviation	0.25	0.27	0.23	
55-64	0.80	0.78	0.81	0.81	
	Mean	484	196	288	0.203
	Count	0.26	0.28	0.26	
	Std Deviation	0.26	0.28	0.26	
65-74	0.78	0.78	0.78	0.78	
	Mean	488	228	260	0.892
	Count	0.26	0.28	0.25	
	Std Deviation	0.26	0.28	0.25	
75+	0.73	0.75	0.71	0.71	
	Mean	314	108	206	0.197
	Count	0.27	0.28	0.27	
	Std Deviation	0.27	0.28	0.27	
Significance Level of F Test			0.000	0.000	0.000

**Figure B**

**Self Rated Health Status by Age and Sex**



**Table B****Self Rated Health Status by Age and Sex**

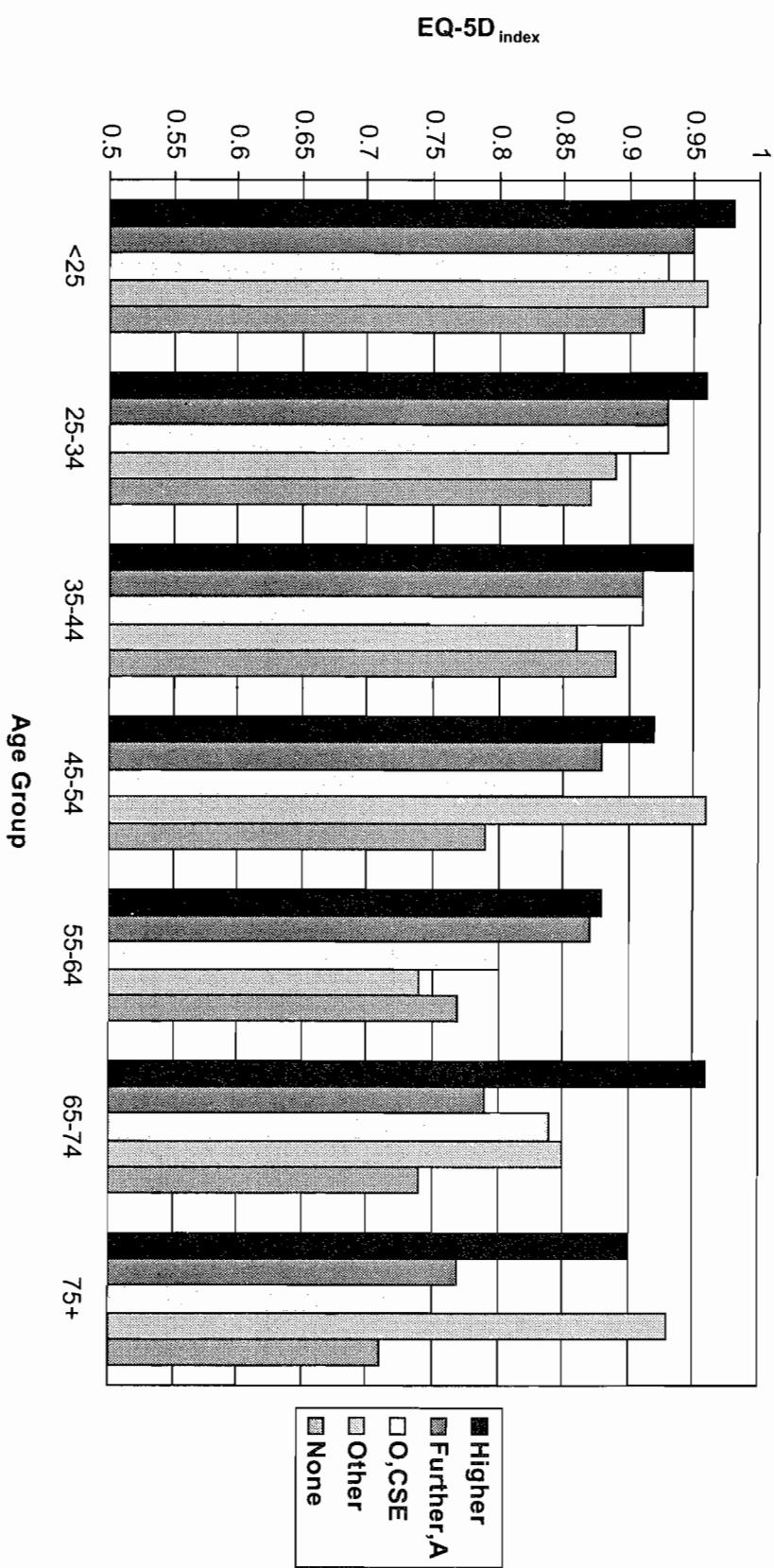
			Sex		Sig. Level of F Test
			All		
			Mean	Females	
			Count		
			Std Deviation		
All			82.48	82.66	82.34
			3378	1463	1915
			16.96	16.96	16.97
Age	Under 25		86.49	87.15	86.00
			303	128	175
			13.60	13.86	13.43
25-34			86.84	86.87	86.82
			753	330	423
			14.41	14.41	14.42
35-44			86.56	86.81	86.35
			559	255	304
			13.79	12.39	14.88
45-54			82.03	81.56	82.42
			487	221	266
			18.15	19.23	17.23
55-64			79.74	78.99	80.26
			480	194	286
			18.23	19.04	17.67
65-74			77.32	78.19	76.55
			486	228	258
			18.05	27.40	18.61
75+			73.66	72.90	74.07
			310	107	203
			18.63	18.99	18.47
Significance Level of F Test			0.000	0.000	0.000

## **SECTION 1**

**Weighted Health State Index  
EQ-5D<sub>index</sub>**

**Whole Population  
Males  
Females**

**Figure 1.1.1**  
**Weighted Health State Index by Age and Educational Qualifications**

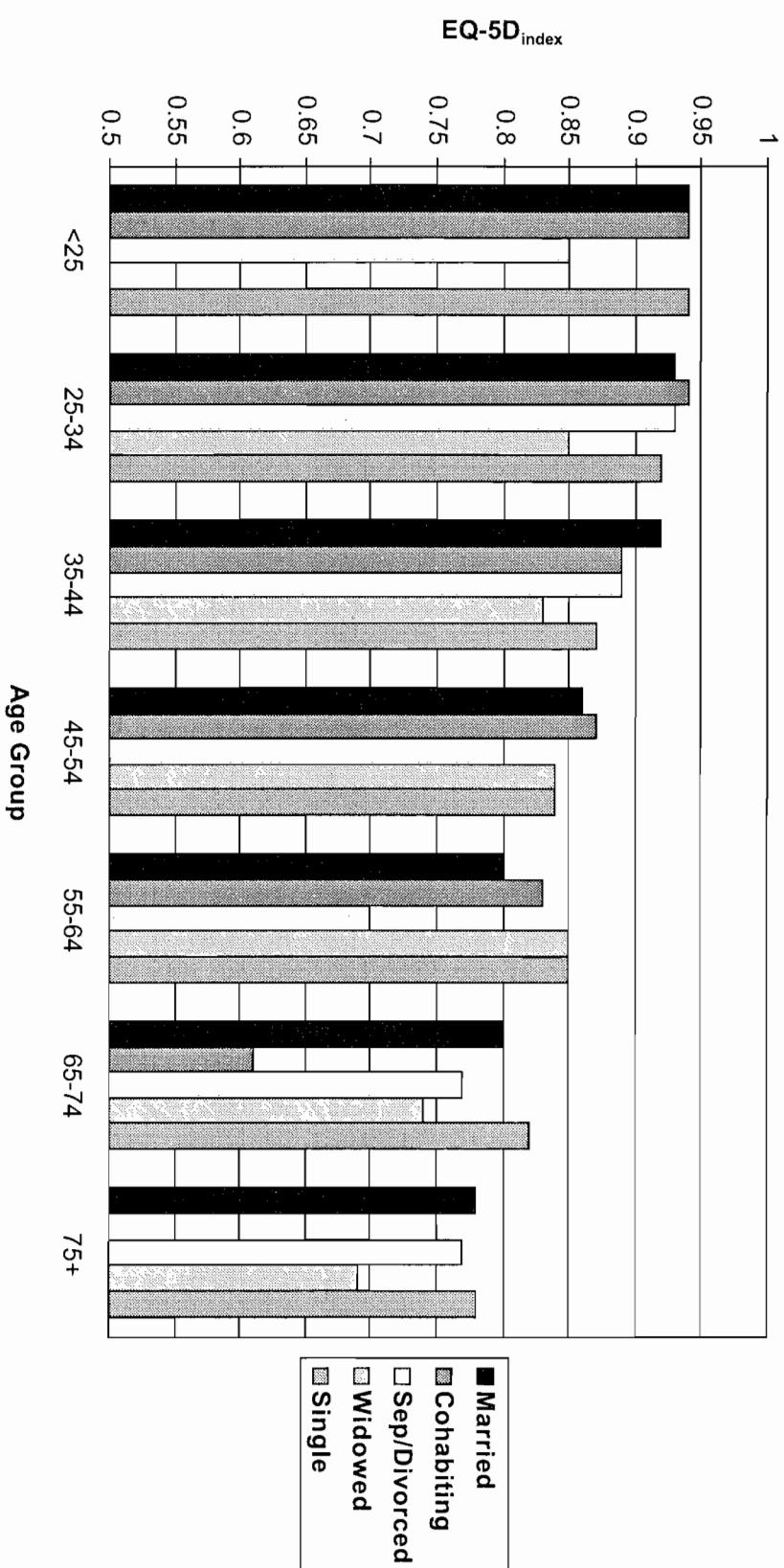


**Table 1.1.1**

**Weighted Health State Index by Age and Educational Qualifications**

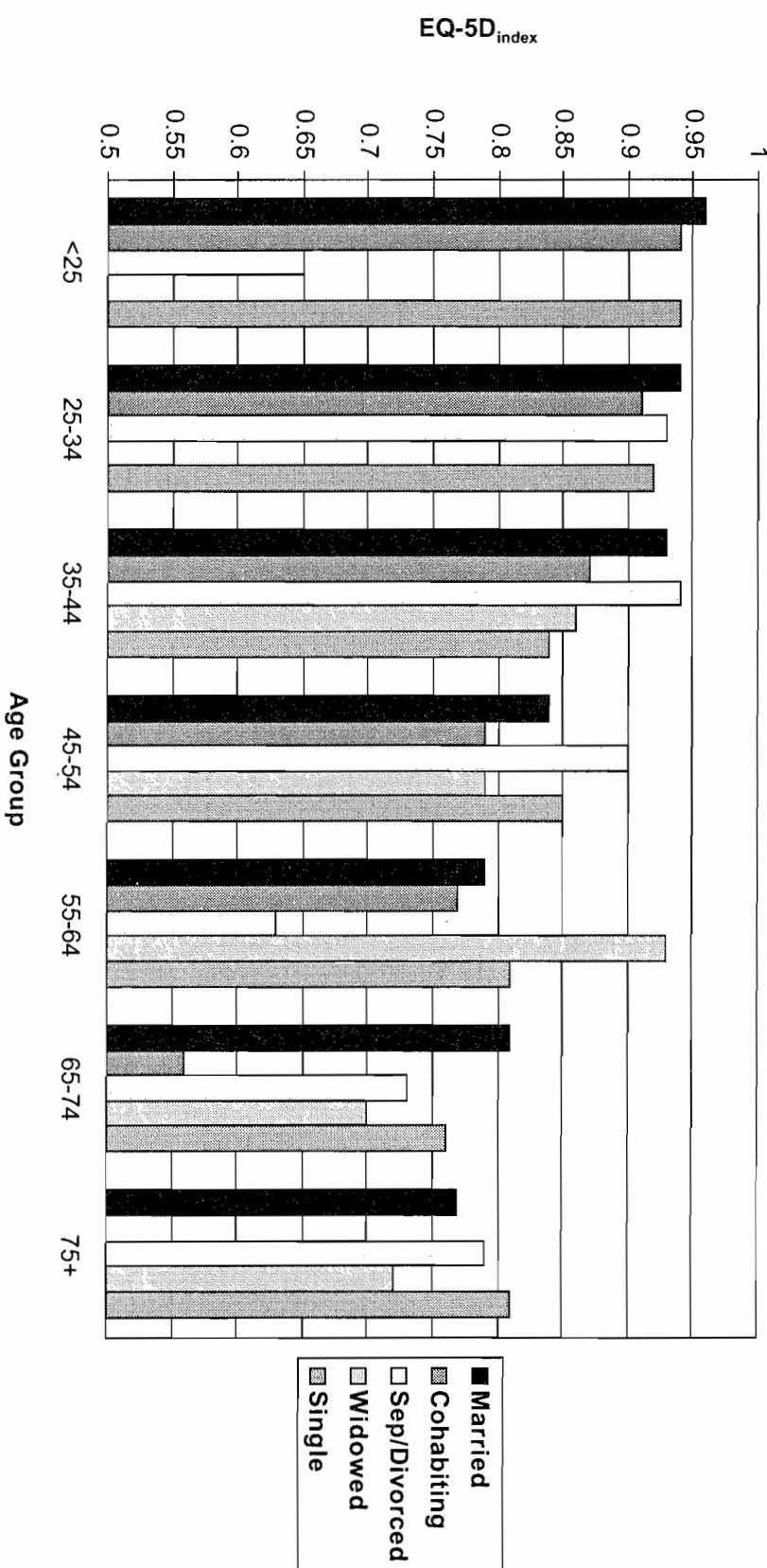
		Level of Education				Sig. Level of F Test
		Higher	Further,A	O,CSE	Other	
All	Mean	0.94	0.90	0.89	0.87	0.78
	Count	313	685	1049	92	1251
	Std Deviation	0.13	0.19	0.19	0.21	0.000
Age Under 25	Mean	0.98	0.95	0.93	0.96	0.91
	Count	18	102	142	3	39
	Std Deviation	0.07	0.12	0.12	0.07	0.322
Age 25-34	Mean	0.96	0.93	0.93	0.89	0.87
	Count	101	224	307	11	110
	Std Deviation	0.09	0.15	0.14	0.18	0.000
Age 35-44	Mean	0.95	0.91	0.91	0.86	0.89
	Count	80	137	183	10	151
	Std Deviation	0.12	0.19	0.12	0.15	0.112
Age 45-54	Mean	0.92	0.88	0.85	0.96	0.79
	Count	57	79	141	23	187
	Std Deviation	0.16	0.21	0.25	0.09	0.000
Age 55-64	Mean	0.88	0.87	0.80	0.74	0.77
	Count	31	72	117	22	241
	Std Deviation	0.19	0.22	0.25	0.31	0.024
Age 65-74	Mean	0.96	0.79	0.84	0.85	0.74
	Count	18	47	108	17	298
	Std Deviation	0.09	0.28	0.21	0.17	0.000
Age 75+	Mean	0.90	0.77	0.75	0.93	0.71
	Count	8	24	51	6	225
	Std Deviation	0.14	0.23	0.27	0.13	0.066
Significance Level of F Test		0.019	0.000	0.000	0.023	0.000

**Figure 1.1.2**  
**Weighted Health State Index by Age and Marital Status**



**Figure 1.2.2**

**Weighted Health State Index by Age and Marital Status for Males**



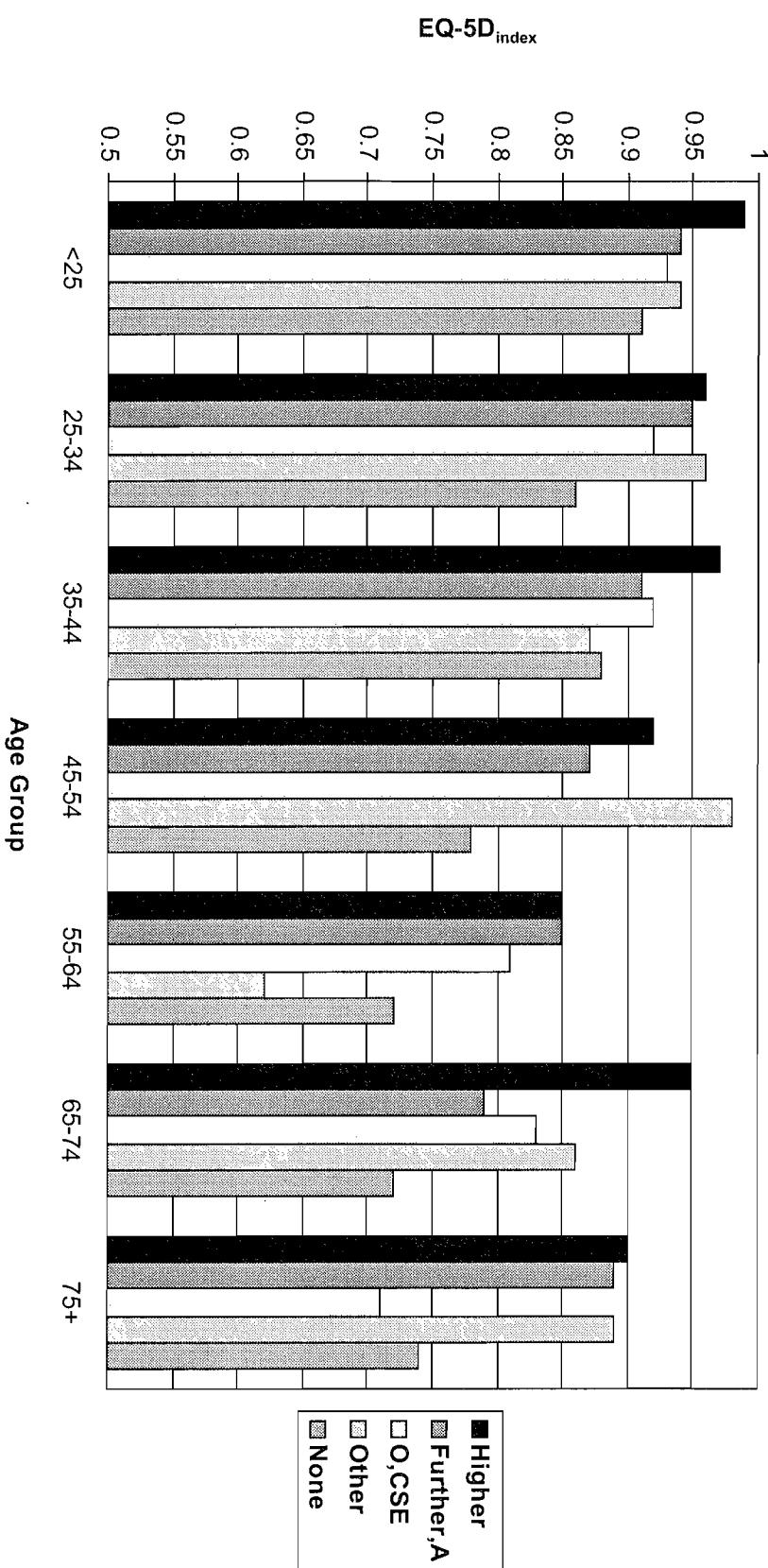
**Table 1.2.1**

**Weighted Health State Index by Age and Educational Qualifications for Males**

		Level of Education				Sig. Level of F Test		
		Higher	Further,A	O,CSE	Other	None		
All		Mean Count Std Deviation	0.94 182 0.12	0.91 343 0.19	0.87 453 0.21	0.84 51 0.25	0.78 436 0.30	0.000
Age	Under 25	Mean Count Std Deviation	0.99 11 0.05	0.94 55 0.14	0.93 51 0.11	0.94 2 0.08	0.91 9 0.11	0.659
Age	25-34	Mean Count Std Deviation	0.96 56 0.08	0.95 109 0.14	0.92 122 0.15	0.96 4 0.08	0.86 39 0.28	0.021
Age	35-44	Mean Count Std Deviation	0.97 44 0.08	0.91 74 0.19	0.92 68 0.12	0.87 4 0.15	0.88 66 0.22	0.118
Age	45-54	Mean Count Std Deviation	0.92 29 0.14	0.87 44 0.24	0.85 63 0.27	0.98 11 0.06	0.78 73 0.34	0.044
Age	55-64	Mean Count Std Deviation	0.85 22 0.22	0.85 32 0.21	0.81 59 0.25	0.62 12 0.38	0.72 70 0.32	0.040
Age	65-74	Mean Count Std Deviation	0.95 15 0.09	0.79 24 0.30	0.83 62 0.22	0.86 14 0.18	0.72 113 0.31	0.010
Age	75+	Mean Count Std Deviation	0.90 5 0.14	0.89 5 0.17	0.71 28 0.32	0.89 4 0.15	0.74 66 0.27	0.337
Significance Level of F Test			0.003	0.002	0.000	0.017	0.003	

**Figure 1.2.1**

**Weighted Health State Index by Age and Educational Qualifications for Males**

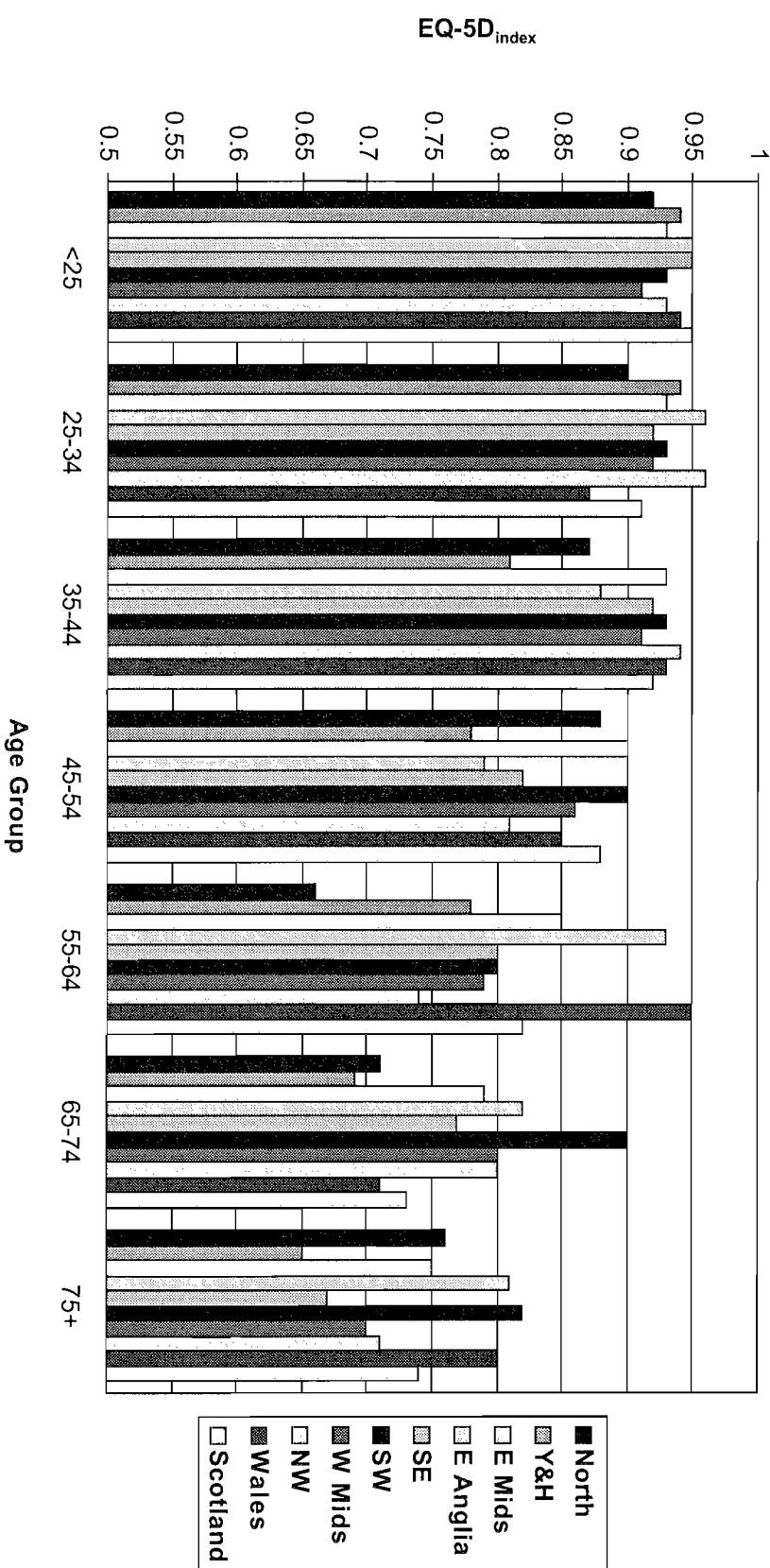


**Table 1.1.6**

**Weighted Health State Index by Age and Standard Region**

		Region								Sig. Level of F Test		
		North	Y&H	E Mids	E Anglia	SE	SW	W Mids	NW	Wales	Scotland	
All		Mean	0.81	0.81	0.89	0.88	0.85	0.89	0.85	0.86	0.86	0.000
		Count	209	266	359	135	840	368	313	424	121	360
		Std Deviation	0.26	0.27	0.19	0.18	0.23	0.18	0.23	0.24	0.23	0.23
Age	Under 25	Mean	0.92	0.94	0.93	0.95	0.95	0.93	0.91	0.93	0.94	0.95
		Count	15	29	32	17	82	24	30	26	12	37
		Std Deviation	0.19	0.10	0.13	0.10	0.09	0.15	0.15	0.16	0.11	0.09
Age	25-34	Mean	0.90	0.94	0.93	0.96	0.92	0.93	0.92	0.96	0.87	0.91
		Count	42	52	105	22	176	73	66	104	29	84
		Std Deviation	0.16	0.16	0.15	0.10	0.15	0.13	0.17	0.09	0.25	0.19
Age	35-44	Mean	0.87	0.81	0.93	0.88	0.92	0.93	0.91	0.94	0.93	0.92
		Count	34	44	65	30	141	62	52	59	22	52
		Std Deviation	0.20	0.27	0.12	0.21	0.12	0.15	0.17	0.10	0.15	0.14
Age	45-54	Mean	0.88	0.78	0.90	0.79	0.82	0.90	0.86	0.81	0.85	0.88
		Count	29	32	52	15	127	54	49	81	12	37
		Std Deviation	0.22	0.33	0.17	0.31	0.27	0.15	0.23	0.28	0.29	0.21
Age	55-64	Mean	0.66	0.78	0.85	0.93	0.80	0.80	0.79	0.74	0.95	0.82
		Count	32	48	35	20	125	56	36	61	12	59
		Std Deviation	0.36	0.29	0.19	0.12	0.26	0.27	0.23	0.30	0.12	0.21
Age	65-74	Mean	0.71	0.69	0.79	0.82	0.77	0.90	0.80	0.80	0.71	0.73
		Count	34	34	41	18	119	62	48	60	20	52
		Std Deviation	0.30	0.32	0.27	0.17	0.26	0.17	0.25	0.25	0.24	0.31
Age	75+	Mean	0.76	0.65	0.75	0.81	0.67	0.82	0.70	0.71	0.80	0.74
		Count	23	27	29	13	70	36	32	33	12	39
		Std Deviation	0.22	0.24	0.29	0.17	0.31	0.17	0.29	0.27	0.24	0.28
Significance Level of F Test			0.000	0.000	0.015	0.000	0.000	0.000	0.000	0.014	0.000	

**Figure 1.1.6**  
**Weighted Health State Index by Age and Standard Region**

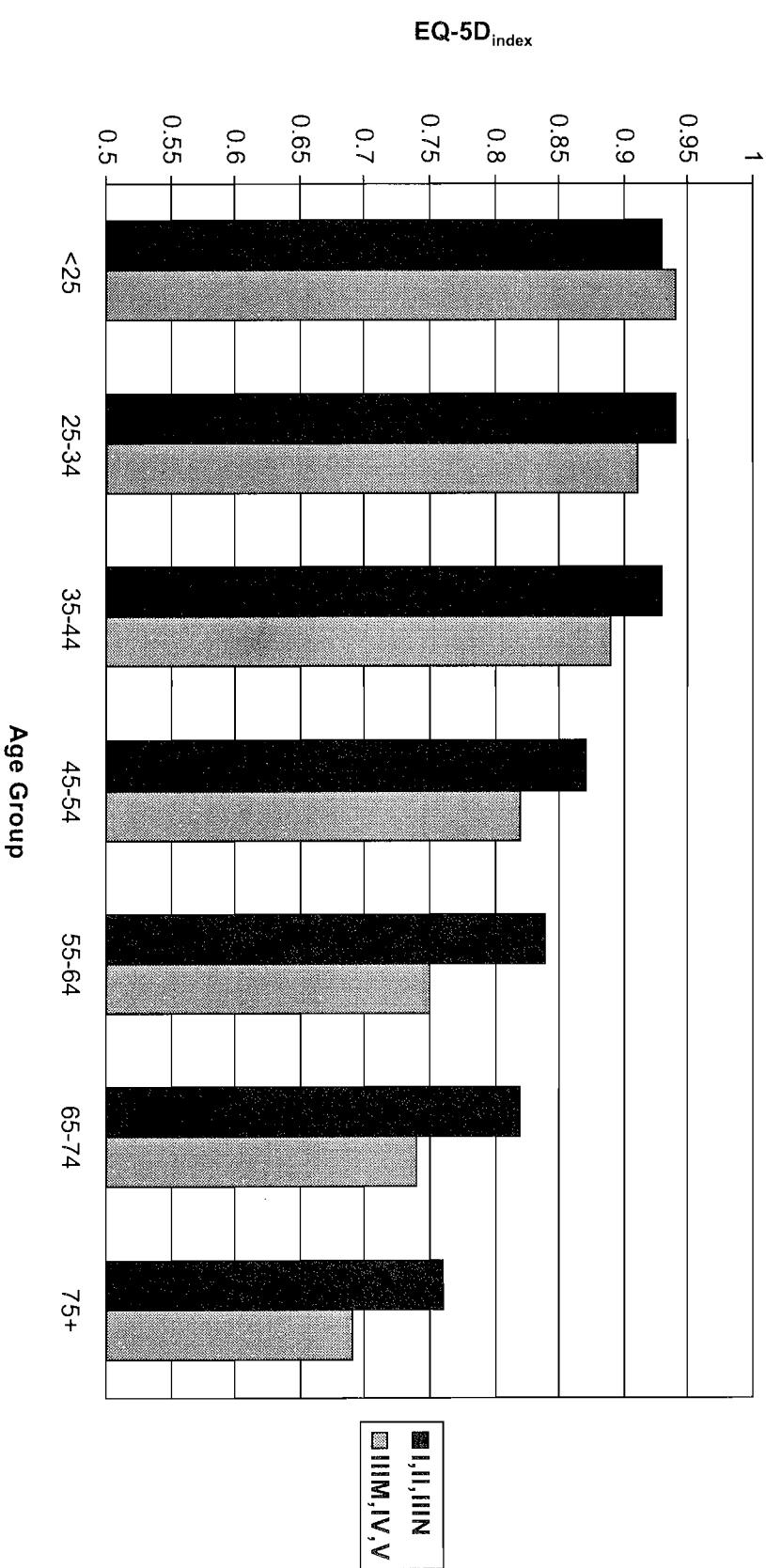


**Table 1.1.5**  
**Weighted Health State Index by Age and Social Class**

		Social Class		Sig. Level of F Test
		Non-manual	Manual	
All		Mean 0.88 Count 1780 Std Deviation 0.20	0.82 1505 0.26	0.000
Age Under 25		Mean 0.93 Count 131 Std Deviation 0.14	0.94 140 0.11	0.592
Age 25-34		Mean 0.94 Count 460 Std Deviation 0.13	0.91 272 0.17	0.004
Age 35-44		Mean 0.93 Count 318 Std Deviation 0.13	0.89 230 0.19	0.041
Age 45-54		Mean 0.87 Count 274 Std Deviation 0.13	0.82 211 0.26	0.046
Age 55-64		Mean 0.84 Count 245 Std Deviation 0.24	0.75 230 0.30	0.001
Age 65-74		Mean 0.82 Count 224 Std Deviation 0.23	0.74 249 0.29	0.001
Age 75+		Mean 0.76 Count 128 Std Deviation 0.26	0.69 173 0.28	0.048
Significance Level of F Test		0.000	0.000	

**Figure 1.1.5**

**Weighted Health State Index by Age and Social Class**

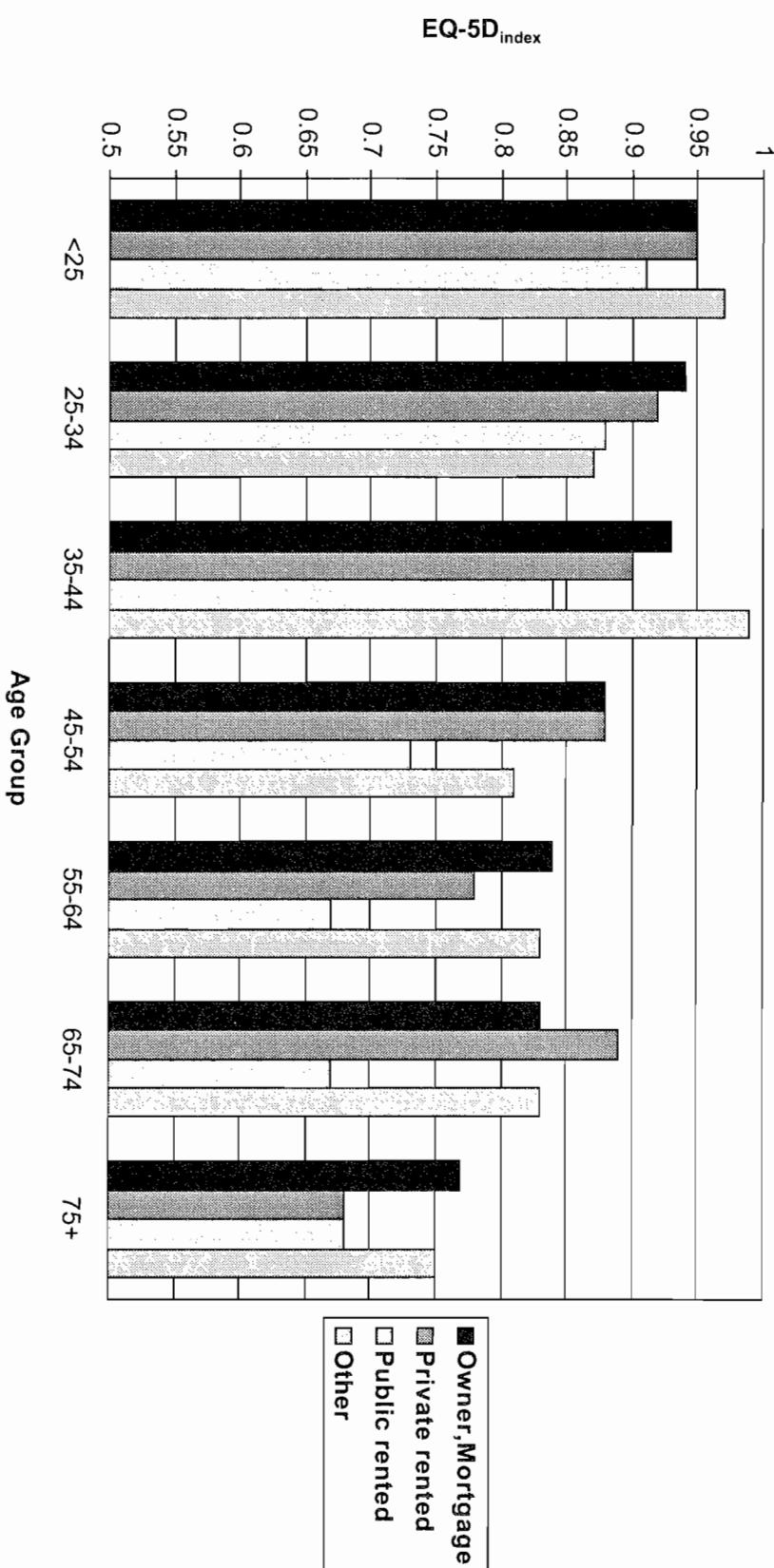


**Table 1.1.4****Weighted Health State Index by Age and Housing Tenure**

		Tenure			Sig. Level of F Test
		Owner/Mortgage	Private rented	Public rented	
All	Mean	0.89	0.88	0.76	0.88
	Count	2229	262	830	63
	Std Deviation	0.19	0.21	0.29	0.18
Age Under 25	Mean	0.95	0.95	0.91	0.97
	Count	151	59	82	10
	Std Deviation	0.11	0.12	0.14	0.06
Age 25-34	Mean	0.94	0.92	0.88	0.87
	Count	511	78	150	14
	Std Deviation	0.13	0.16	0.22	0.17
Age 35-44	Mean	0.93	0.90	0.84	0.99
	Count	417	36	96	12
	Std Deviation	0.14	0.19	0.23	0.04
Age 45-54	Mean	0.88	0.88	0.73	0.81
	Count	358	23	98	8
	Std Deviation	0.22	0.22	0.32	0.28
Age 55-64	Mean	0.84	0.78	0.67	0.83
	Count	332	27	116	7
	Std Deviation	0.23	0.29	0.31	0.27
Age 65-74	Mean	0.83	0.89	0.67	0.83
	Count	312	15	154	6
	Std Deviation	0.22	0.12	0.31	0.15
Age 75+	Mean	0.77	0.68	0.68	0.75
	Count	148	24	134	6
	Std Deviation	0.23	0.33	0.29	0.19
Significance Level of F Test		0.000	0.000	0.000	0.064

**Figure 1.1.4**

**Weighted Health State Index by Age and Housing Tenure**



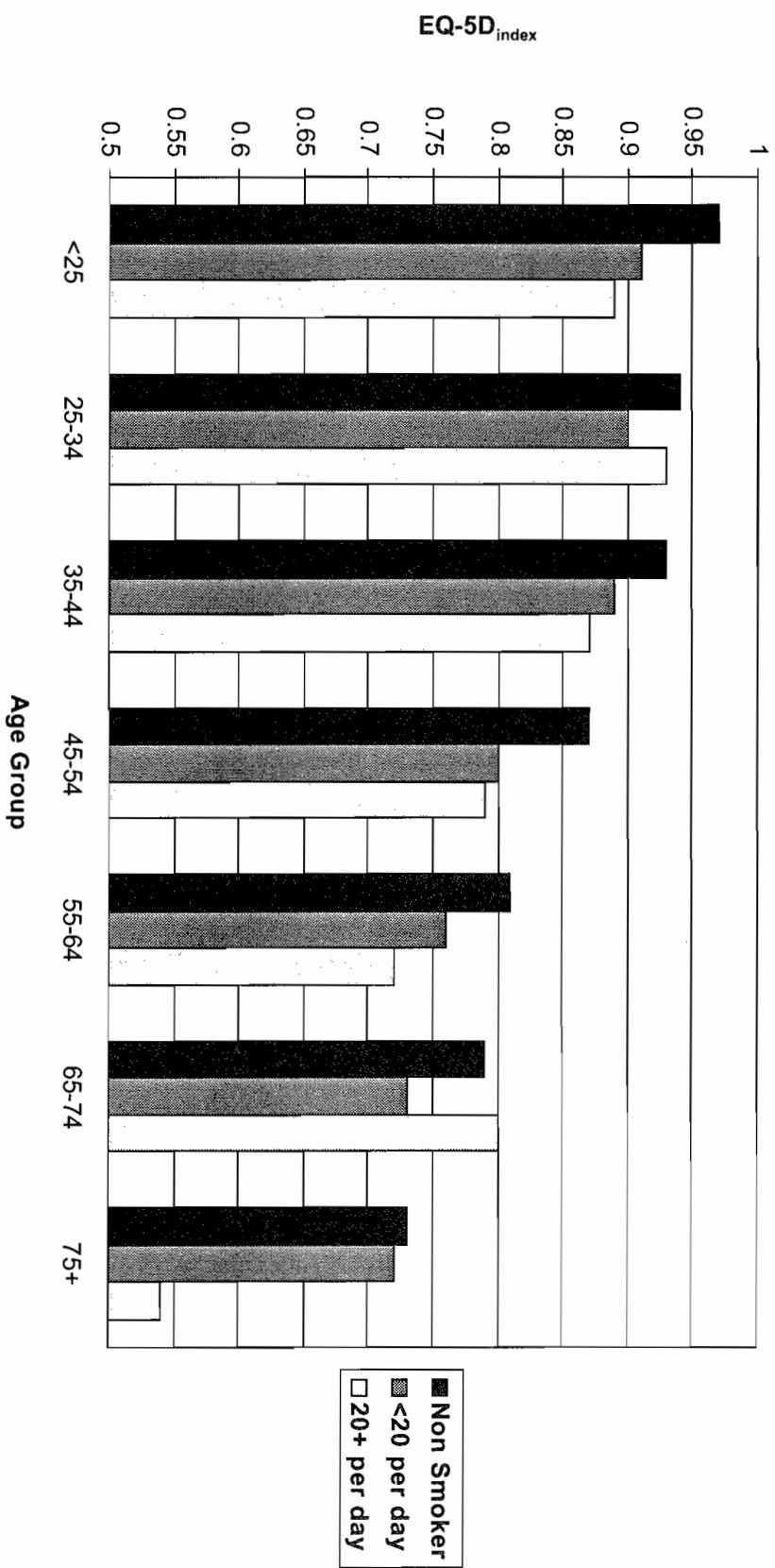
**Table 1.1.3**

**Weighted Health State Index by Age and Smoking Status**

		Smoker		Sig. Level of F Test
		Non smoker	<20 pd	20+ pd
All		0.86 2344 0.22	0.85 694 0.24	0.84 342 0.24
Age Under 25		0.97 166 0.08	0.91 105 0.15	0.89 33 0.16
Age 25-34		0.94 472 0.15	0.90 196 0.17	0.93 84 0.15
Age 35-44		0.93 367 0.14	0.89 116 0.18	0.87 76 0.21
Age 45-54		0.87 312 0.22	0.80 98 0.30	0.79 75 0.28
Age 55-64		0.81 364 0.24	0.76 73 0.30	0.72 43 0.29
Age 65-74		0.79 392 0.26	0.73 67 0.30	0.80 27 0.26
Age 75+		0.73 271 0.27	0.72 39 0.26	0.54 4 0.39
Significance Level of F Test		0.000	0.000	0.000

**Figure 1.1.3**

**Weighted Health State Index by Age and Smoking Status**



**Table 1.1.2**

**Weighted Health State Index by Age and Marital Status**

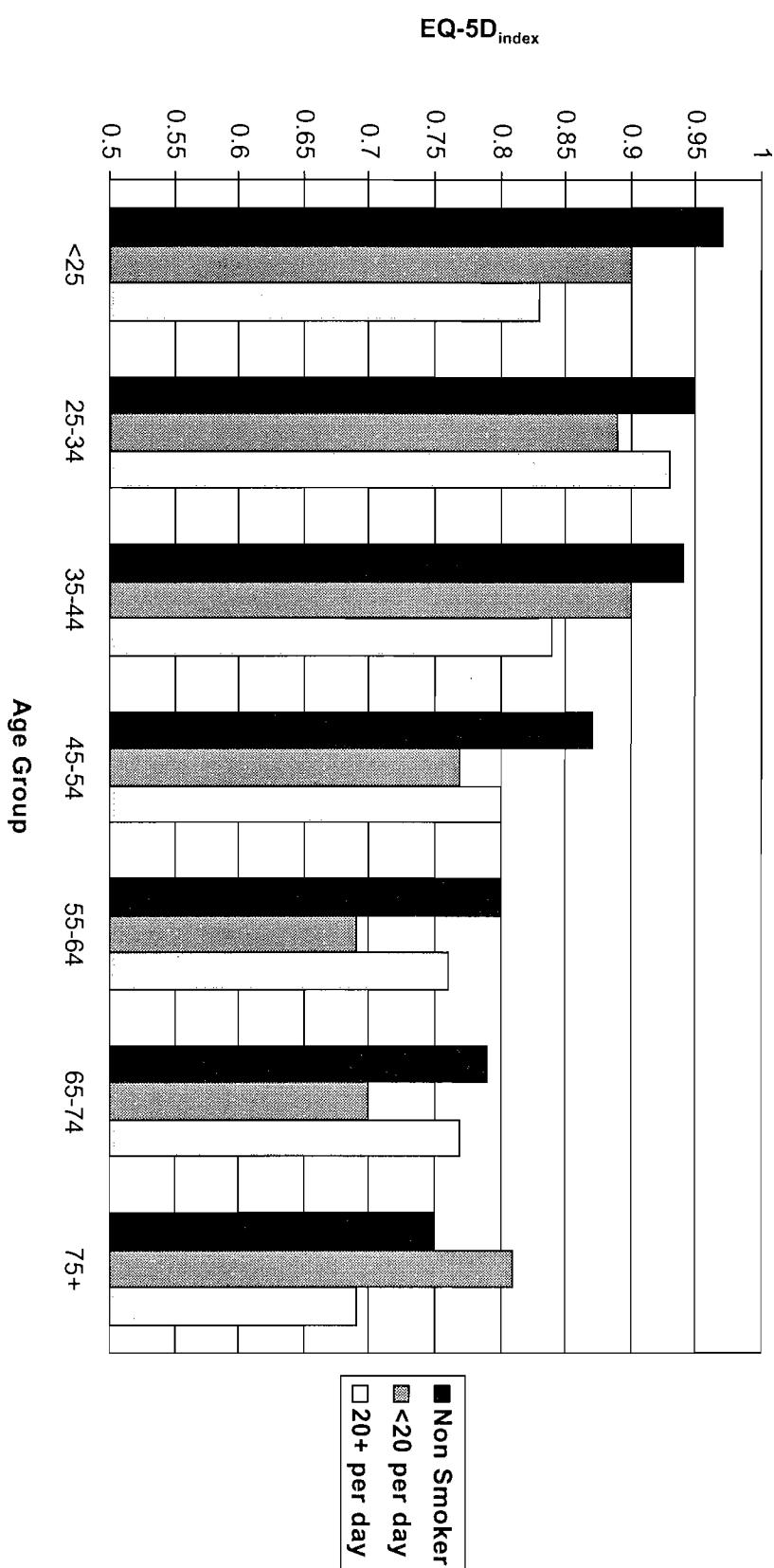
		Marital Status					Sig. Level of F Test
		Married	Cohabiting	Separated/Divorced	Widowed	Single	
All	Mean	0.87	0.91	0.83	0.74	0.90	0.000
	Count	1843	187	356	430	573	
	Std Deviation	0.22	0.16	0.24	0.26	0.18	
Age Under 25	Mean	0.94	0.94	0.85	·	0.94	
	Count	47	44	12	0	201	
	Std Deviation	0.10	0.12	0.28	·	0.11	
Age 25-34	Mean	0.93	0.94	0.93	0.85	0.92	
	Count	398	82	86	1	185	
	Std Deviation	0.16	0.13	0.12	·	0.16	
Age 35-44	Mean	0.92	0.89	0.89	0.83	0.87	
	Count	398	32	73	4	54	
	Std Deviation	0.14	0.15	0.18	0.12	0.25	
Age 45-54	Mean	0.86	0.87	0.80	0.84	0.84	
	Count	345	13	72	20	37	
	Std Deviation	0.25	0.19	0.28	0.15	0.26	
Age 55-64	Mean	0.80	0.83	0.70	0.85	0.85	
	Count	308	10	66	71	29	
	Std Deviation	0.27	0.29	0.31	0.19	0.18	
Age 65-74	Mean	0.80	0.61	0.77	0.74	0.82	
	Count	262	6	32	144	43	
	Std Deviation	0.27	0.26	0.23	0.26	0.25	
Age 75+	Mean	0.78	·	0.77	0.69	0.78	
	Count	85	0	15	190	24	
	Std Deviation	0.23	·	0.22	0.29	0.24	
Significance Level of F Test		0.000	0.000	0.000	0.000	0.000	

**Table 1.2.2**  
**Weighted Health State Index by Age and Marital Status for Males**

		Marital Status					Sig. Level of F Test
		Married	Cohabiting	Separated/Divorced	Widowed	Single	
All		0.86 Mean	0.87 Count	0.84 Std Deviation	0.74 111	0.89 100	0.000 0.19
Age Under 25		0.96 Mean	0.94 Count	0.65 2	0.29 0.50	0.94 0	0.006 0.11
Age 25-34		0.94 Mean	0.91 Count	0.93 26	0.92 0	0.92 98	0.530 0.17
Age 35-44		0.93 Mean	0.87 Count	0.94 17	0.86 2	0.84 37	0.042 0.19
Age 45-54		0.84 Mean	0.79 Count	0.90 29	0.79 5	0.85 22	0.830 0.27
Age 55-64		0.79 Mean	0.77 Count	0.63 22	0.93 9	0.81 14	0.035 0.20
Age 65-74		0.81 Mean	0.56 Count	0.73 9	0.70 0.35	0.76 0.16	0.071 0.20
Age 75+		0.77 Mean	0.79 Count	0.79 0.33	0.72 0.30	0.81 43	0.749 0.16
Significance Level of F Test		0.000	0.010	0.000			0.002

**Figure 1.2.3**

**Weighted Health State Index by Age and Smoking Status for Males**

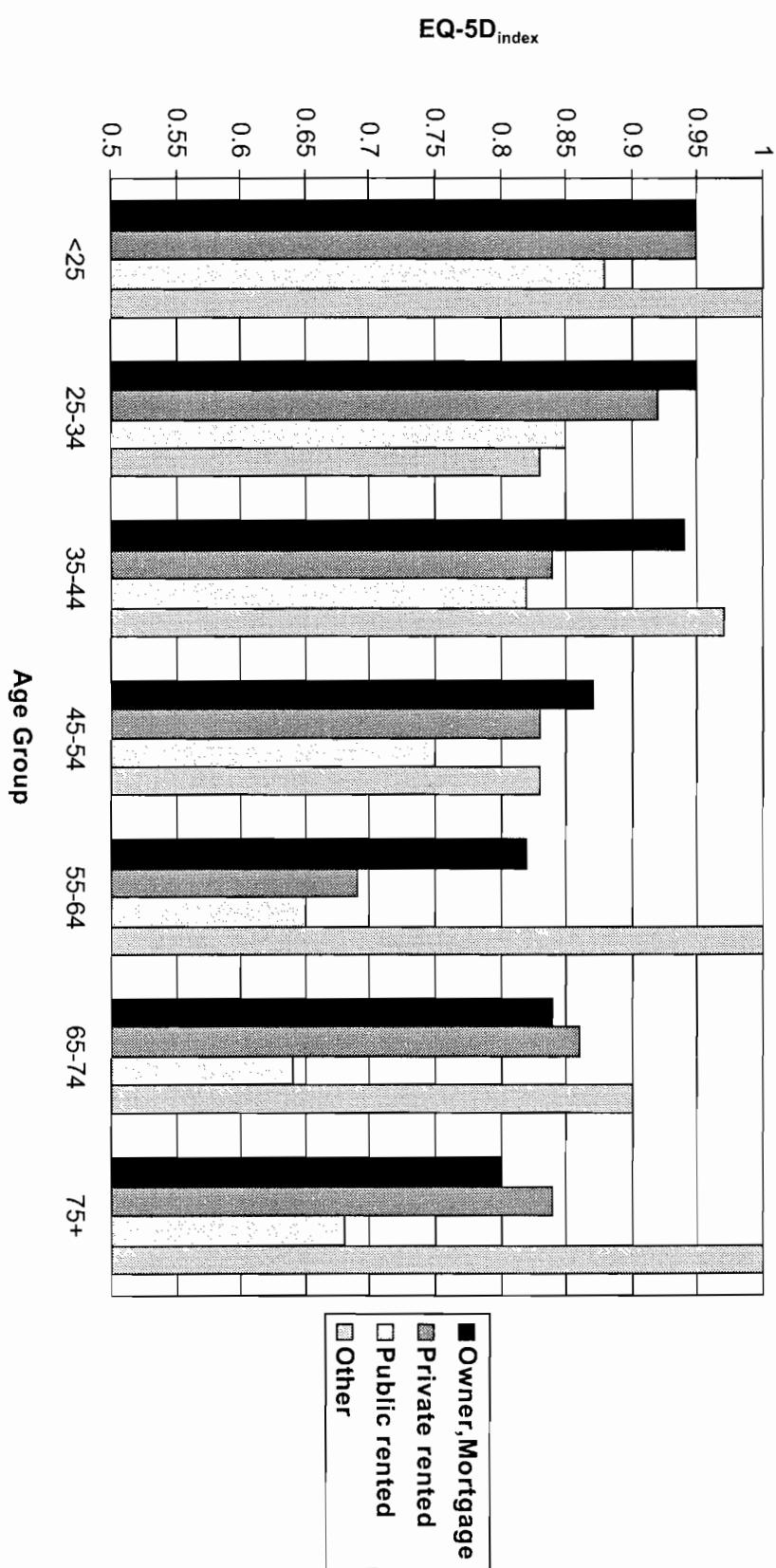


**Table 1.2.3****Weighted Health State Index by Age and Smoking Status for Males**

		Smoker		Sig. Level of F Test
		Non smoker	<20 pd	20+ pd
All		Mean 100.1	0.84 282	0.83 175
		Count 0.23	0.25	0.25
Age	Under 25	Mean 73	0.97 44	0.83 11
		Count 0.08	0.13	0.21
Age	25-34	Mean 205	0.95 84	0.93 41
		Count 0.13	0.21	0.15
Age	35-44	Mean 164	0.94 51	0.84 39
		Count 0.14	0.18	0.25
Age	45-54	Mean 142	0.87 36	0.80 41
		Count 0.23	0.37	0.31
Age	55-64	Mean 145	0.80 26	0.76 21
		Count 0.26	0.34	0.25
Age	65-74	Mean 181	0.79 27	0.77 19
		Count 0.27	0.31	0.29
Age	75+	Mean 91	0.75 14	0.69 3
		Count 0.29	0.14	0.32
Significance Level of F Test		0.000	0.000	0.081

**Figure 1.2.4**

**Weighted Health State Index by Age and Housing Tenure for Males**

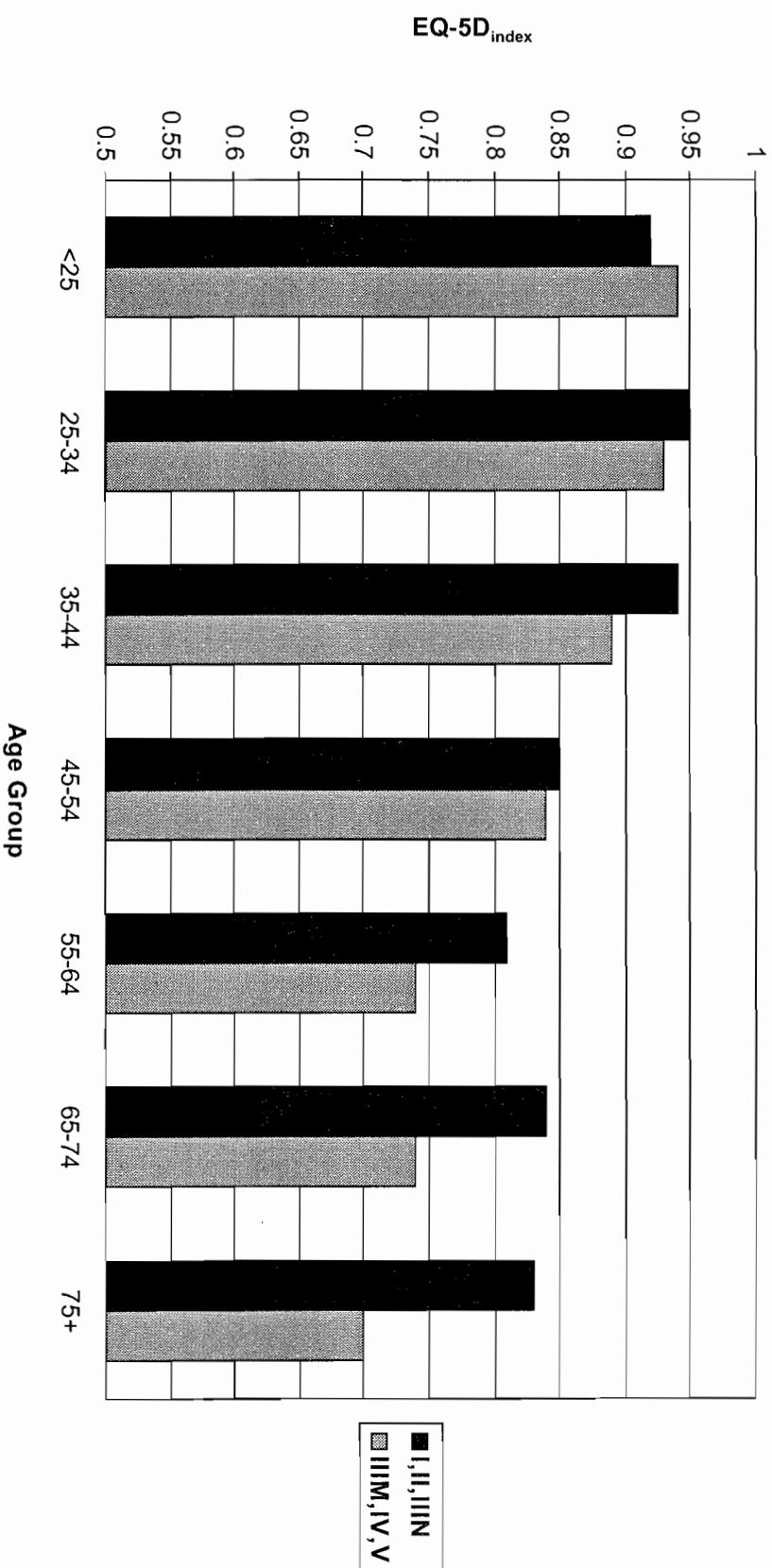


**Table 1.2.4****Weighted Health State Index by Age and Housing Tenure for Males**

		Tenure			Sig. Level of F Test	
				Owner/Mortgage		
		Mean	0.89	0.88	0.74	0.89
		Count	1007	124	305	28
		Std Deviation	0.20	0.21	0.31	0.20
Age Under 25		Mean	0.95	0.95	0.88	1.00
		Count	78	25	24	1
		Std Deviation	0.11	0.10	0.16	0.105
Age 25-34		Mean	0.95	0.92	0.88	0.83
		Count	224	45	52	9
		Std Deviation	0.13	0.14	0.24	0.20
Age 35-44		Mean	0.94	0.84	0.82	0.97
		Count	195	18	37	6
		Std Deviation	0.12	0.25	0.28	0.06
Age 45-54		Mean	0.87	0.83	0.75	0.83
		Count	161	9	44	6
		Std Deviation	0.24	0.33	0.34	0.101
Age 55-64		Mean	0.82	0.69	0.65	1.00
		Count	143	12	38	2
		Std Deviation	0.25	0.31	0.33	0.002
Age 65-74		Mean	0.84	0.86	0.64	0.90
		Count	155	5	64	3
		Std Deviation	0.23	0.16	0.34	0.000
Age 75+		Mean	0.80	0.84	0.68	1.00
		Count	51	10	46	1
		Std Deviation	0.19	0.30	0.33	0.051
Significance Level of F Test			0.000	0.000	0.017	0.759

**Figure 1.2.5**

**Weighted Health State Index by Age and Social Class for Males**

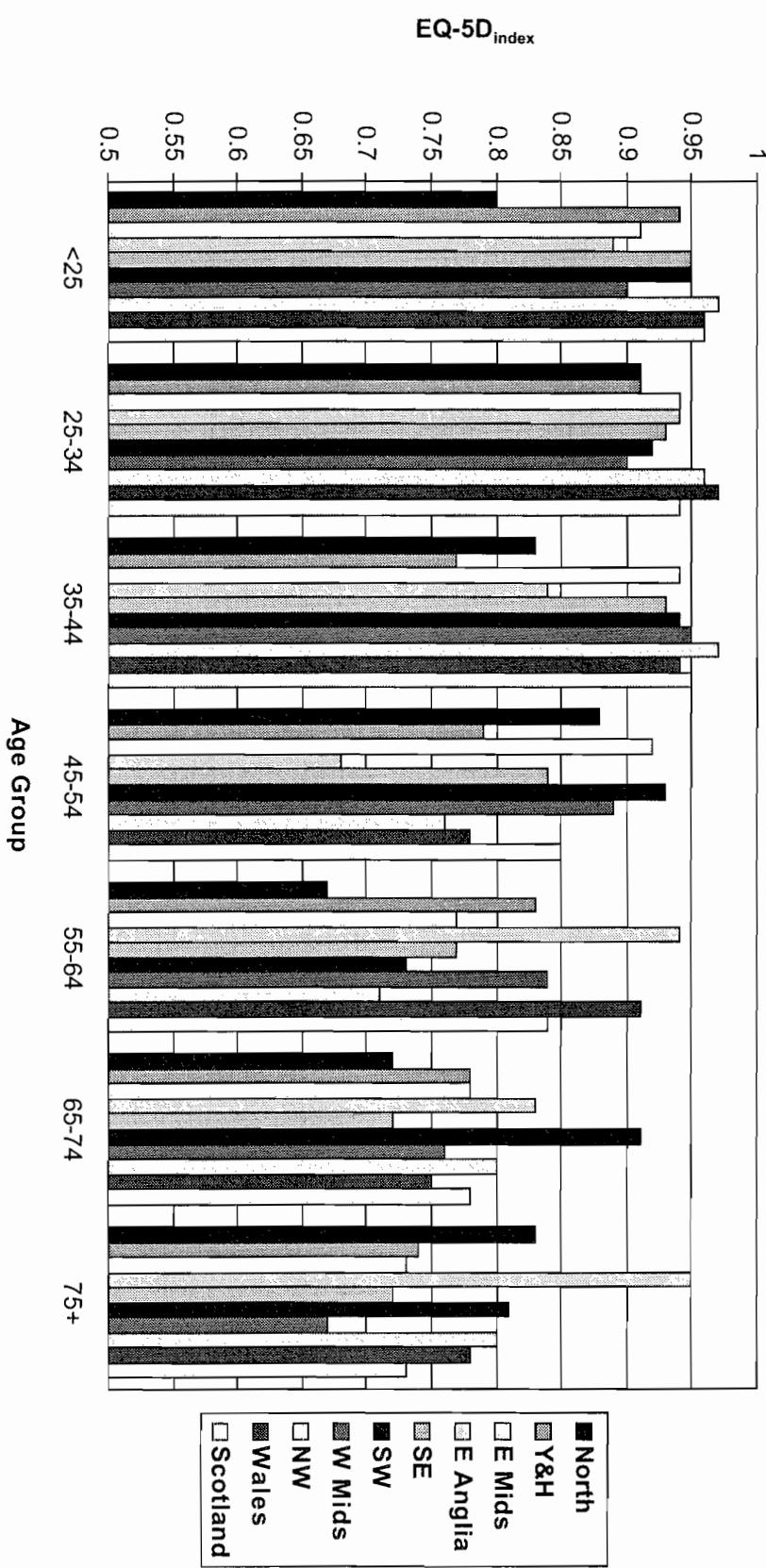


**Table 1.2.5****Weighted Health State Index by Age and Social Class for Males**

		Social Class		Sig. Level of F Test
		Non-manual	Manual	
All		0.89 667 0.20	0.83 762 0.26	0.000
Age Under 25		0.92 51 0.15	0.94 64 0.10	0.448
Age 25-34		0.95 173 0.12	0.93 147 0.18	0.196
Age 35-44		0.94 130 0.10	0.89 122 0.22	0.013
Age 45-54		0.85 98 0.29	0.84 121 0.27	0.699
Age 55-64		0.81 92 0.24	0.74 101 0.31	0.112
Age 65-74		0.84 85 0.22	0.74 140 0.30	0.007
Age 75+		0.83 38 0.22	0.70 67 0.29	0.023
Significance Level of F Test		0.000	0.000	

**Figure 1.2.6**

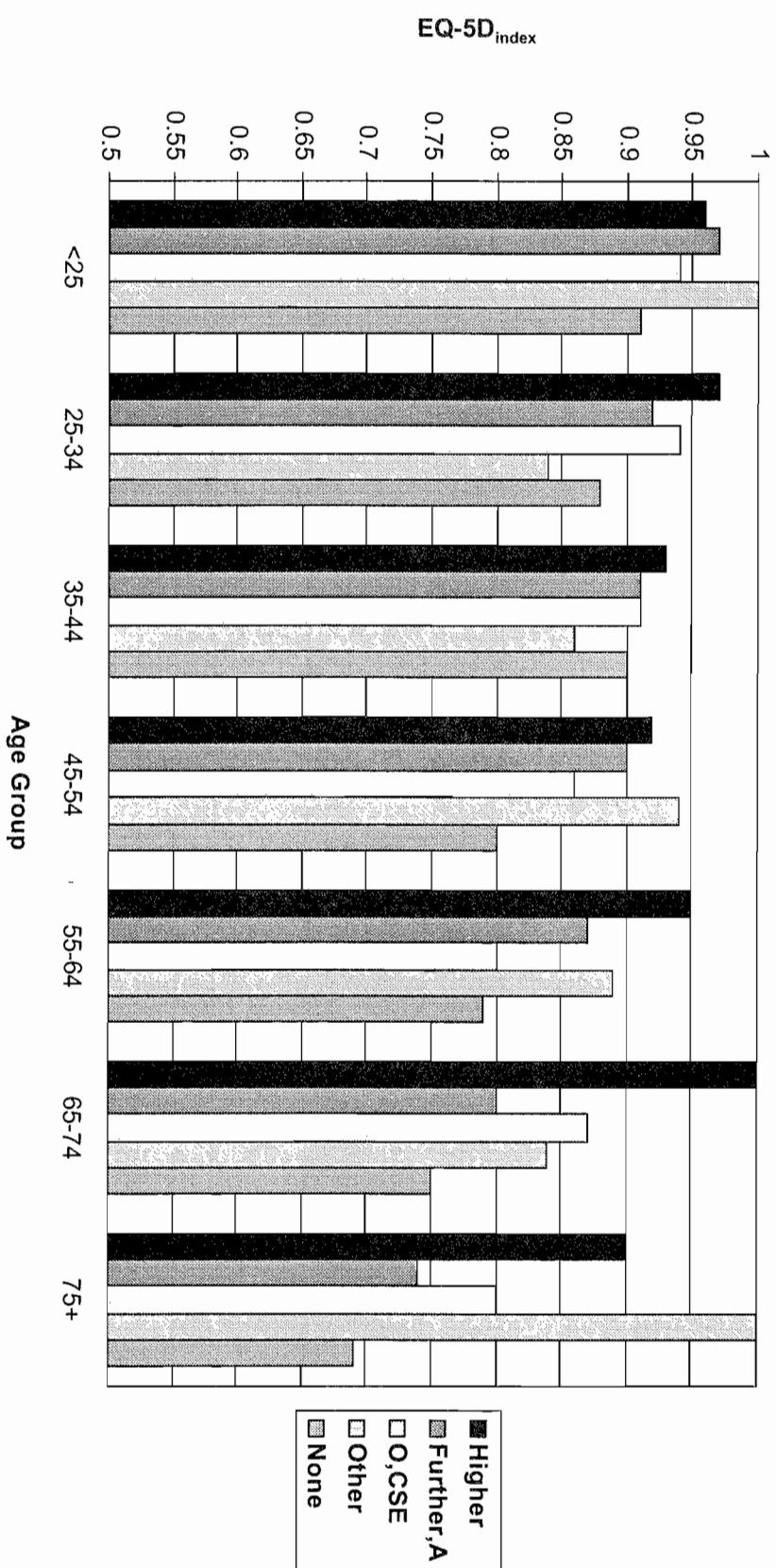
**Weighted Health State Index by Age and Standard Region for Males**



**Table 1.2.6**  
**Weighted Health State Index by Age and Standard Region for Males**

		Region								Sig. Level of F Test	
		North	Y&H	E Mids	E Anglia	SE	SW	W Mids	NW	Wales	Scotland
All	Mean	0.81	0.82	0.89	0.86	0.84	0.89	0.86	0.86	0.86	0.87
	Count	87	111	168	50	348	174	146	181	44	160
	Std Deviation	0.30	0.28	0.21	0.22	0.24	0.20	0.23	0.24	0.22	0.21
Age Under 25	Mean	0.80	0.94	0.91	0.89	0.95	0.95	0.90	0.97	0.96	0.96
	Count	5	7	14	6	30	13	12	16	5	20
	Std Deviation	0.31	0.10	0.16	0.12	0.09	0.08	0.15	0.08	0.09	0.08
Age 25-34	Mean	0.91	0.91	0.94	0.94	0.93	0.92	0.90	0.96	0.97	0.94
	Count	19	24	50	8	76	31	32	46	5	39
	Std Deviation	0.21	0.21	0.12	0.08	0.16	0.16	0.22	0.10	0.07	0.15
Age 35-44	Mean	0.83	0.77	0.94	0.84	0.93	0.94	0.95	0.97	0.94	0.95
	Count	19	21	35	16	56	30	24	29	8	18
	Std Deviation	0.25	0.33	0.12	0.26	0.10	0.11	0.09	0.07	0.12	0.08
Age 45-54	Mean	0.88	0.79	0.92	0.68	0.84	0.93	0.89	0.76	0.78	0.85
	Count	11	19	23	5	55	26	24	32	8	18
	Std Deviation	0.33	0.35	0.19	0.40	0.27	0.14	0.16	0.35	0.34	0.28
Age 55-64	Mean	0.67	0.83	0.77	0.94	0.77	0.73	0.84	0.71	0.91	0.84
	Count	14	18	10	5	51	27	17	23	4	27
	Std Deviation	0.36	0.23	0.28	0.14	0.29	0.36	0.19	0.30	0.17	0.18
Age 65-74	Mean	0.72	0.78	0.78	0.83	0.72	0.91	0.76	0.80	0.75	0.78
	Count	16	12	22	6	53	33	28	25	8	25
	Std Deviation	0.34	0.28	0.28	0.14	0.31	0.14	0.30	0.28	0.28	0.27
Age 75+	Mean	0.83	0.74	0.73	0.95	0.72	0.81	0.67	0.80	0.78	0.73
	Count	3	10	14	4	27	14	9	10	4	13
	Std Deviation	0.30	0.26	0.37	0.10	0.28	0.19	0.39	0.20	0.20	0.26
Significance Level of F Test		0.463	0.415	0.001	0.384	0.000	0.001	0.003	0.000	0.341	0.001

**Figure 1.3.1**  
**Weighted Health State Index by Age and Educational Qualifications for Females**

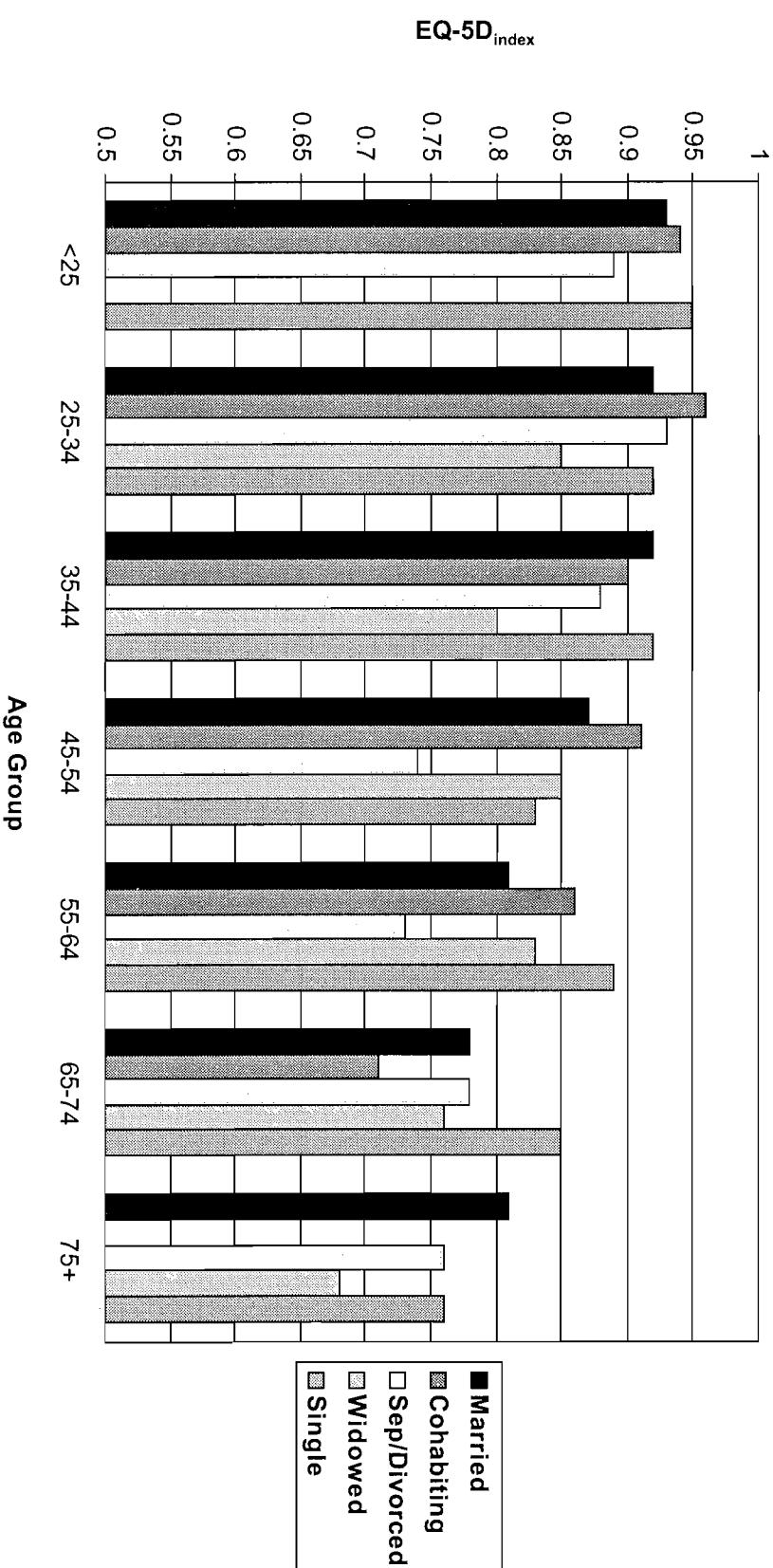


**Table 1.3.1****Weighted Health State Index by Age and Educational Qualifications for Females**

		Level of Education				Sig. Level of F Test
		Higher	Further,A	O,CSE	Other	None
All		0.94	0.90	0.90	0.90	0.78 815 0.000
	Mean	131	342	596	41	
	Count					
	Std Deviation	0.14	0.19	0.18	0.14	0.26
Age Under 25		0.96	0.97	0.94	1.00	0.91 30 0.372
	Mean	7	47	91	1	
	Count					
	Std Deviation	0.10	0.08	0.13		
Age 25-34		0.97	0.92	0.94	0.84	0.88 71 0.008
	Mean	45	115	185	7	
	Count					
	Std Deviation	0.09	0.16	0.13	0.21	0.19
Age 35-44		0.93	0.91	0.91	0.86	0.90 85 0.834
	Mean	36	63	115	6	
	Count					
	Std Deviation	0.16	0.19	0.13	0.16	0.16
Age 45-54		0.92	0.90	0.86	0.94	0.80 114 0.012
	Mean	28	35	78	12	
	Count					
	Std Deviation	0.19	0.15	0.24	0.10	0.25
Age 55-64		0.95	0.87	0.80	0.89	0.79 171 0.087
	Mean	9	40	58	10	
	Count					
	Std Deviation	0.09	0.22	0.25	0.10	0.27
Age 65-74		1.00	0.80	0.87	0.84	0.75 185 0.021
	Mean	3	23	46	3	
	Count					
	Std Deviation	0.00	0.27	0.19	0.14	0.26
Age 75+		0.90	0.74	0.80	1.00	0.69 159 0.144
	Mean	3	19	23	2	
	Count					
	Std Deviation	0.18	0.24	0.19	0.00	0.28
Significance Level of F Test		0.669	0.000	0.000	0.525	0.000

**Figure 1.3.2**

**Weighted Health State Index by Age and Marital Status for Females**



**Table 1.3.2****Weighted Health State Index by Age and Marital Status for Females**

		Marital Status					Sig. Level of F Test
		Married	Cohabiting	Separated/Divorced	Widowed	Single	
All		0.87 Mean	0.93 Count	0.83 Std Deviation	0.74 245	0.91 330	0.000
Age Under 25		0.93 Mean	0.94 Count	0.89 Std Deviation	0.89 10	0.95 0	0.539
Age 25-34		0.92 Mean	0.96 Count	0.93 Std Deviation	0.85 60	0.92 1	0.472
Age 35-44		0.92 Mean	0.90 Count	0.88 Std Deviation	0.80 56	0.92 2	0.565
Age 45-54		0.87 Mean	0.91 Count	0.74 Std Deviation	0.85 43	0.83 15	0.013
Age 55-64		0.81 Mean	0.86 Count	0.73 Std Deviation	0.83 44	0.89 62	0.165
Age 65-74		0.78 Mean	0.71 Count	0.78 Std Deviation	0.76 23	0.85 103	0.569
Age 75+		0.81 Mean	0.76 Count	0.76 Std Deviation	0.68 9	0.76 147	0.100
Significance Level of F Test		0.000	0.013	0.000		0.000	

**Figure 1.3.3**

**Weighted Health State Index by Age and Smoking Status for Females**

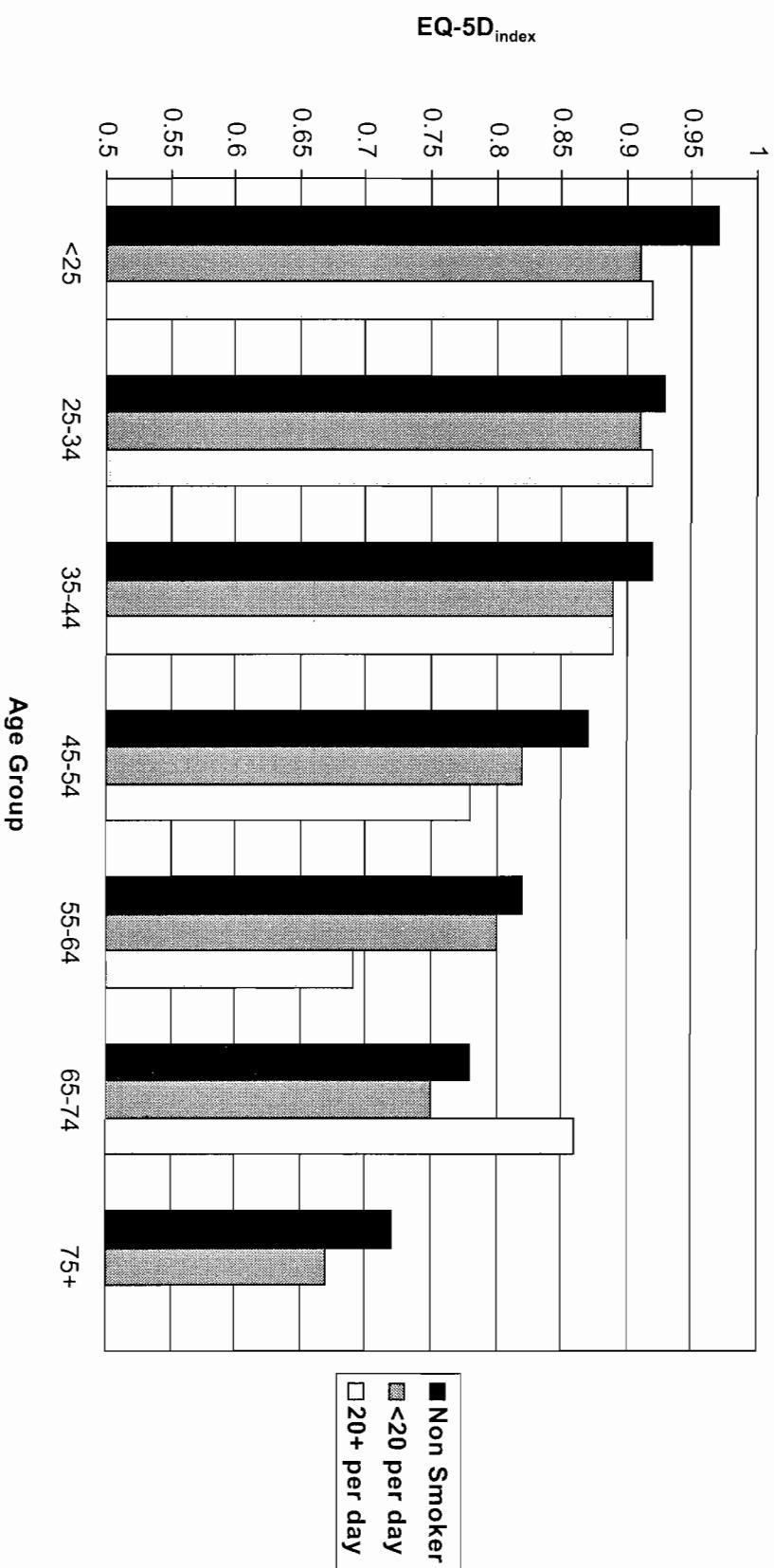


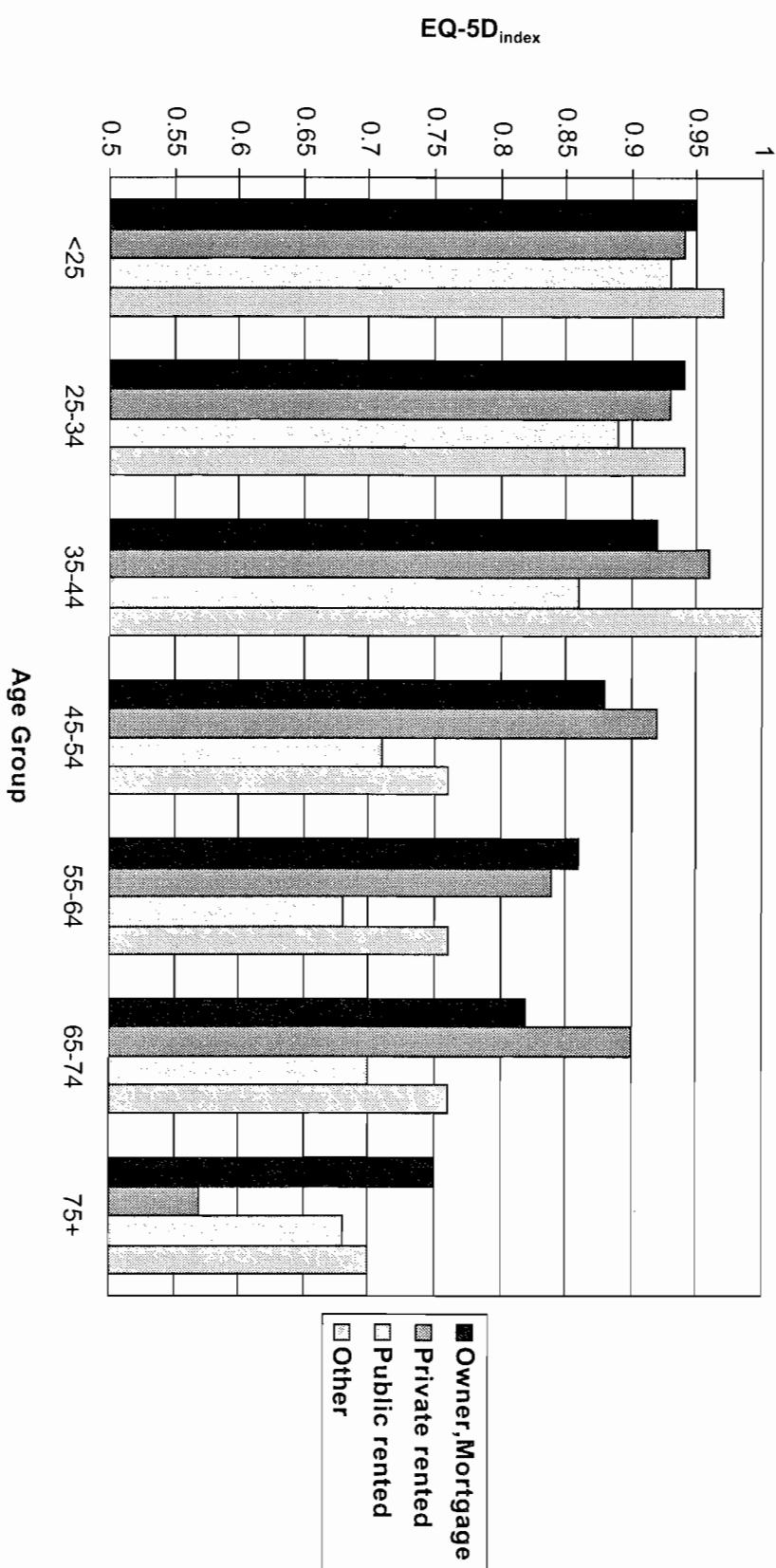
Table 1.3.3

## Weighted Health State Index by Age and Smoking Status for Females

	Non smoker	Smoker		Sig. Level of F Test
		<20 pd	20+ pd	
All				
	Mean	0.85	0.85	0.966
	Count	1343	412	
	Std Deviation	0.22	0.23	
Age Under 25				
	Mean	0.97	0.91	0.028
	Count	93	61	
	Std Deviation	0.08	0.16	
Age 25-34				
	Mean	0.93	0.91	0.563
	Count	267	112	
	Std Deviation	0.16	0.14	
Age 35-44				
	Mean	0.92	0.89	0.300
	Count	203	65	
	Std Deviation	0.14	0.18	
Age 45-54				
	Mean	0.87	0.82	0.080
	Count	170	62	
	Std Deviation	0.21	0.25	
Age 55-64				
	Mean	0.82	0.80	0.051
	Count	219	47	
	Std Deviation	0.24	0.28	
Age 65-74				
	Mean	0.78	0.75	0.478
	Count	211	40	
	Std Deviation	0.25	0.30	
Age 75+				
	Mean	0.72	0.67	0.047
	Count	180	25	
	Std Deviation	0.26	0.30	
Significance Level of F Test				
		0.000	0.000	0.000

**Figure 1.3.4**

**Weighted Health State Index by Age and Housing Tenure for Females**

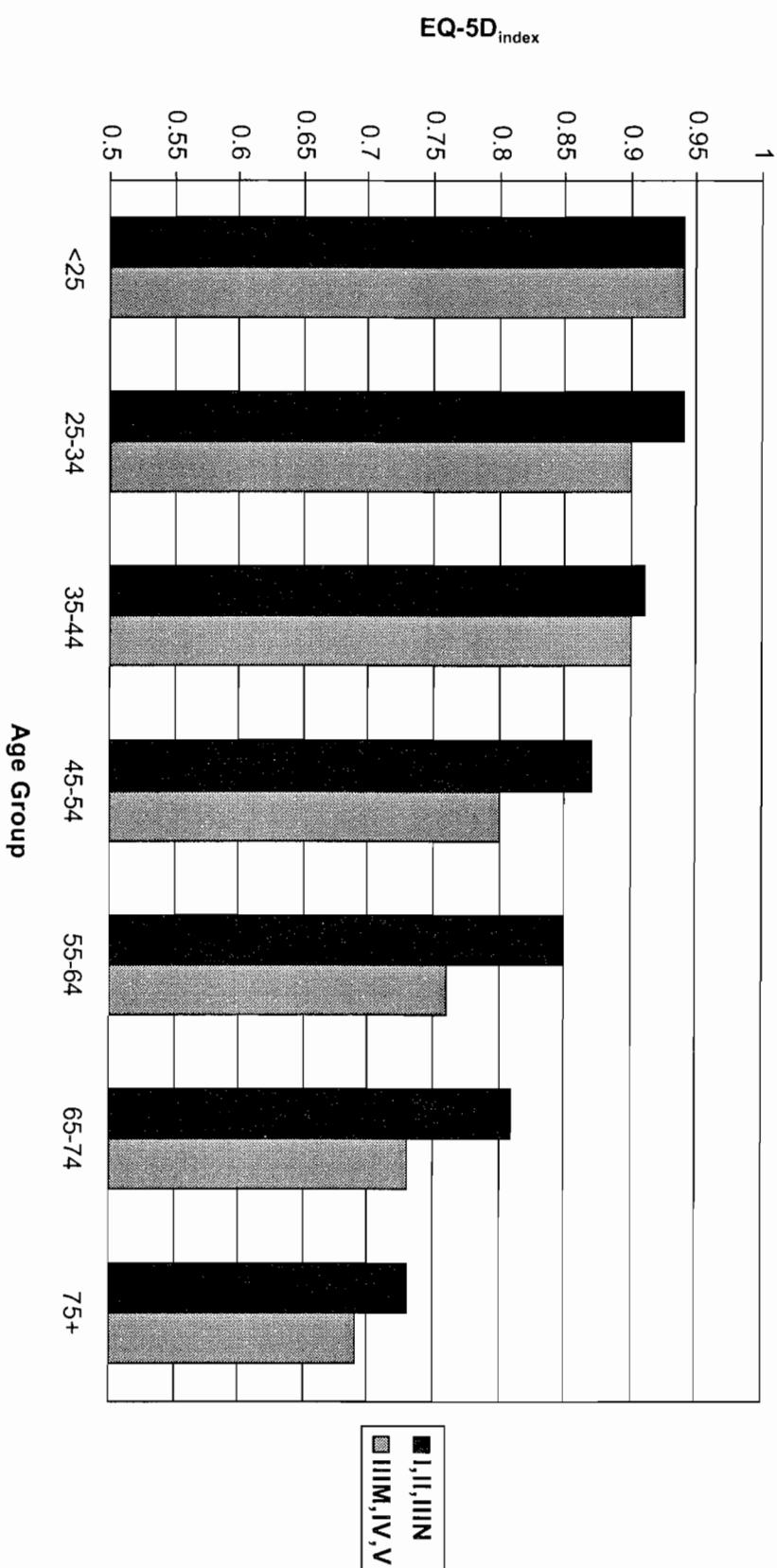


**Table 1.3.4****Weighted Health State Index by Age and Housing Tenure for Females**

		Tenure				Sig. Level of F Test
		Owner/Mortgage	Private rented	Public rented	Other	
All		0.88	0.89	0.77	0.87	0.000
	Mean					
	Count	1222	138	525	35	
	Std Deviation	0.19	0.21	0.27	0.17	
Age Under 25		0.95	0.94	0.93	0.97	0.746
	Mean					
	Count	73	34	58	9	
	Std Deviation	0.11	0.14	0.14	0.07	
Age 25-34		0.94	0.93	0.89	0.94	0.073
	Mean					
	Count	287	33	98	5	
	Std Deviation	0.12	0.18	0.20	0.08	
Age 35-44		0.92	0.96	0.86	1.00	0.056
	Mean					
	Count	222	18	59	6	
	Std Deviation	0.15	0.09	0.20	0.00	
Age 45-54		0.88	0.92	0.71	0.76	
	Mean					
	Count	197	14	54	2	
	Std Deviation	0.19	0.12	0.30	0.05	
Age 55-64		0.86	0.84	0.68	0.76	
	Mean					
	Count	189	15	78	5	
	Std Deviation	0.21	0.26	0.30	0.29	
Age 65-74		0.82	0.90	0.70	0.76	
	Mean					
	Count	157	10	90	3	
	Std Deviation	0.22	0.11	0.29	0.08	
Age 75+		0.75	0.57	0.68	0.70	0.084
	Mean					
	Count	97	14	88	5	
	Std Deviation	0.25	0.32	0.27	0.17	
Significance Level of F Test		0.000	0.000	0.000	0.004	

**Figure 1.3.5**

**Weighted Health State Index by Age and Social Class for Females**

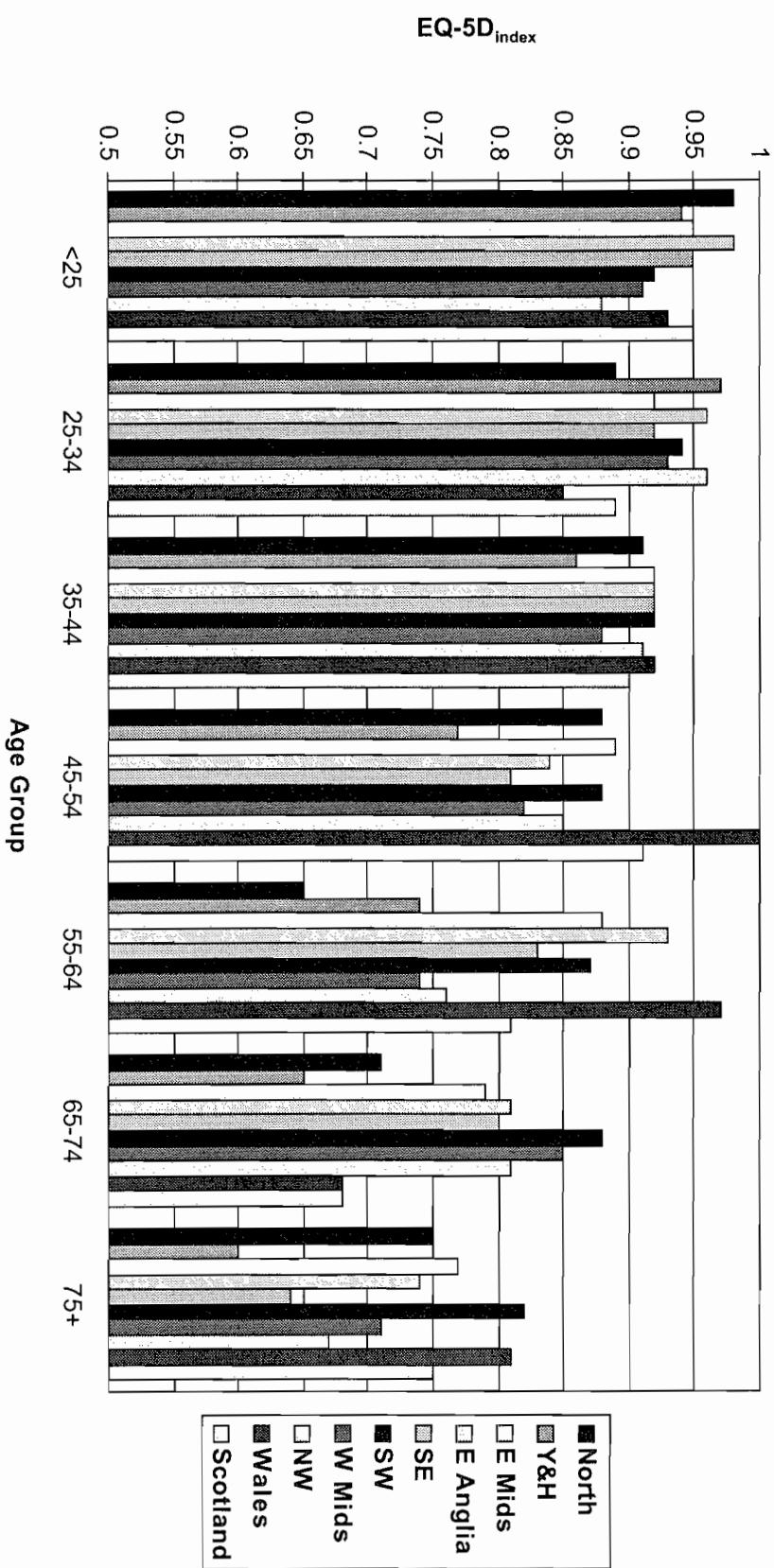


**Table 1.3.5****Weighted Health State Index by Age and Social Class for Females**

	Social Class		Sig. Level of F Test
	Non-manual	Manual	
All	0.88 Mean Count Std Deviation	0.81 743 0.25	0.000
Age Under 25	0.94 Mean Count Std Deviation	0.94 76 0.12	0.919
Age 25-34	0.94 Mean Count Std Deviation	0.90 125 0.17	0.003
Age 35-44	0.91 Mean Count Std Deviation	0.90 108 0.17	0.730
Age 45-54	0.87 Mean Count Std Deviation	0.80 90 0.26	0.009
Age 55-64	0.85 Mean Count Std Deviation	0.76 129 0.29	0.002
Age 65-74	0.81 Mean Count Std Deviation	0.73 109 0.27	0.021
Age 75+	0.73 Mean Count Std Deviation	0.69 106 0.27	0.327
Significance Level of F Test	0.000	0.000	

**Figure 1.3.6**

**Weighted Health State Index by Age and Standard Region for Females**



**Table 1.3.6**  
**Weighted Health State Index by Age and Standard Region for Females**

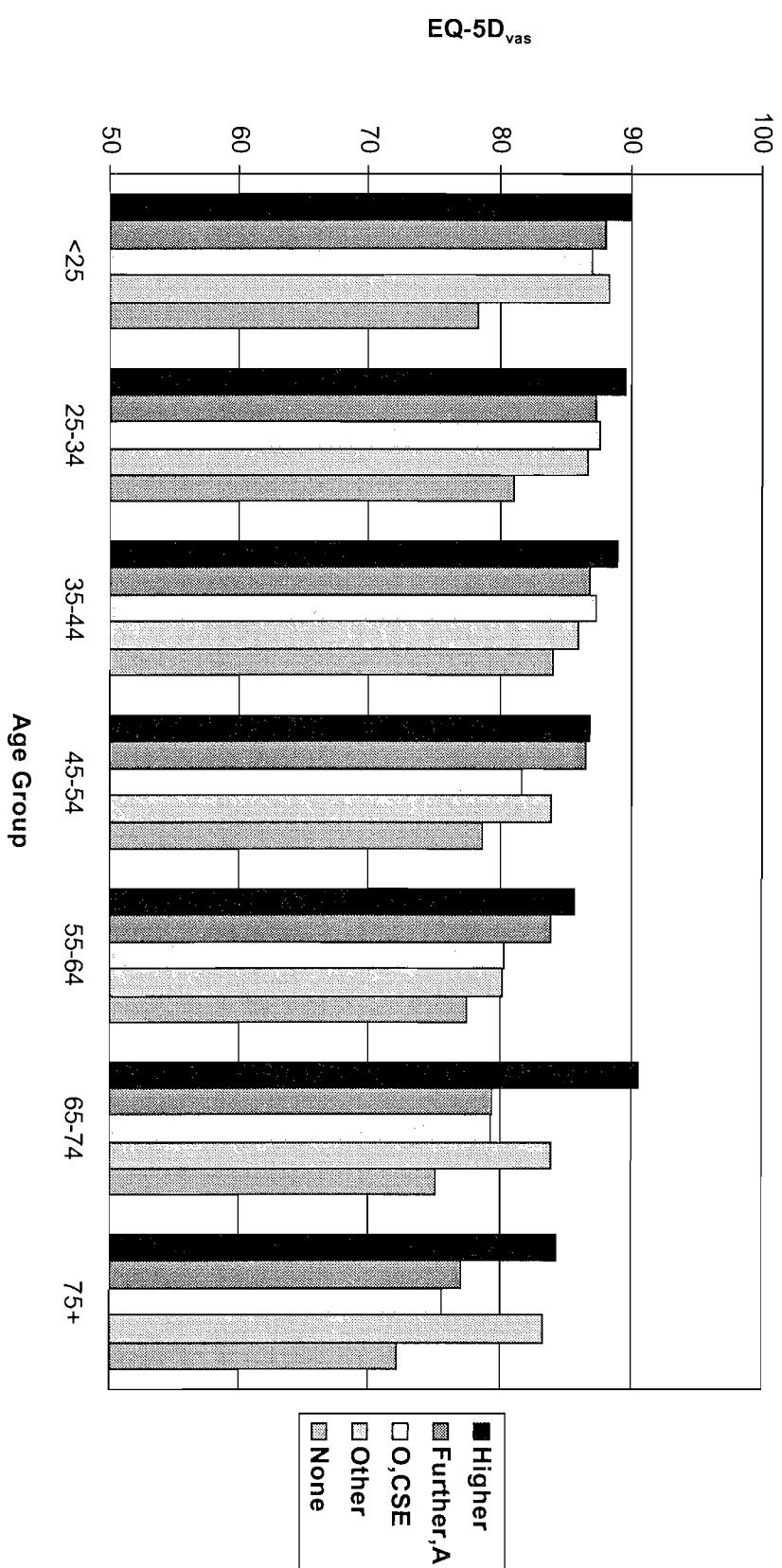
		Region								Sig. Level of F Test		
		North	Y&H	E Mids	E Anglia	SE	SW	W Mids	NW	Wales	Scotland	
All		0.81	0.80	0.89	0.89	0.85	0.89	0.84	0.85	0.86	0.84	0.001
	Mean	122	155	191	85	492	193	167	243	77	200	
	Count	0.24	0.27	0.18	0.16	0.22	0.16	0.22	0.23	0.23	0.24	
	Std Deviation											
Age Under 25		0.98	0.94	0.95	0.98	0.95	0.92	0.91	0.88	0.93	0.95	0.679
	Mean	10	22	18	11	52	11	18	10	7	17	
	Count	0.06	0.10	0.10	0.08	0.09	0.21	0.16	0.24	0.13	0.10	
	Std Deviation											
Age 25-34		0.89	0.97	0.92	0.96	0.92	0.94	0.93	0.96	0.85	0.89	0.043
	Mean	23	28	55	14	100	42	34	58	24	45	
	Count	0.12	0.08	0.17	0.11	0.15	0.10	0.11	0.07	0.28	0.21	
	Std Deviation											
Age 35-44		0.91	0.86	0.92	0.92	0.92	0.92	0.88	0.91	0.92	0.90	0.789
	Mean	15	23	30	14	85	32	28	30	14	34	
	Count	0.10	0.12	0.11	0.14	0.18	0.22	0.12	0.18	0.17		
	Std Deviation											
Age 45-54		0.88	0.77	0.89	0.84	0.81	0.88	0.82	0.85	1.00	0.91	0.439
	Mean	18	13	29	10	72	28	25	49	4	19	
	Count	0.14	0.32	0.16	0.26	0.27	0.17	0.28	0.22	0.00	0.11	
	Std Deviation											
Age 55-64		0.65	0.74	0.88	0.93	0.83	0.87	0.74	0.76	0.97	0.81	0.009
	Mean	18	30	25	15	74	29	19	38	8	32	
	Count	0.38	0.31	0.15	0.11	0.23	0.14	0.26	0.30	0.08	0.23	
	Std Deviation											
Age 65-74		0.71	0.65	0.79	0.81	0.80	0.88	0.85	0.81	0.68	0.68	0.013
	Mean	18	22	19	12	66	29	20	35	12	27	
	Count	0.28	0.34	0.27	0.19	0.21	0.20	0.17	0.23	0.23	0.33	
	Std Deviation											
Age 75+		0.75	0.60	0.77	0.74	0.64	0.82	0.71	0.67	0.81	0.75	0.186
	Mean	20	17	15	9	43	22	23	23	8	26	
	Count	0.22	0.23	0.21	0.15	0.34	0.15	0.26	0.29	0.27	0.30	
	Std Deviation											
Significance Level of F Test		0.000	0.000	0.005	0.003	0.000	0.056	0.002	0.000	0.042	0.000	

## **SECTION 2**

### **Self Rated Health Status EQ-5D<sub>vas</sub>**

**Whole Population  
Males  
Females**

**Figure 2.1.1**  
**Self Rated Health Status by Age and Educational Qualifications**

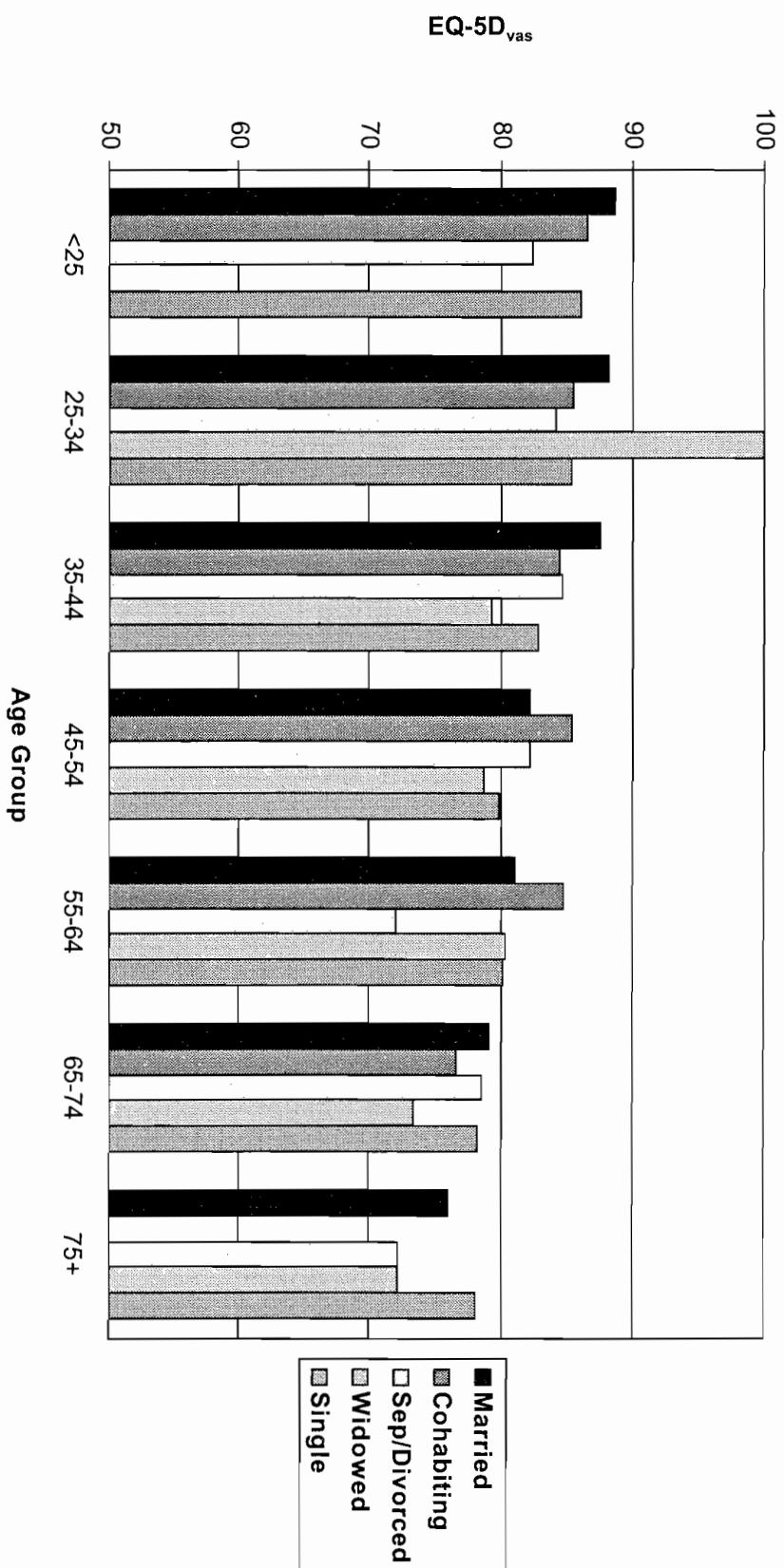


**Table 2.1.1**  
**Self Rated Health Status by Age and Educational Qualifications**

		Level of Education				Sig. Level of F Test
		Higher	Further,A	O,CSE	Other	
All		88.50	86.06	84.46	83.70	77.30
	Mean	311	682	1044	92	1248
	Count					18.99
	Std Deviation	12.55	14.28	15.70	14.66	0.000
Age Under 25		90.00	88.06	87.09	88.33	78.44
	Mean	18	102	141	3	39
	Count					2.89
	Std Deviation	13.41	11.48	13.64		16.53
Age 25-34		89.54	87.40	87.62	86.73	81.05
	Mean	101	224	307	11	110
	Count					0.000
	Std Deviation	11.44	14.02	13.99	8.40	17.64
Age 35-44		89.01	86.90	87.37	86.00	84.01
	Mean	80	136	182	10	151
	Count					0.076
	Std Deviation	13.05	12.73	12.43	21.08	15.75
Age 45-54		86.86	86.63	81.65	83.91	78.65
	Mean	56	79	141	23	187
	Count					0.003
	Std Deviation	13.88	13.43	19.57	13.96	19.71
Age 55-64		85.67	83.96	80.31	80.18	77.48
	Mean	30	72	116	22	239
	Count					0.028
	Std Deviation	12.72	15.93	17.84	18.76	19.29
Age 65-74		90.56	79.43	79.26	83.94	75.12
	Mean	18	46	107	17	298
	Count					0.001
	Std Deviation	11.70	17.61	14.93	11.68	19.25
Age 75+		84.38	77.13	75.62	83.33	72.22
	Mean	8	23	50	6	223
	Count					0.138
	Std Deviation	10.84	19.89	16.77	9.83	19.10
Significance Level of F Test		0.556	0.000	0.000	0.898	0.000

**Figure 2.1.2**

**Self Rated Health Status by Age and Marital Status**

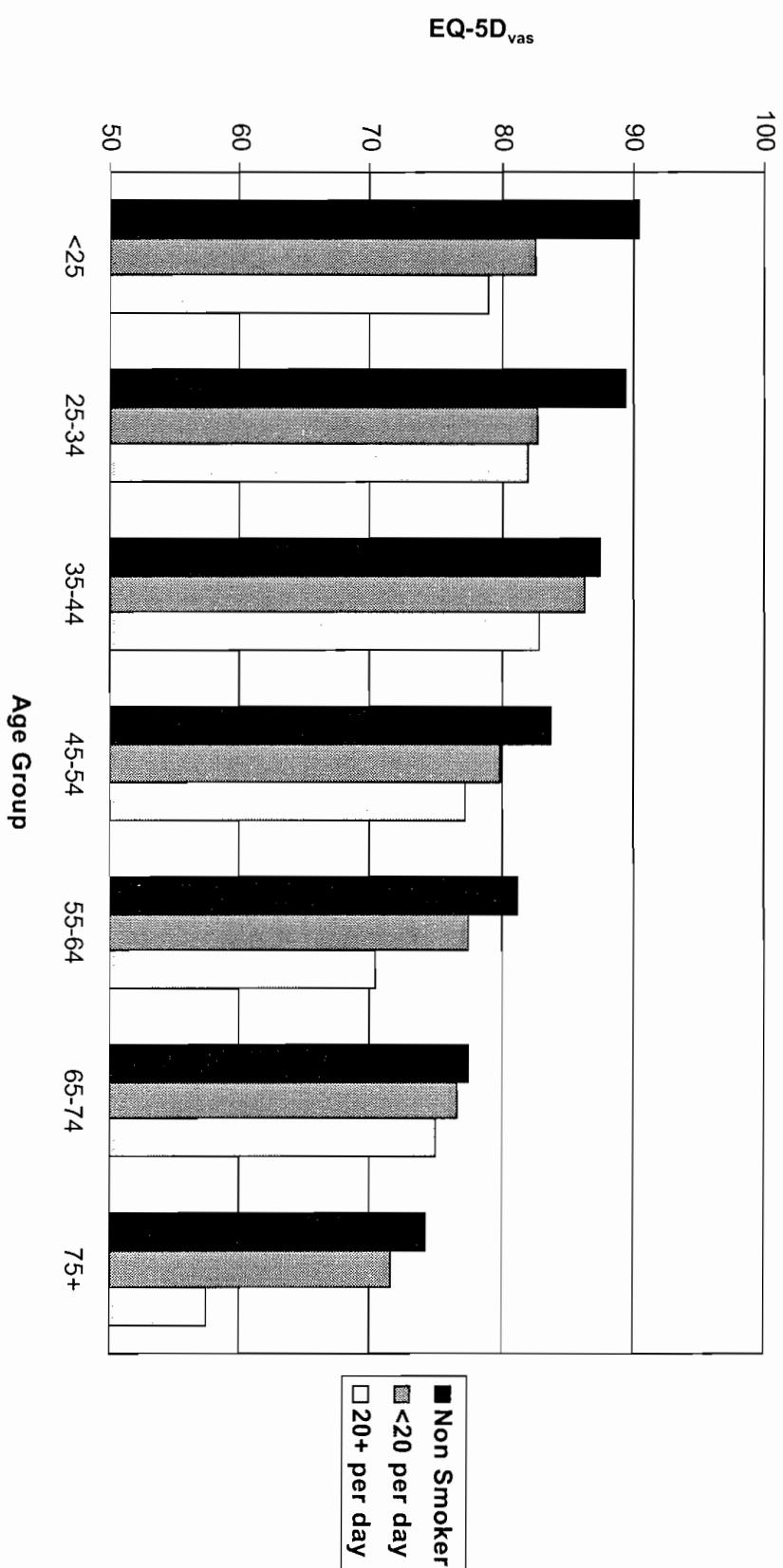


MVH National Survey Data 1993  
Centre for Health Economics  
University of York

**Table 2.1.2**  
**Self Rated Health Status by Age and Marital Status**

		Marital Status				Sig. Level of F Test
		Married	Cohabiting	Separated/Divorced	Widowed	
All		83.96	85.29	80.63	74.36	83.97
	Mean	1837	185	354	427	572
	Count	16.11	15.22	17.83	19.07	16.15
	Std Deviation					
Age Under 25		88.68	86.63	82.42	.	86.18
	Mean	47	43	12	0	201
	Count	11.97	14.94	12.84		13.72
	Std Deviation					
Age 25-34		88.26	85.57	84.30	100.00	85.39
	Mean	398	82	86	1	185
	Count	398	82	86		0.042
	Std Deviation	13.41	15.46	15.62	.	15.18
Age 35-44		87.64	84.47	84.68	79.25	82.83
	Mean	398	32	72	4	53
	Count	398	32	72		19.67
	Std Deviation	12.10	16.21	15.23	21.88	
Age 45-54		82.25	85.46	82.29	78.65	79.84
	Mean	344	13	72	20	37
	Count	344	13	72		0.781
	Std Deviation	18.59	13.92	16.42	15.71	20.28
Age 55-64		81.04	84.78	72.06	80.42	80.17
	Mean	305	9	66	71	29
	Count	305	9	66		0.008
	Std Deviation	17.42	15.06	22.06	17.68	15.82
Age 65-74		79.18	76.67	78.58	73.29	78.30
	Mean	262	6	31	143	43
	Count	16.45	14.38	18.29	20.19	18.63
	Std Deviation					
Age 75+		75.99	.	72.13	72.19	78.17
	Mean	83	0	15	188	24
	Count	19.27	.	16.61	18.46	18.45
	Std Deviation					0.037
Significance Level of F Test		0.000	0.797	0.000		0.006

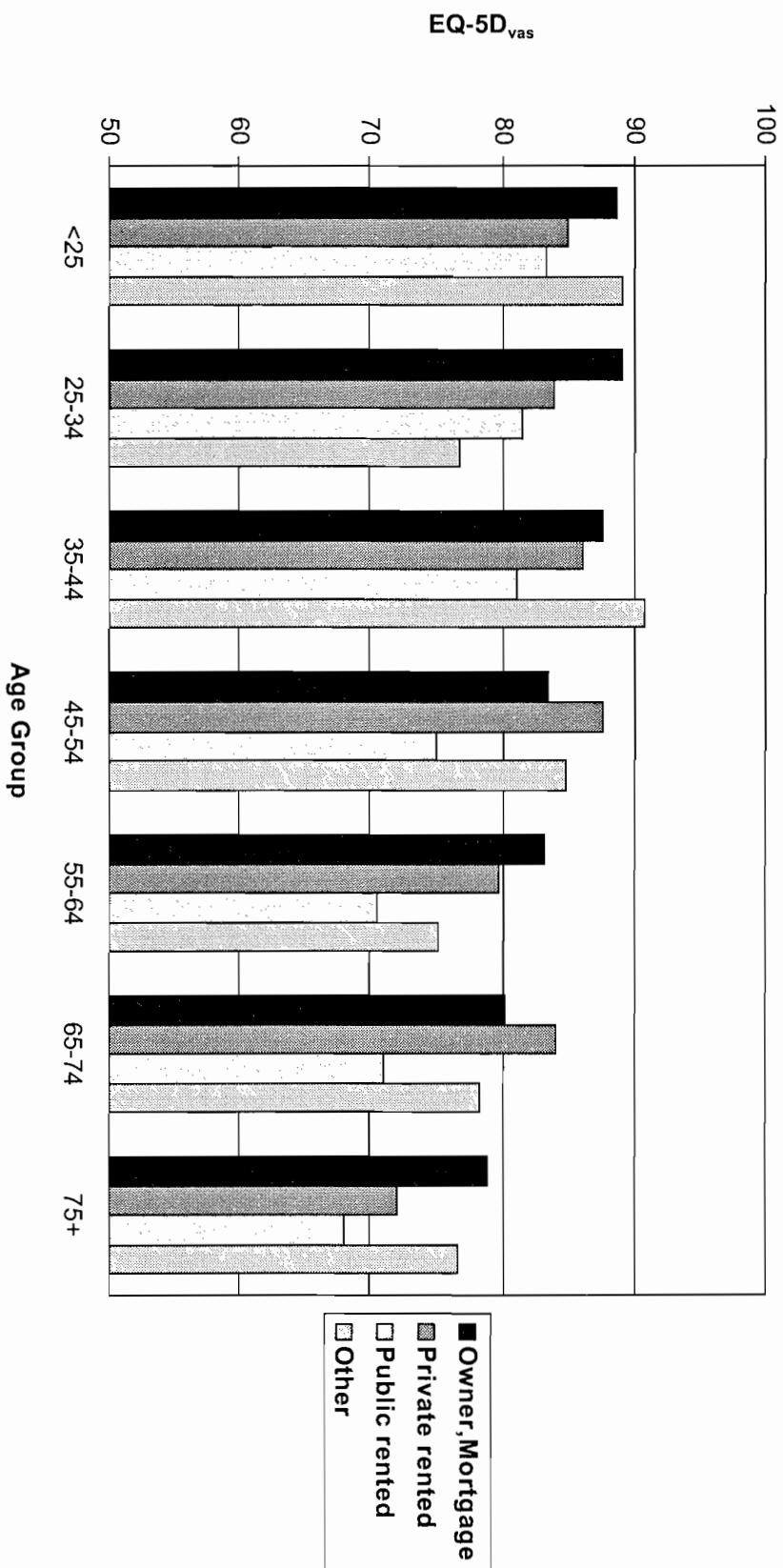
**Figure 2.1.3**  
**Self Rated Health Status by Age and Smoking Status**



**Table 2.1.3**  
**Self Rated Health Status by Age and Smoking Status**

	Smoker			Sig. Level of F Test
	Non smoker	<20 pd	20+ pd	
All				
	Mean	83.43	81.14	78.58
	Count	2332	694	341
	Std Deviation	16.57	16.61	19.59
Age Under 25				
	Mean	90.43	82.62	79.06
	Count	165	105	33
	Std Deviation	11.12	15.02	13.88
Age 25-34				
	Mean	89.39	82.74	82.05
	Count	472	196	84
	Std Deviation	12.42	16.22	16.97
Age 35-44				
	Mean	87.44	86.32	82.89
	Count	366	116	75
	Std Deviation	13.02	14.62	15.57
Age 45-54				
	Mean	83.76	79.86	77.28
	Count	311	98	75
	Std Deviation	16.82	18.38	22.08
Age 55-64				
	Mean	81.25	77.47	70.40
	Count	361	73	43
	Std Deviation	16.94	17.36	0.001
Age 65-74				
	Mean	77.53	76.66	75.04
	Count	390	67	27
	Std Deviation	18.38	16.54	0.753
Age 75+				
	Mean	74.22	71.51	57.50
	Count	267	39	4
	Std Deviation	18.79	15.68	29.86
Significance Level of F Test		0.000	0.000	0.003

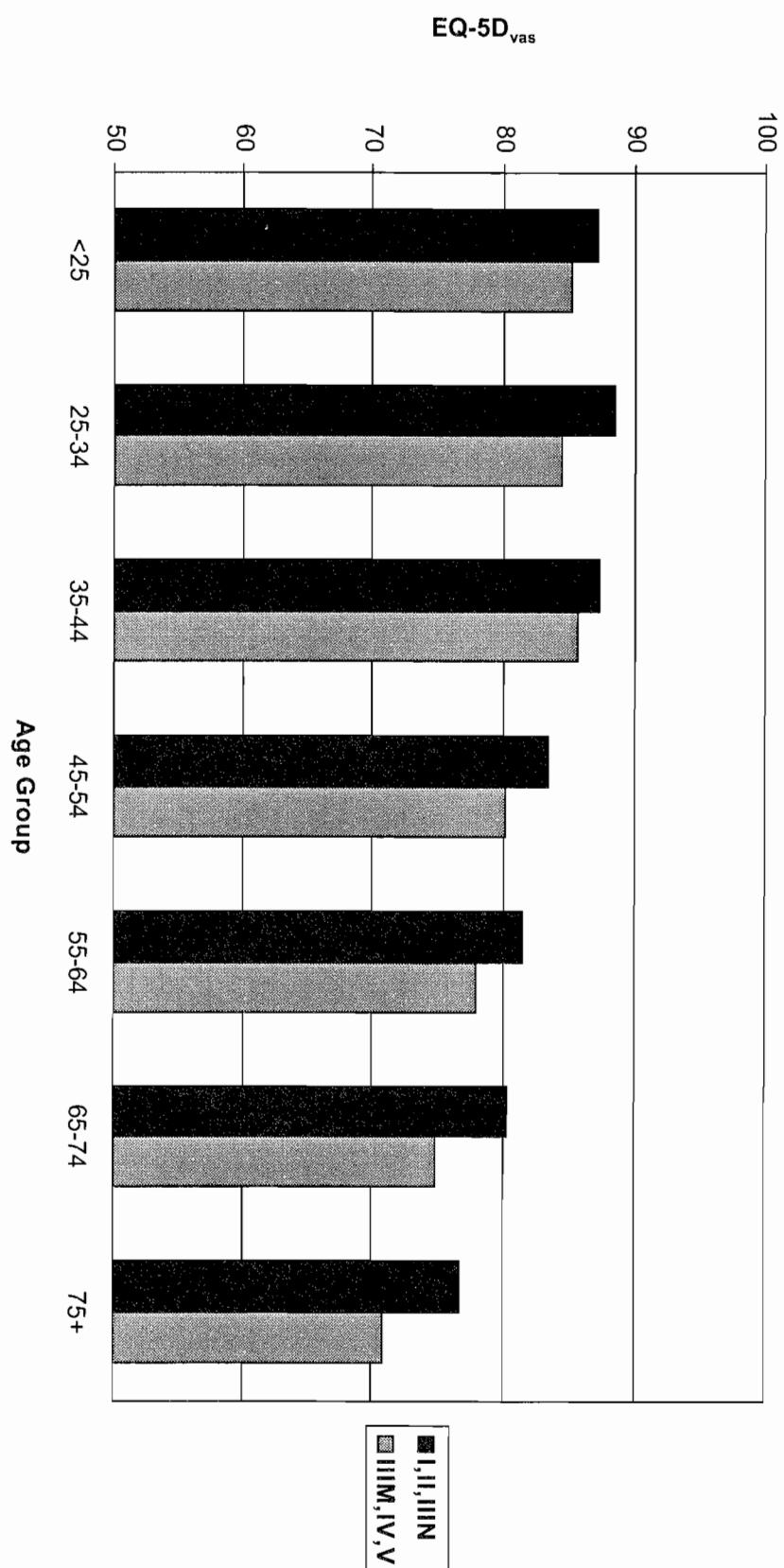
**Figure 2.1.4**  
**Self Rated Health Status by Age and Housing Tenure**



**Table 2.1.4****Self Rated Health Status by Age and Housing Tenure**

		Tenure			Sig. Level of F Test
	Owner/Mortgage	Private rented	Public rented	Other	
All	Mean Count Std Deviation	85.09 2218 14.71	83.29 262 15.26	75.23 827 20.53	82.40 63 19.17 0.000
Age Under 25	Mean Count Std Deviation	88.62 150 12.36	84.92 59 13.98	83.30 82 15.02	89.10 10 13.96 0.025
Age 25-34	Mean Count Std Deviation	89.09 511 11.54	83.96 78 15.65	81.60 150 18.54	76.86 14 26.78 0.000
Age 35-44	Mean Count Std Deviation	87.71 416 12.53	86.19 36 12.84	81.14 95 18.23	90.75 12 6.00 0.000
Age 45-54	Mean Count Std Deviation	83.46 357 16.70	87.70 23 10.57	75.07 98 22.15	84.88 8 24.56 0.000
Age 55-64	Mean Count Std Deviation	83.14 329 15.39	79.74 27 15.52	70.51 115 22.65	75.14 7 20.82 0.000
Age 65-74	Mean Count Std Deviation	80.16 310 16.15	84.13 15 18.94	70.98 154 20.10	78.33 6 15.06 0.000
Age 75+	Mean Count Std Deviation	78.81 145 16.30	72.00 24 17.05	67.97 133 19.91	76.67 6 13.66 0.000
Significance Level of F Test		0.000	0.000	0.004	0.366

**Figure 2.1.5**  
**Self Rated Health Status by Age and Social Class**

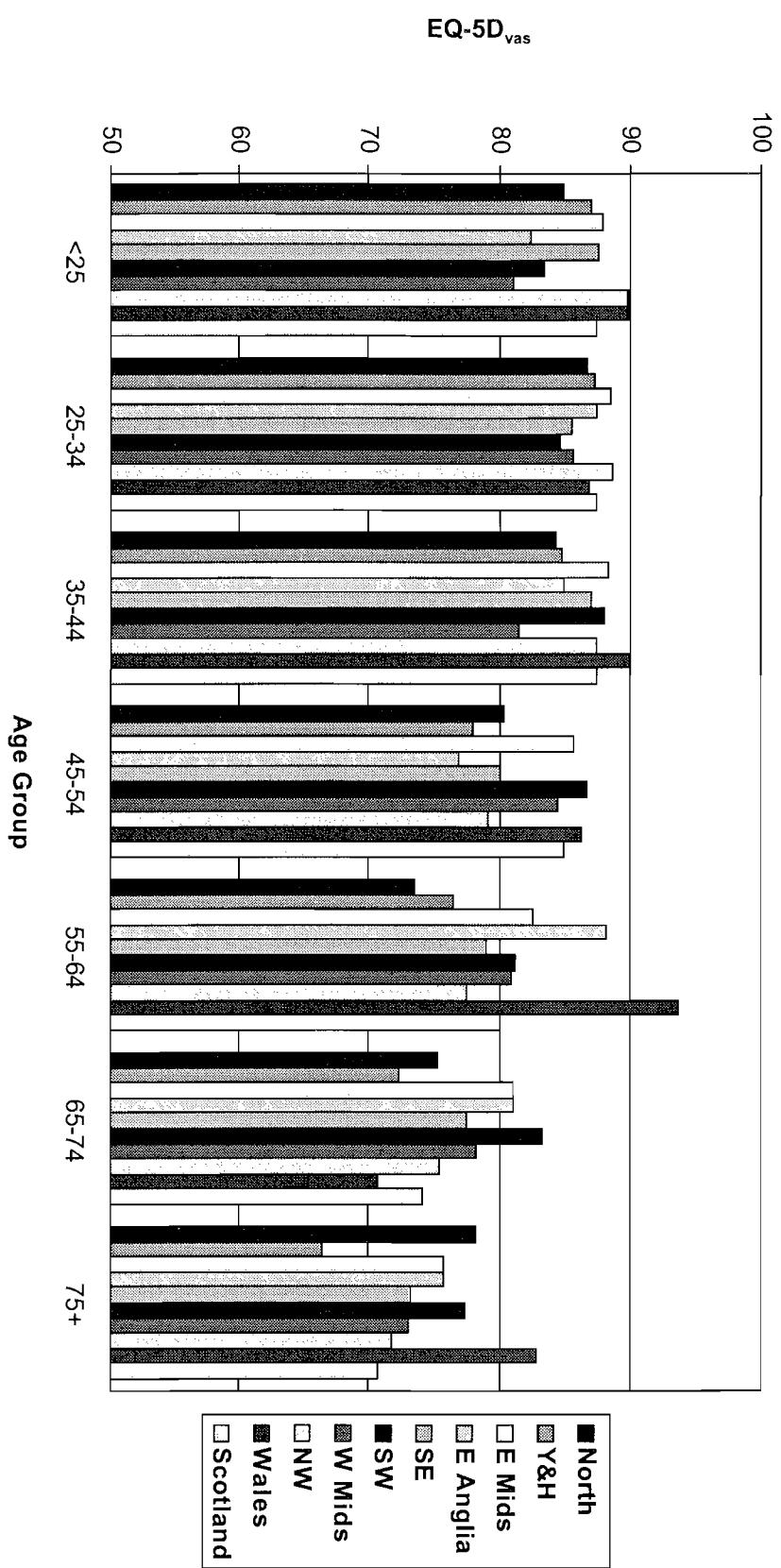


**Table 2.1.5**  
**Self Rated Health Status by Age and Social Class**

		Social Class		Sig. Level of F Test
		Non-manual	Manual	
All		Mean Count Std Deviation	84.63 1772 15.60	79.99 1500 18.19
Age Under 25		Mean Count Std Deviation	87.24 131 13.52	85.32 139 14.57
Age 25-34		Mean Count Std Deviation	88.53 460 12.41	84.47 272 16.18
Age 35-44		Mean Count Std Deviation	87.39 317 13.57	85.73 229 14.12
Age 45-54		Mean Count Std Deviation	83.44 273 17.06	80.26 211 19.46
Age 55-64		Mean Count Std Deviation	81.57 243 17.01	77.95 228 19.37
Age 65-74		Mean Count Std Deviation	80.31 222 17.22	74.84 249 18.41
Age 75+		Mean Count Std Deviation	76.80 126 17.63	70.78 172 19.08
Significance Level of F Test			0.000	0.000

**Figure 2.1.6**

**Self Rated Health Status by Age and Standard Region**

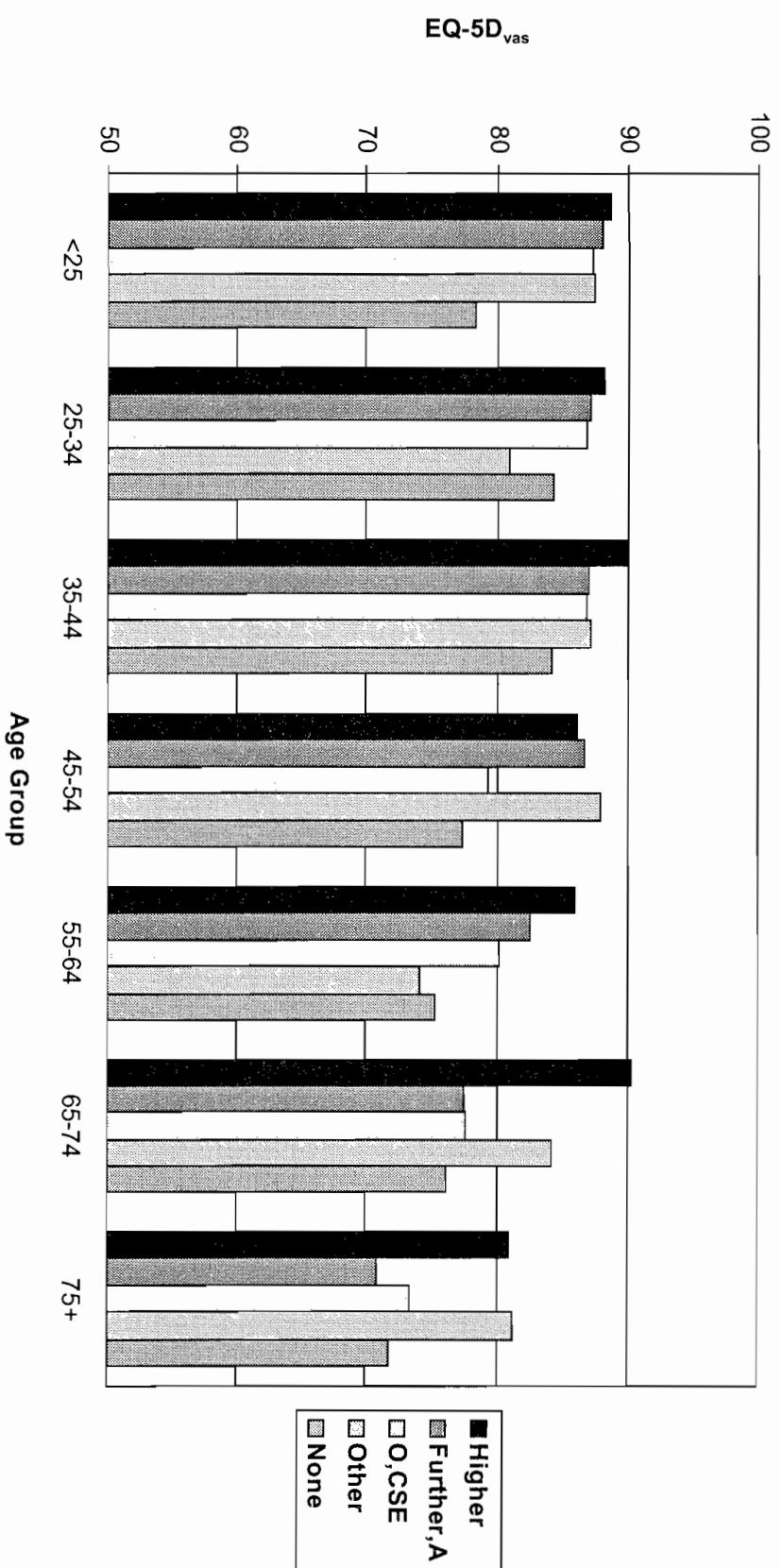


**Table 2.1.6**  
**Self Rated Health Status by Age and Standard Region**

		Region							Sig. Level of F Test		
		North	Y&H	E Mids	E Anglia	SE	SW	W Mids	NW	Wales	Scotland
All		80.58	79.76	85.57	83.26	82.07	84.01	81.43	82.00	85.21	82.24
	Mean	208	266	358	135	838	363	311	423	117	359
	Count										
	Std Deviation	17.82	18.16	14.50	12.42	17.50	15.30	16.71	18.08	17.50	17.79
Age Under 25		85.00	87.03	88.00	82.47	87.65	83.46	81.07	89.88	89.83	87.54
	Mean	15	29	31	17	82	24	30	26	12	37
	Count										
	Std Deviation	12.68	13.75	11.97	11.65	12.39	14.81	18.06	12.48	12.63	14.15
Age 25-34		86.79	87.29	88.52	87.45	85.57	84.63	85.71	88.67	86.86	87.51
	Mean	42	52	105	22	176	73	66	104	29	84
	Count										
	Std Deviation	14.02	15.54	13.55	9.68	15.12	14.71	15.03	12.87	18.12	14.18
Age 35-44		84.44	84.84	88.34	85.00	87.02	88.08	81.51	87.51	90.00	87.45
	Mean	34	44	65	30	141	62	51	59	22	51
	Count										
	Std Deviation	16.02	15.08	9.99	9.52	14.14	14.85	16.38	11.22	14.55	14.05
Age 45-54		80.34	78.00	85.77	77.00	80.13	86.70	84.49	79.20	86.33	84.97
	Mean	29	32	52	15	127	53	49	81	12	37
	Count										
	Std Deviation	20.71	20.78	14.95	20.92	19.12	10.35	16.51	20.55	18.72	16.64
Age 55-64		73.45	76.48	82.63	88.20	79.05	81.25	80.97	77.58	93.73	80.00
	Mean	32	48	35	20	124	56	36	60	11	59
	Count										
	Std Deviation	21.57	18.15	15.68	8.85	19.21	18.37	16.32	19.08	7.54	17.82
Age 65-74		75.35	72.35	81.05	81.11	77.48	83.30	78.31	75.43	70.65	74.17
	Mean	34	34	41	18	119	60	48	60	20	52
	Count										
	Std Deviation	16.77	19.54	14.75	13.44	18.67	15.17	13.74	20.42	20.80	20.97
Age 75+		78.26	66.44	75.69	75.77	73.26	77.40	73.10	71.70	82.91	70.62
	Mean	23	27	29	13	69	35	31	33	11	39
	Count										
	Std Deviation	17.36	14.72	20.04	8.38	19.43	16.77	21.16	20.80	12.33	19.74
Significance Level of F Test		0.013	0.000	0.000	0.014	0.000	0.022	0.016	0.000	0.002	0.000

**Figure 2.2.1**

**Self Rated Health Status by Age and Educational Qualifications for Males**

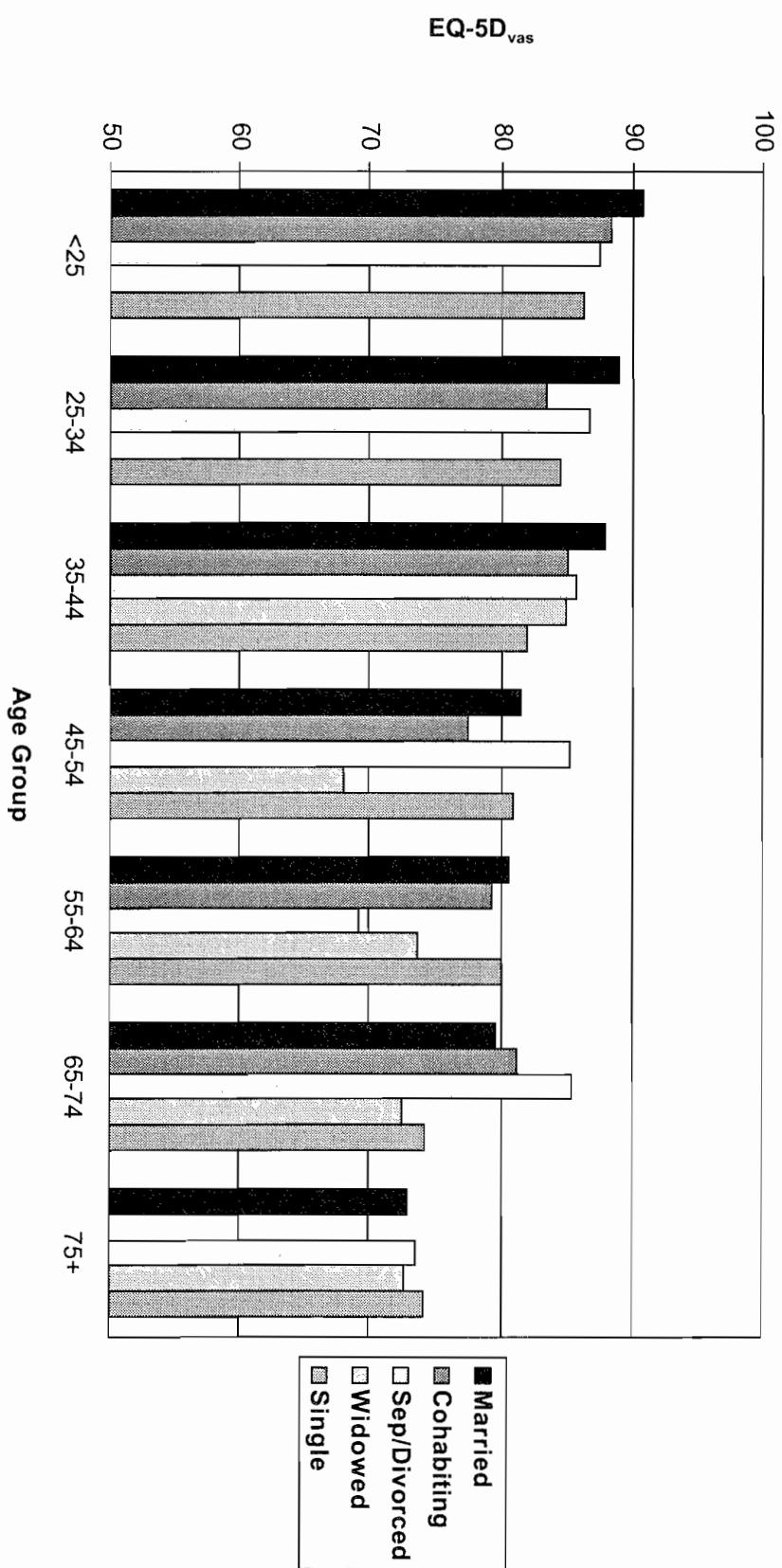


**Table 2.2.1**  
**Self Rated Health Status by Age and Educational Qualifications for Males**

		Level of Education				Sig. Level of F Test	
		Higher	Further,A	O,CSE	Other	None	
All	Mean Count Std Deviation	88.11 181 10.95	85.89 342 14.73	82.94 453 16.71	82.53 51 14.93	77.59 434 19.64	0.000
Age Under 25	Mean Count Std Deviation	88.64 11 15.04	88.07 55 11.91	87.35 51 15.67	87.50 2 3.54	78.44 9 13.39	0.420
Age 25-34	Mean Count Std Deviation	88.27 56 10.79	87.18 109 14.27	86.93 122 16.10	81.00 4 7.35	84.38 39 14.41	0.664
Age 35-44	Mean Count Std Deviation	90.07 44 7.93	87.00 73 10.92	86.97 68 11.70	87.25 4 9.22	84.23 66 16.35	0.203
Age 45-54	Mean Count Std Deviation	86.21 29 11.96	86.80 44 13.80	79.30 63 20.35	87.91 11 10.00	77.42 23 73.00	0.033
Age 55-64	Mean Count Std Deviation	86.00 21 12.09	82.56 32 18.40	80.15 59 16.91	74.08 12 23.25	75.26 69 21.37	0.105
Age 65-74	Mean Count Std Deviation	90.33 15 12.27	77.58 24 19.93	77.71 62 15.28	84.29 14 12.65	76.22 113 18.41	0.031
Age 75+	Mean Count Std Deviation	81.00 5 10.84	70.80 5 32.26	73.43 28 16.50	81.25 4 10.31	71.69 65 19.85	0.738
Significance Level of F Test		0.447	0.008	0.000	0.419	0.003	

**Figure 2.2.2**

**Self Rated Health Status by Age and Marital Status for Males**

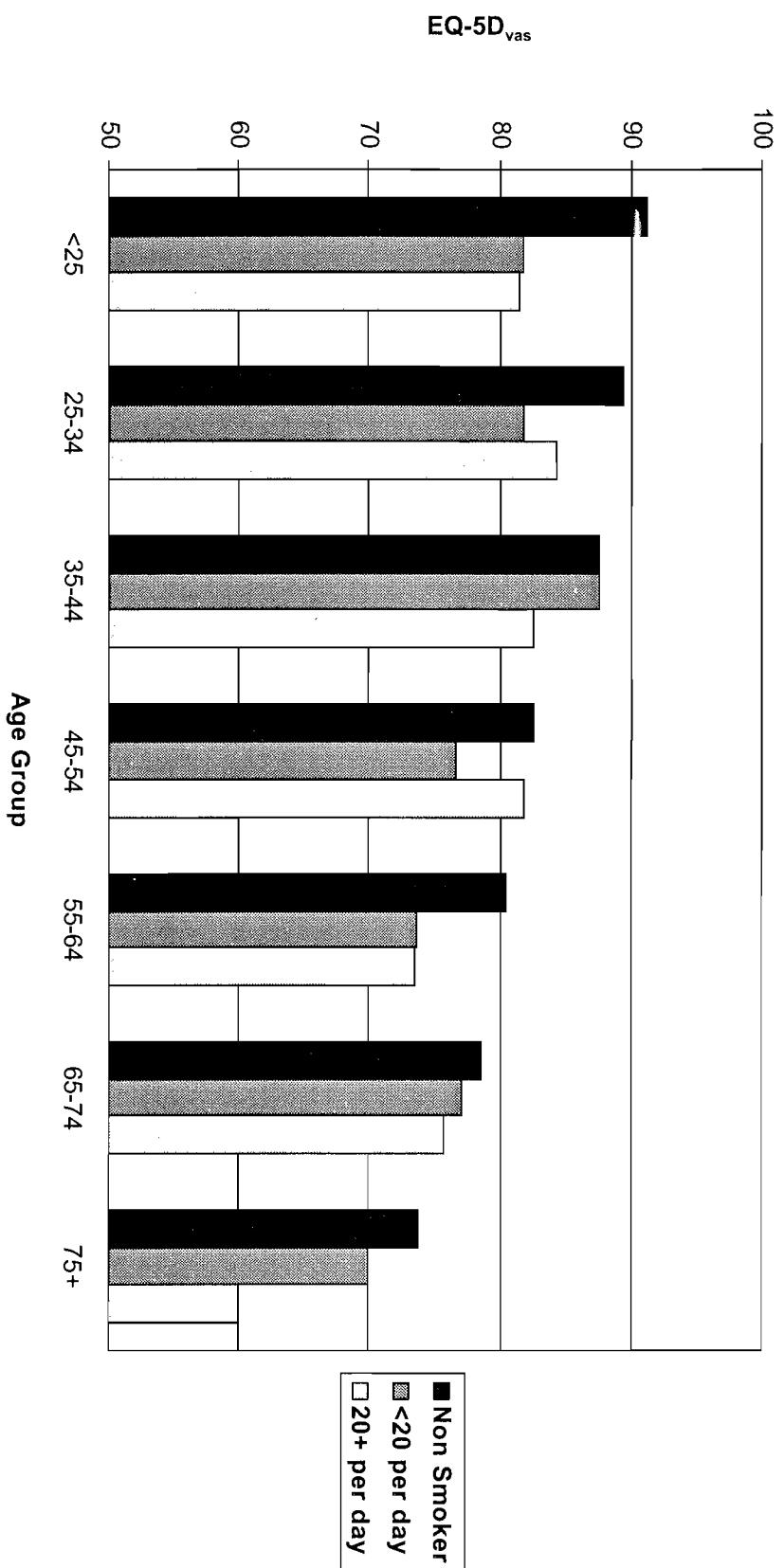


**Table 2.2.2****Self Rated Health Status by Age and Marital Status for Males**

		Marital Status					Sig. Level of F Test
		Married	Cohabiting	Separated/Divorced	Widowed	Single	
All	Mean	83.48	83.84	81.93	72.68	83.55	0.000
	Count	889	76	111	99	288	
	Std Deviation	16.23	15.14	18.73	19.71	16.88	
Age Under 25	Mean	90.83	88.33	87.50	·	86.30	0.638
	Count	18	12	2	0	96	
	Std Deviation	12.47	11.55	10.61	·	14.45	
Age 25-34	Mean	89.05	83.48	86.77	·	84.59	0.037
	Count	166	40	26	0	98	
	Std Deviation	12.00	16.31	14.83	·	16.66	
Age 35-44	Mean	87.96	85.17	85.76	85.00	81.92	
	Count	188	12	17	2	36	0.106
	Std Deviation	10.44	12.10	9.86	14.14	20.06	
Age 45-54	Mean	81.51	77.60	85.28	68.00	81.00	
	Count	160	5	29	5	22	
	Std Deviation	19.96	18.94	14.51	17.89	19.53	
Age 55-64	Mean	80.68	79.33	69.18	73.67	80.07	
	Count	146	3	22	9	14	
	Std Deviation	16.90	25.42	28.28	22.38	16.70	
Age 65-74	Mean	79.56	81.25	85.44	72.54	74.31	
	Count	158	4	9	41	16	
	Std Deviation	15.90	12.50	10.98	22.05	19.64	
Age 75+	Mean	72.94	·	73.50	72.57	74.17	
	Count	53	0	6	42	6	
	Std Deviation	20.92	·	21.90	17.60	8.61	
Significance Level of F Test		0.000	0.802	0.015	·	0.086	

**Figure 2.2.3**

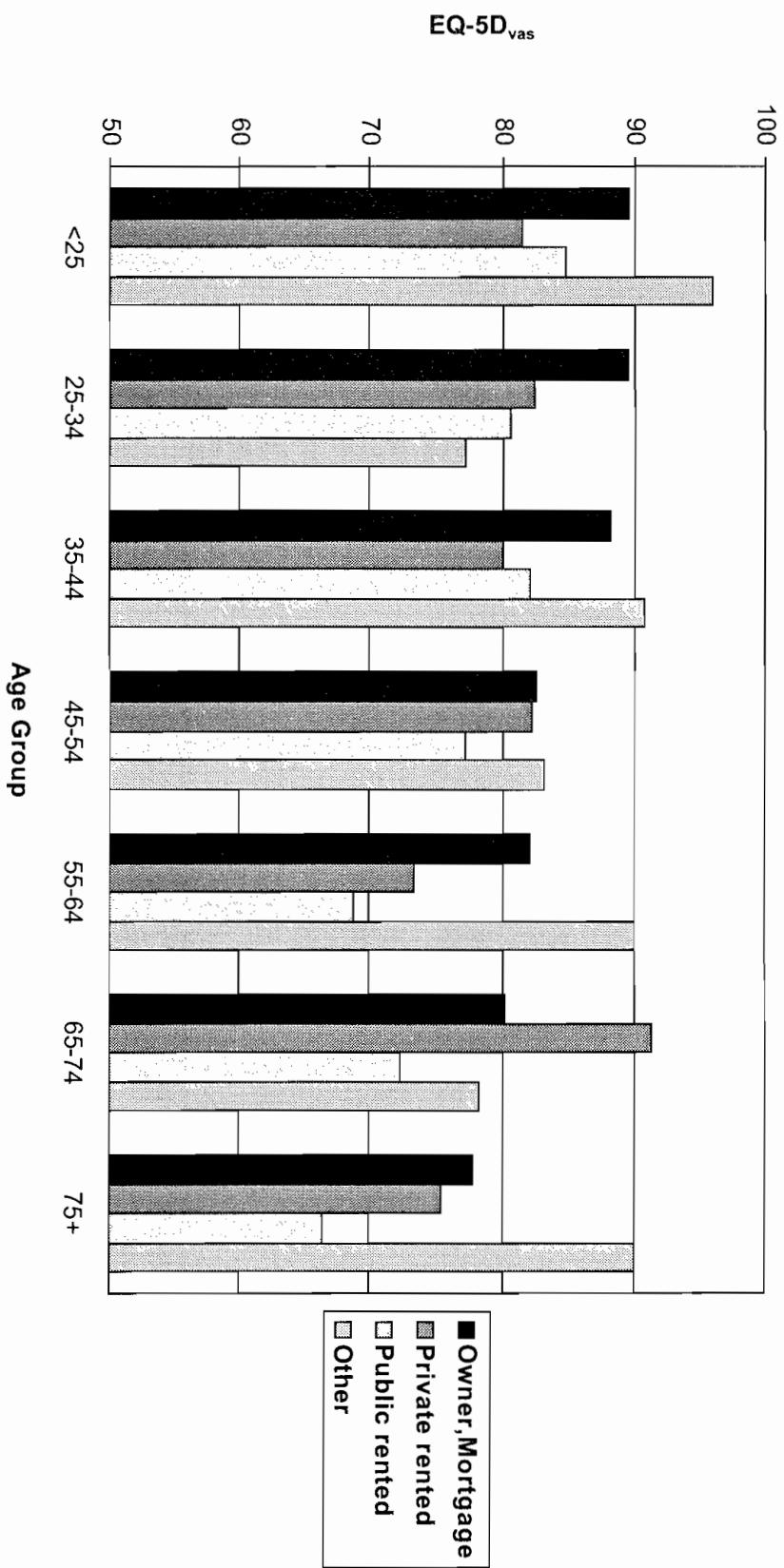
**Self Rated Health Status by Age and Smoking Status for Males**



**Table 2.2.3****Self Rated Health Status by Age and Smoking Status for Males**

		Non smoker			Smoker			Sig. Level of F Test
		<20 pd		20+ pd				
All	Mean	83.64	80.42	80.56				
	Count	998	282	175				0.004
	Std Deviation	16.46	17.62	18.31				
Age Under 25	Mean	91.21	81.82	81.55				
	Count	73	44	11				0.000
	Std Deviation	11.70	14.68	15.71				
Age 25-34	Mean	89.41	81.87	84.39				
	Count	205	84	41				0.000
	Std Deviation	12.22	17.98	13.55				
Age 35-44	Mean	87.68	87.61	82.59				
	Count	163	51	39				0.062
	Std Deviation	11.74	11.77	14.87				
Age 45-54	Mean	82.65	76.58	81.85				
	Count	142	36	41				0.241
	Std Deviation	18.37	22.56	19.19				
Age 55-64	Mean	80.54	73.69	73.57				
	Count	144	26	21				0.097
	Std Deviation	17.71	19.89	24.94				
Age 65-74	Mean	78.55	77.07	75.74				
	Count	181	27	19				0.756
	Std Deviation	17.28	17.47	19.36				
Age 75+	Mean	73.78	70.00	60.00				
	Count	90	14	3				0.390
	Std Deviation	19.18	13.01	36.06				
Significance Level of F Test		0.000	0.002	0.096				

**Figure 2.2.4**  
**Self Rated Health Status by Age and Housing Tenure for Males**



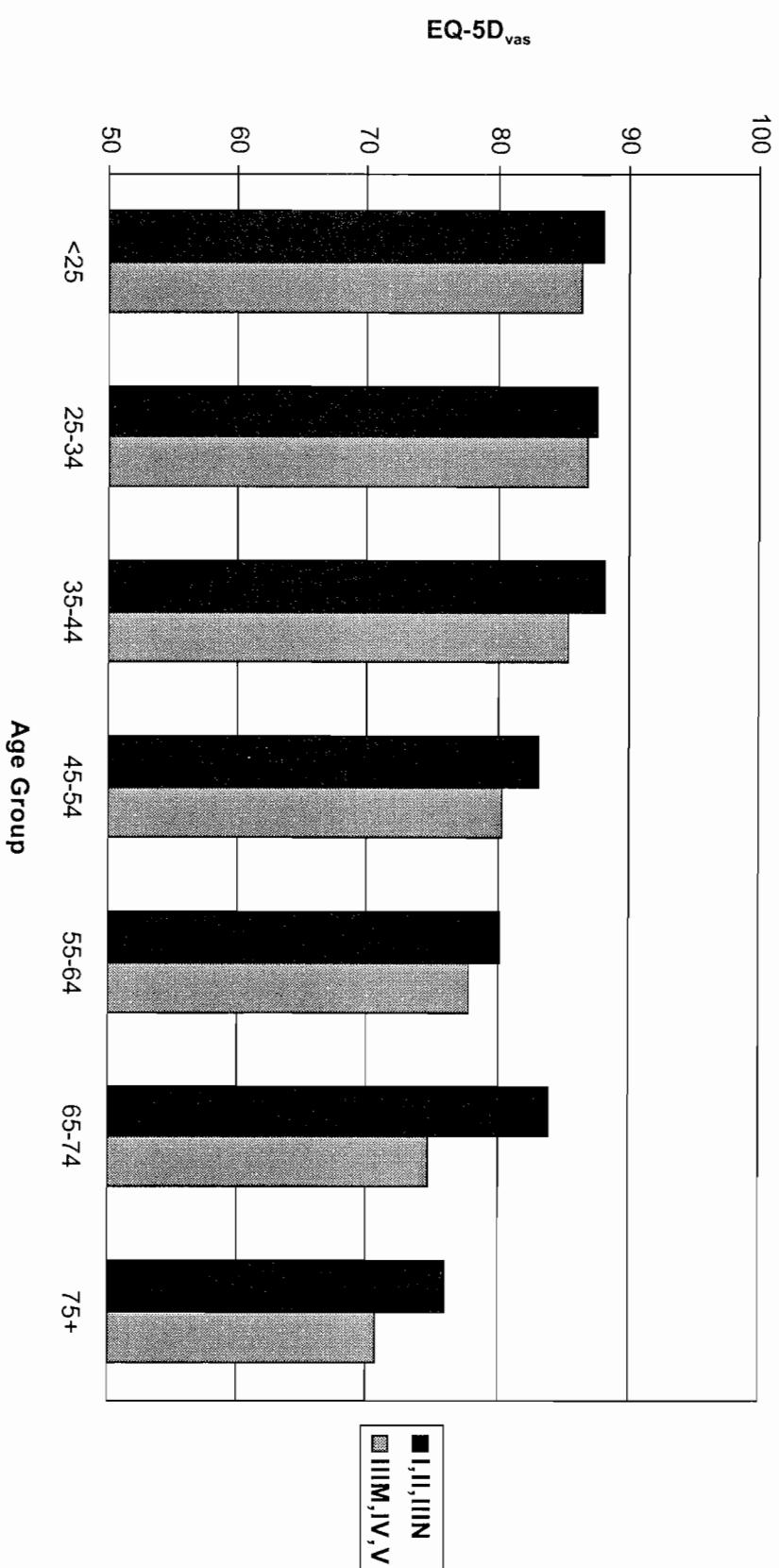
**Table 2.2.4**

**Self Rated Health Status by Age and Housing Tenure for Males**

		Tenure			Sig. Level of F Test	
		Owner/Mortgage	Private rented	Public rented		
All		Mean Count Std Deviation	85.11 1004 16.69	80.82 124 15.09	75.31 304 21.51	83.57 28 21.02 0.000
Age	Under 25	Mean Count Std Deviation	89.55 78 13.41	81.48 25 13.03	84.88 24 14.77	96.00 1 0.054
Age	25-34	Mean Count Std Deviation	89.58 224 11.07	82.44 45 15.86	80.67 52 19.13	77.22 9 27.17 0.000
Age	35-44	Mean Count Std Deviation	88.21 194 10.49	80.11 18 11.57	82.08 37 19.12	90.83 6 6.65 0.003
Age	45-54	Mean Count Std Deviation	82.52 161 17.96	82.33 9 12.58	77.23 44 23.14	83.17 6 28.81 0.445
Age	55-64	Mean Count Std Deviation	82.17 141 15.65	73.33 12 17.69	68.76 38 26.51	90.00 2 0.00 0.001
Age	65-74	Mean Count Std Deviation	80.28 155 15.61	91.40 5 10.06	72.31 64 20.41	78.33 3 17.56 0.006
Age	75+	Mean Count Std Deviation	77.82 51 16.82	75.50 10 20.53	66.36 45 19.53	90.00 1 0.019
Significance Level of F Test			0.000	0.000	0.291 0.911	

**Figure 2.2.5**

**Self Rated Health Status by Age and Social Class for Males**

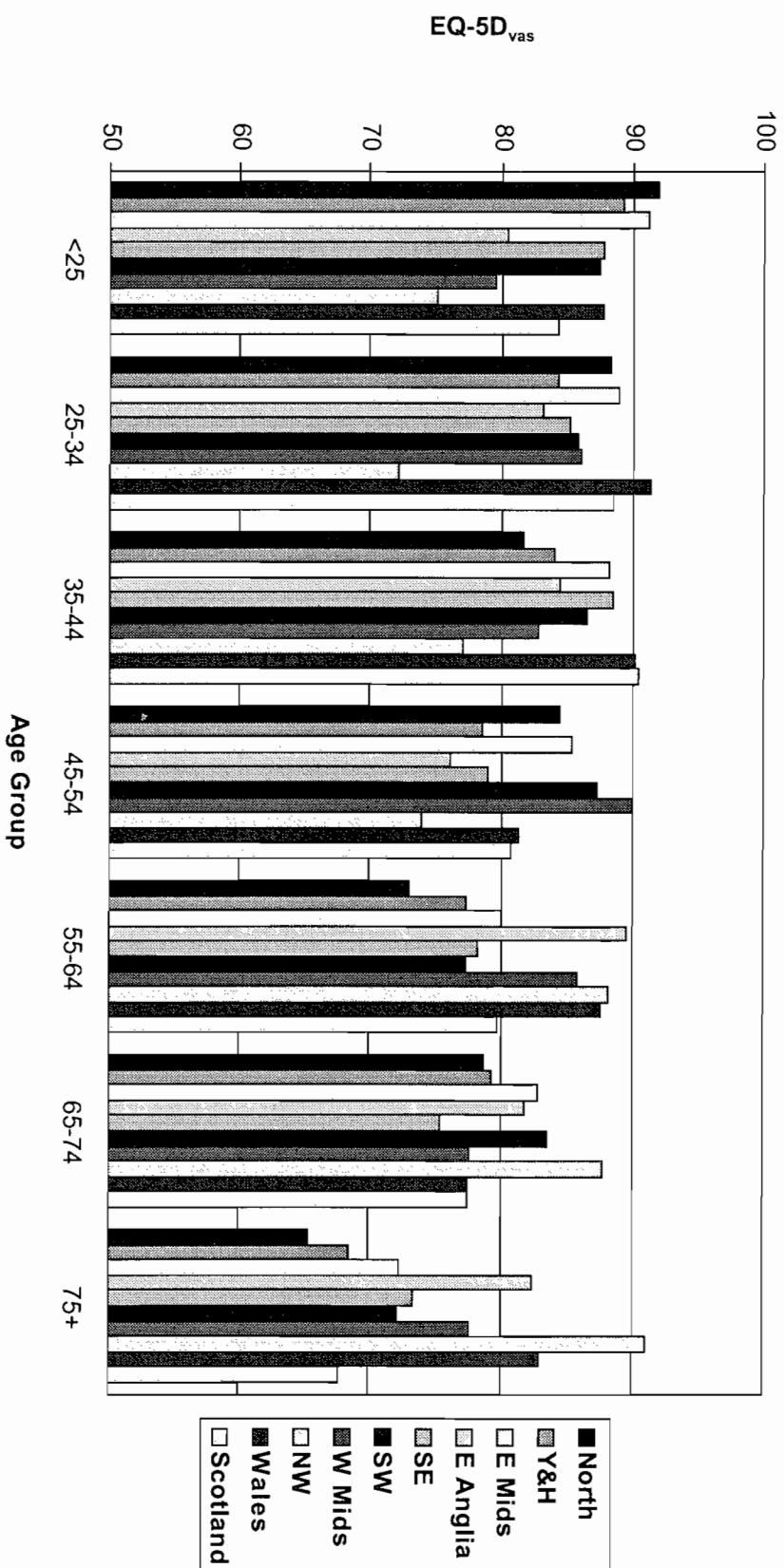


**Table 2.2.5**  
**Self Rated Health Status by Age and Social Class for Males**

		Social Class		Sig. Level of F Test	
		Non-manual	Manual		
All		Mean Count Std Deviation	84.95 665 15.18	80.72 761 18.12	0.000
Age Under 25		Mean Count Std Deviation	88.12 51 14.31	86.53 64 14.46	0.558
Age 25-34		Mean Count Std Deviation	87.61 173 12.74	86.84 147 14.59	0.615
Age 35-44		Mean Count Std Deviation	88.19 129 11.37	85.43 122 13.40	0.079
Age 45-54		Mean Count Std Deviation	83.15 98 17.62	80.29 121 20.54	0.276
Age 55-64		Mean Count Std Deviation	80.20 91 17.93	77.81 100 20.18	0.390
Age 65-74		Mean Count Std Deviation	83.87 85 15.28	74.77 140 17.72	0.000
Age 75+		Mean Count Std Deviation	76.11 38 17.27	70.72 67 19.85	0.165
Significance Level of F Test			0.000	0.000	

**Figure 2.2.6**

**Self Rated Health Status by Age and Standard Region for Males**



MVH National Survey Data 1993  
Centre for Health Economics  
University of York

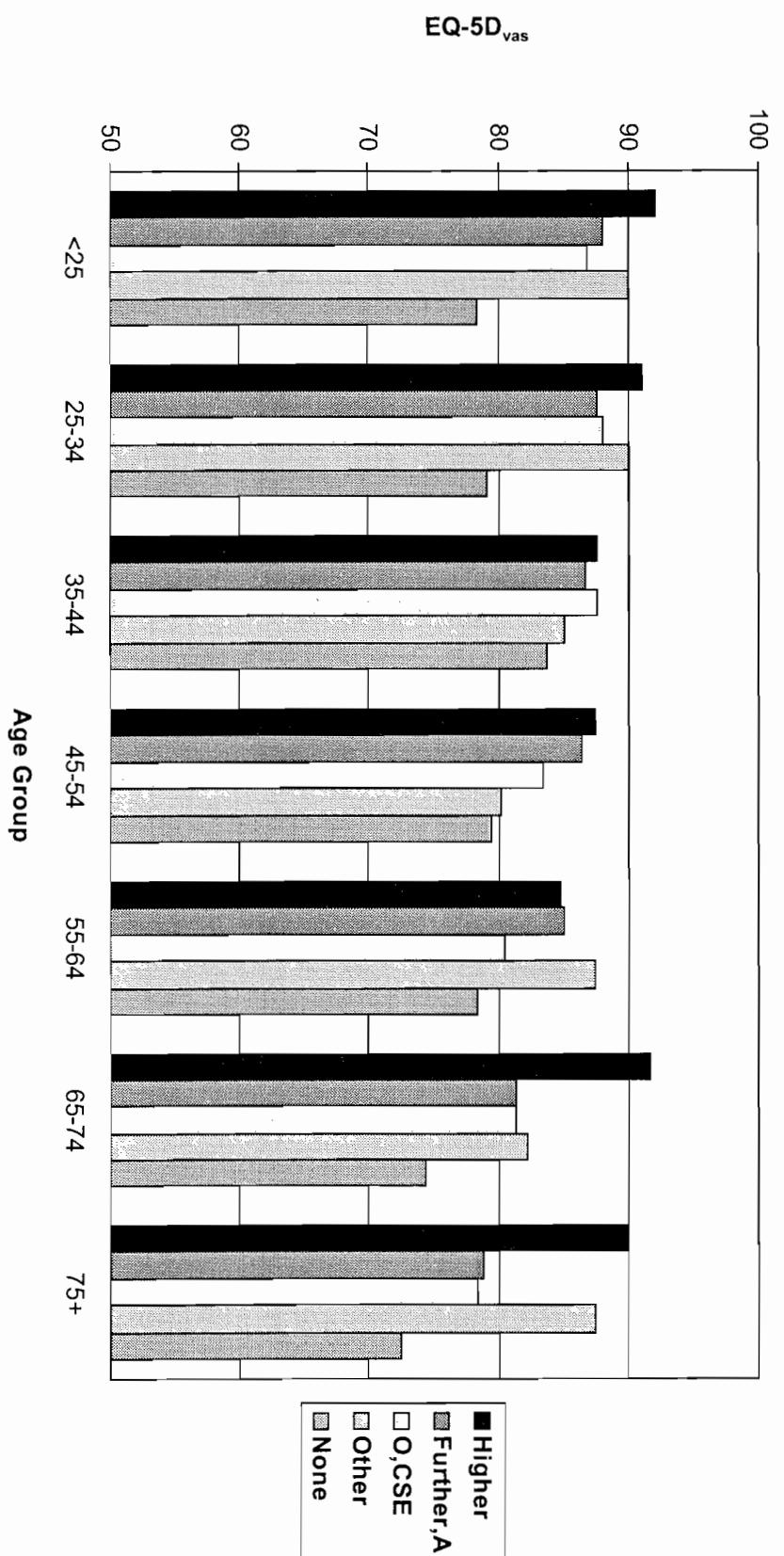
**Table 2.2.6**

**Self Rated Health Status by Age and Standard Region for Males**

		Region								Sig. Level of F Test	
		North	Y&H	E Mids	E Anglia	SE	SW	W Mids	NW	Wales	Scotland
All		81.70 86	80.54 111	85.82 168	83.02 50	81.59 348	83.52 174	83.60 144	81.54 181	84.95 41	82.48 160
	Mean Count Std Deviation	17.38	18.27	15.25	10.96	17.79	15.45	15.00	19.27	14.42	17.99
Age Under 25		92.00 5	89.29 7	91.29 14	80.50 6	87.77 30	87.46 13	79.58 12	91.06 16	87.80 5	84.40 20
	Mean Count Std Deviation	8.37	15.76	11.26	12.65	10.20	11.64	21.72	12.46	10.62	17.50
Age 25-34		88.32 19	84.42 24	88.98 50	83.25 8	85.26 76	85.87 31	86.16 32	87.85 46	91.40 5	88.49 39
	Mean Count Std Deviation	15.85	20.31	12.24	11.44	15.67	13.51	15.03	12.98	9.56	12.78
Age 35-44		81.74 19	84.10 21	88.23 35	84.50 16	88.55 56	86.67 30	82.91 23	88.31 29	90.13 8	90.50 18
	Mean Count Std Deviation	16.05	14.86	12.04	8.80	13.08	11.58	14.03	8.36	7.57	11.23
Age 45-54		84.55 11	78.53 19	85.43 23	76.20 5	79.04 55	87.38 26	90.08 24	74.03 32	81.38 8	80.83 18
	Mean Count Std Deviation	23.18	20.75	17.00	18.86	20.02	9.99	6.04	24.90	21.54	20.95
Age 55-64		73.08 13	77.44 18	80.00 10	89.60 5	78.24 51	77.44 27	85.88 17	77.13 23	87.67 3	79.78 27
	Mean Count Std Deviation	17.72	20.25	20.29	11.33	19.75	22.24	12.89	20.82	11.68	17.42
Age 65-74		78.69 16	79.33 12	82.91 22	81.83 6	75.49 53	83.64 33	77.71 28	72.24 25	77.50 8	77.56 25
	Mean Count Std Deviation	14.80	13.45	14.86	7.88	19.40	12.70	15.79	23.22	17.11	19.55
Age 75+		65.33 3	68.50 10	72.36 14	82.50 4	73.41 27	72.14 14	77.63 8	75.10 10	83.00 4	67.69 13
	Mean Count Std Deviation	15.01	13.95	21.50	8.66	18.28	21.36	19.52	20.71	12.62	23.15
Significance Level of F Test		0.077	0.194	0.005	0.641	0.000	0.011	0.052	0.000	0.565	0.002

**Figure 2.3.1**

**Self Rated Health Status by Age and Educational Qualifications for Females**

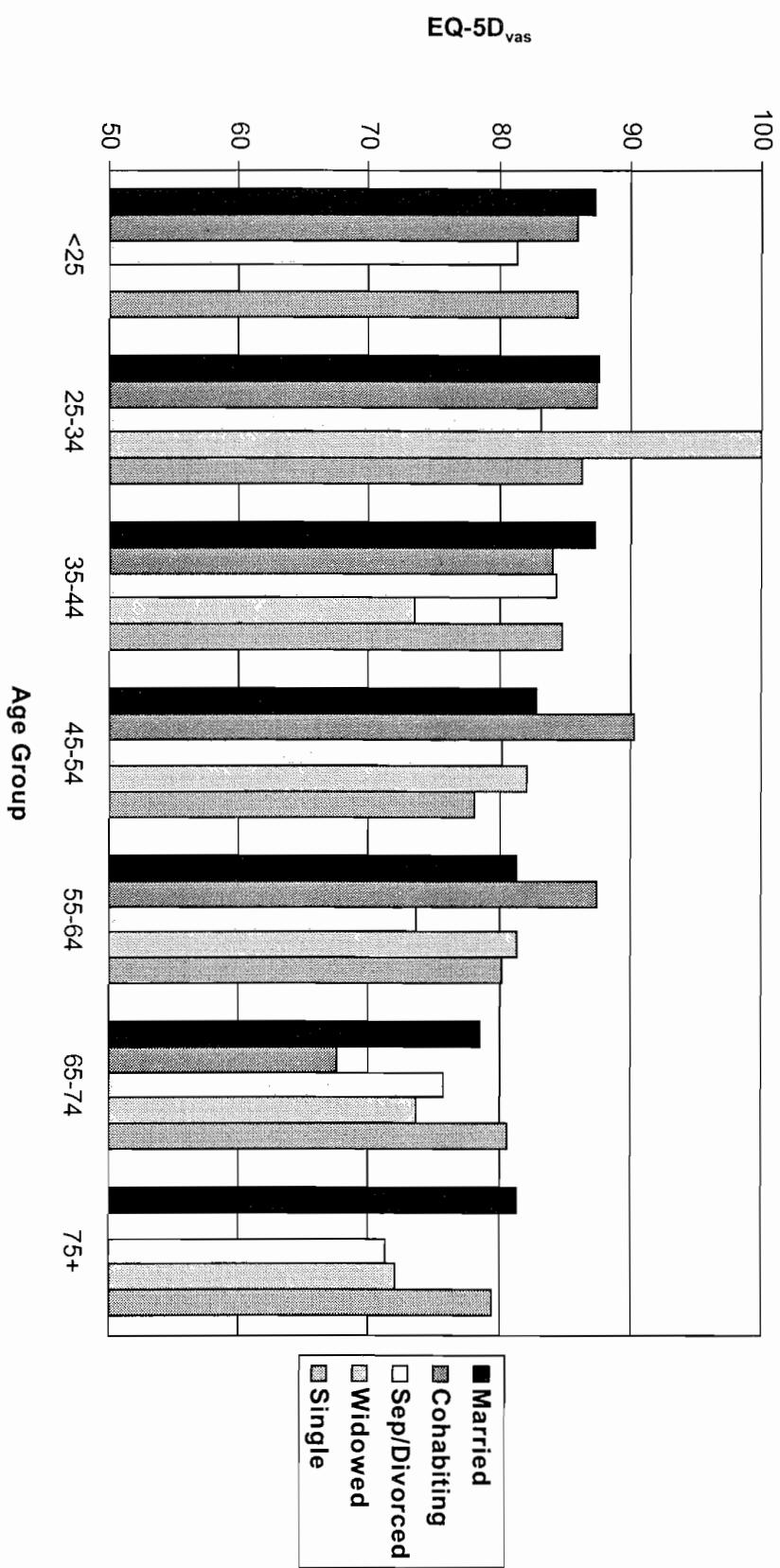


**Table 2.3.1****Self Rated Health Status by Age and Educational Qualifications for Females**

		Level of Education					Sig. Level of F Test
		Higher	Further, <sup>A</sup>	O,CSE	Other	None	
All		89.05	86.24	85.61	85.15	77.12	0.000
	Mean	130	340	591	41	813	
	Count	14.51	13.84	14.79	14.37	18.64	
	Std Deviation						
Age Under 25		92.14	88.04	86.93	90.00	78.43	0.012
	Mean	7	47	90	1	30	
	Count						
	Std Deviation	11.13	11.08	12.44		17.57	
Age 25-34		91.13	87.61	88.08	90.00	79.21	0.000
	Mean	45	115	185	7	71	
	Count						
	Std Deviation	12.13	13.83	12.43	7.51	19.03	
Age 35-44		87.72	86.79	87.61	85.17	83.84	0.458
	Mean	36	63	114	6	85	
	Count						
	Std Deviation	17.44	14.65	12.90	27.33	15.37	
Age 45-54		87.56	86.43	83.54	80.25	79.43	0.082
	Mean	27	35	78	12	114	
	Count						
	Std Deviation	15.89	13.14	18.83	16.37	17.22	
Age 55-64		84.89	85.08	80.47	87.50	78.38	0.125
	Mean	9	40	57	10	170	
	Count						
	Std Deviation	14.84	13.79	18.91	7.17	18.38	
Age 65-74		91.67	81.45	81.40	82.33	74.45	0.055
	Mean	3	22	45	3	185	
	Count						
	Std Deviation	10.41	14.87	14.33	6.81	19.76	
Age 75+		90.00	78.89	78.41	87.50	72.44	0.137
	Mean	3	18	22	2	158	
	Count						
	Std Deviation	10.00	15.88	17.07	10.61	18.85	
Significance Level of F Test		0.854	0.122	0.000	0.862	0.000	

**Figure 2.3.2**

**Self Rated Health Status by Age and Marital Status for Females**



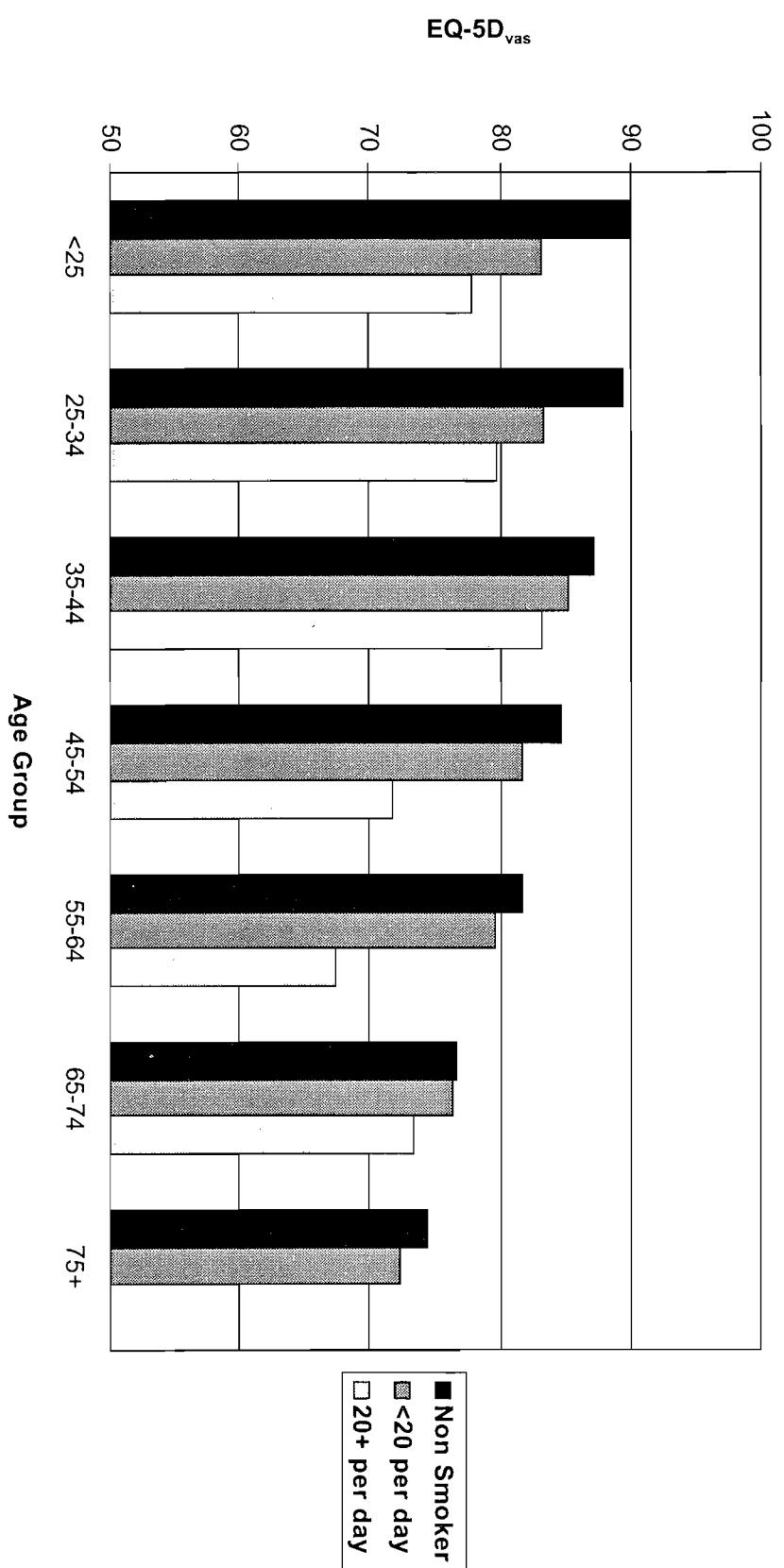
**Table 2.3.2**

**Self Rated Health Status by Age and Marital Status for Females**

Marital Status						Sig. Level of F Test
	Married	Cohabiting	Separated/Divorced	Widowed	Single	
All						
	Mean	84.42	86.30	80.03	74.87	84.40
	Count	948	109	243	328	284
	Std Deviation	15.99	15.25	17.41	18.87	15.40
Age Under 25						
	Mean	87.34	85.97	81.40	·	86.08
	Count	29	31	10	0	105
	Std Deviation	11.67	16.19	13.50	·	13.08
Age 25-34						
	Mean	87.70	87.57	83.23	100.00	86.29
	Count	232	42	60	1	87
	Std Deviation	14.34	14.51	15.95	·	13.35
Age 35-44						
	Mean	87.35	84.05	84.35	73.50	84.76
	Count	210	20	55	2	17
	Std Deviation	13.44	18.54	16.61	33.23	19.26
Age 45-54						
	Mean	82.90	90.38	80.28	82.20	78.13
	Count	184	8	43	15	15
	Std Deviation	17.34	7.44	17.46	13.76	21.91
Age 55-64						
	Mean	81.36	87.50	73.66	81.40	80.27
	Count	159	6	44	62	15
	Std Deviation	17.93	8.80	18.38	16.90	15.54
Age 65-74						
	Mean	78.60	67.50	75.77	73.59	80.67
	Count	104	2	22	102	27
	Std Deviation	17.31	17.68	20.08	19.62	17.96
Age 75+						
	Mean	81.37	·	71.22	72.08	79.50
	Count	30	0	9	146	18
	Std Deviation	14.77	·	13.45	18.76	20.76
Significance Level of F Test		0.000	0.503	0.019	·	0.145

**Figure 2.3.3**

**Self Rated Health Status by Age and Smoking Status for Females**



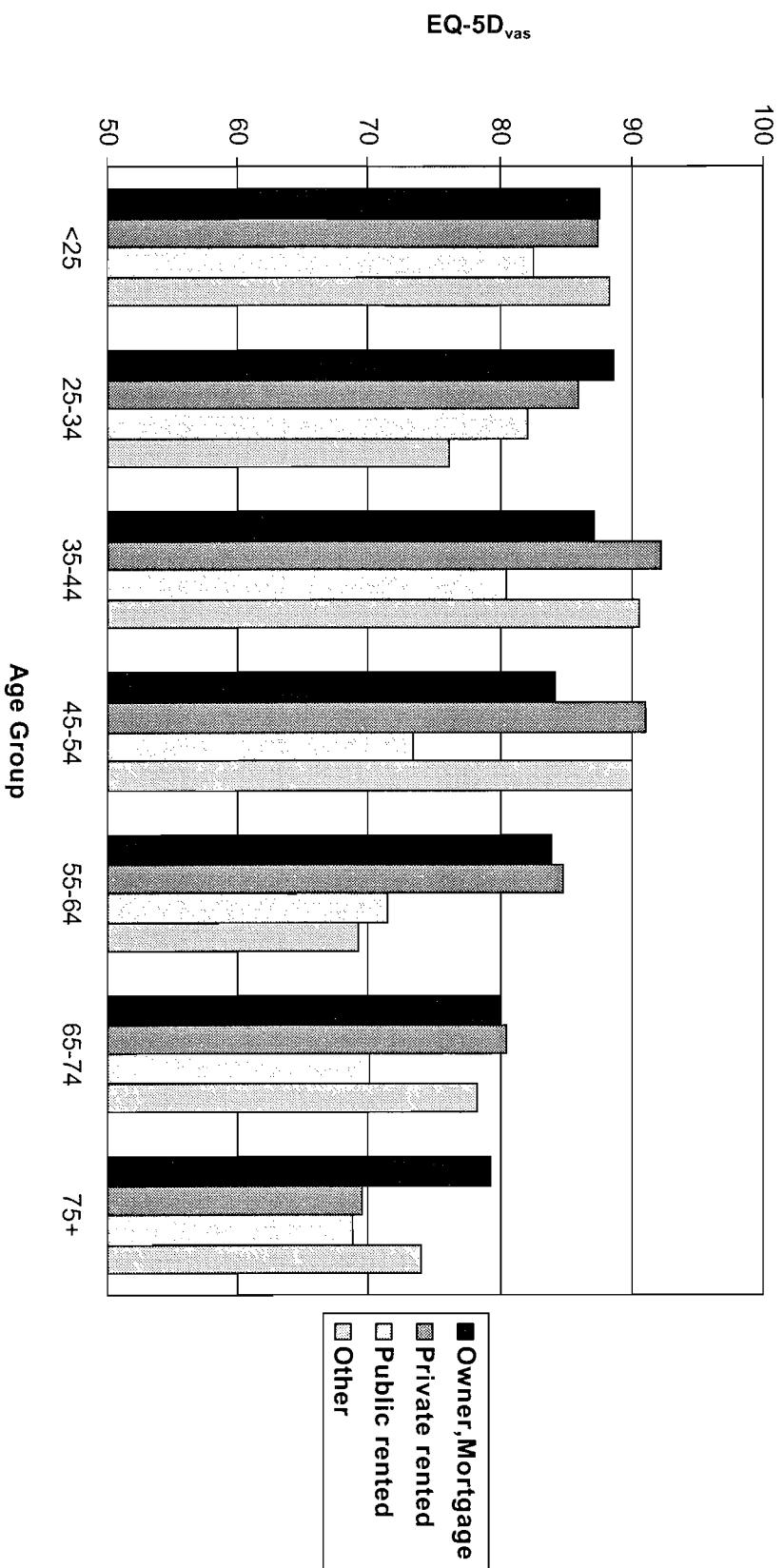
**Table 2.3.3**

**Self Rated Health Status by Age and Smoking Status for Females**

		Smoker		Sig. Level of F Test		
		Non smoker	<20 pd	20+ pd		
All		Mean Count Std Deviation	83.27 1334 16.65	81.63 412 15.88	76.50 166 20.72	0.000
Age Under 25		Mean Count Std Deviation	89.82 92 10.67	83.20 61 15.36	77.82 22 13.08	0.000
Age 25-34		Mean Count Std Deviation	89.37 267 12.59	83.39 112 14.81	79.81 43 19.58	0.000
Age 35-44		Mean Count Std Deviation	87.24 203 13.99	85.31 65 16.54	83.22 36 16.49	0.268
Age 45-54		Mean Count Std Deviation	84.70 169 15.38	81.76 62 15.34	71.76 34 24.28	0.000
Age 55-64		Mean Count Std Deviation	81.71 217 16.44	79.55 47 15.62	67.36 22 26.95	0.001
Age 65-74		Mean Count Std Deviation	76.64 209 19.28	76.38 40 16.10	73.38 8 14.06	0.888
Age 75+		Mean Count Std Deviation	74.45 177 18.63	72.36 25 17.19	50.00 1 .	0.372
Significance Level of F Test			0.000	0.003	0.042	

**Figure 2.3.4**

**Self Rated Health Status by Age and Housing Tenure for Females**



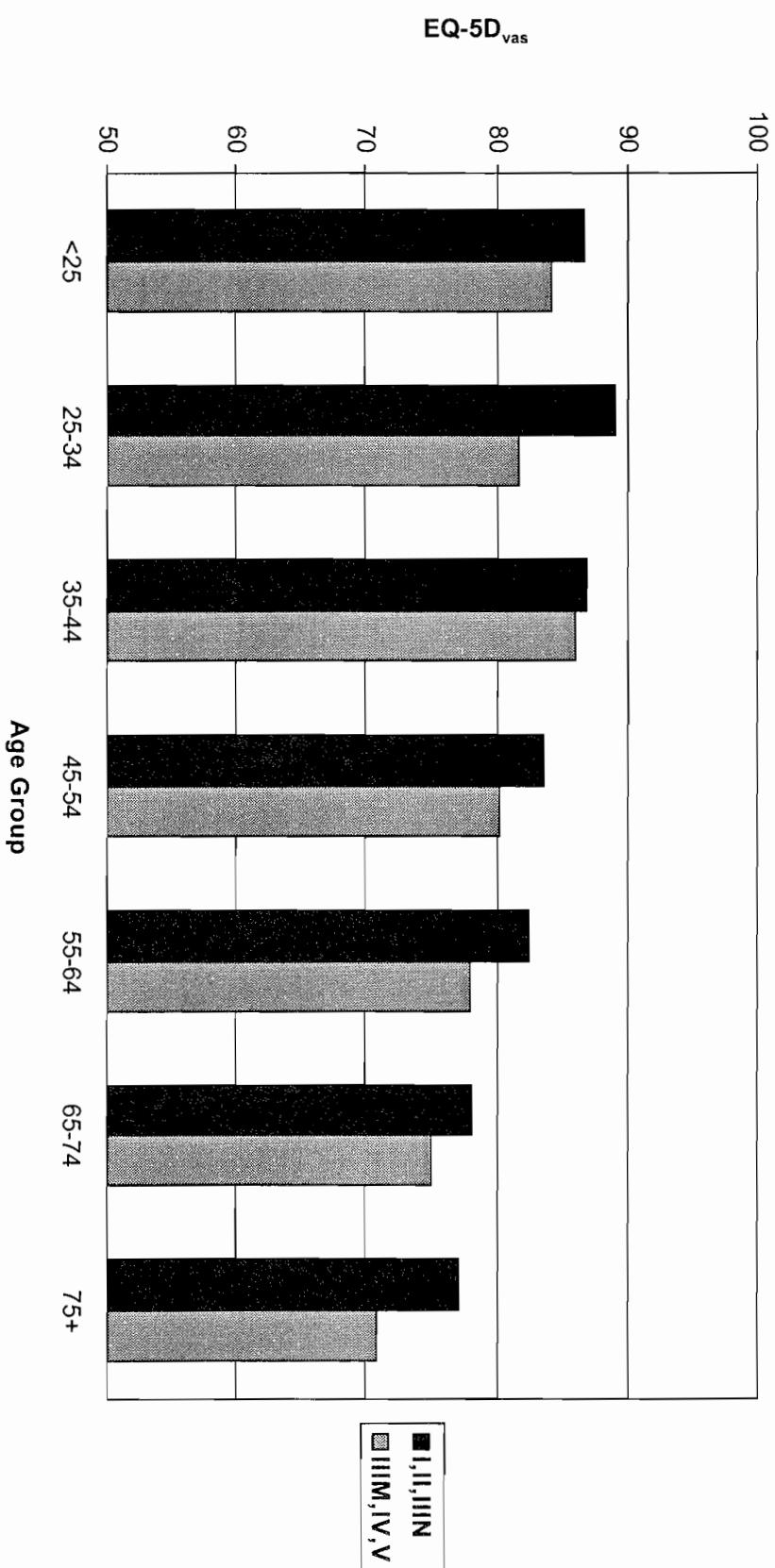
**Table 2.3.4**

**Self Rated Health Status by Age and Housing Tenure for Females**

		Tenure			Sig. Level of F Test
Owner/Mortgage		Private rented	Public rented	Other	
All		85.03	85.51	75.19	81.46
	Mean	1214	138	523	35
	Count	14.74	15.12	19.95	17.81
	Std Deviation				0.000
Age Under 25		87.61	87.44	82.66	88.33
	Mean	72	34	58	9
	Count	11.12	14.29	15.21	14.58
	Std Deviation				0.155
Age 25-34		88.71	86.03	82.09	76.20
	Mean	287	33	98	5
	Count	11.90	15.37	18.29	29.22
	Std Deviation				0.000
Age 35-44		87.27	92.28	80.53	90.67
	Mean	222	18	58	6
	Count	14.09	11.28	17.78	5.92
	Std Deviation				0.004
Age 45-54		84.22	91.14	73.31	90.00
	Mean	196	14	54	2
	Count	15.59	7.67	21.37	0.00
	Std Deviation				0.000
Age 55-64		83.87	84.87	71.38	69.20
	Mean	188	15	77	5
	Count	15.19	11.75	20.63	22.26
	Std Deviation				0.000
Age 65-74		80.05	80.50	70.03	78.33
	Mean	155	10	90	3
	Count	16.72	21.66	19.94	0.001
	Std Deviation				
Age 75+		79.35	69.50	68.80	74.00
	Mean	94	14	88	5
	Count	16.08	14.37	20.16	0.001
	Std Deviation				
Significance Level of F Test		0.000	0.000	0.000	0.312

**Figure 2.3.5**

**Self Rated Health Status by Age and Social Class for Females**

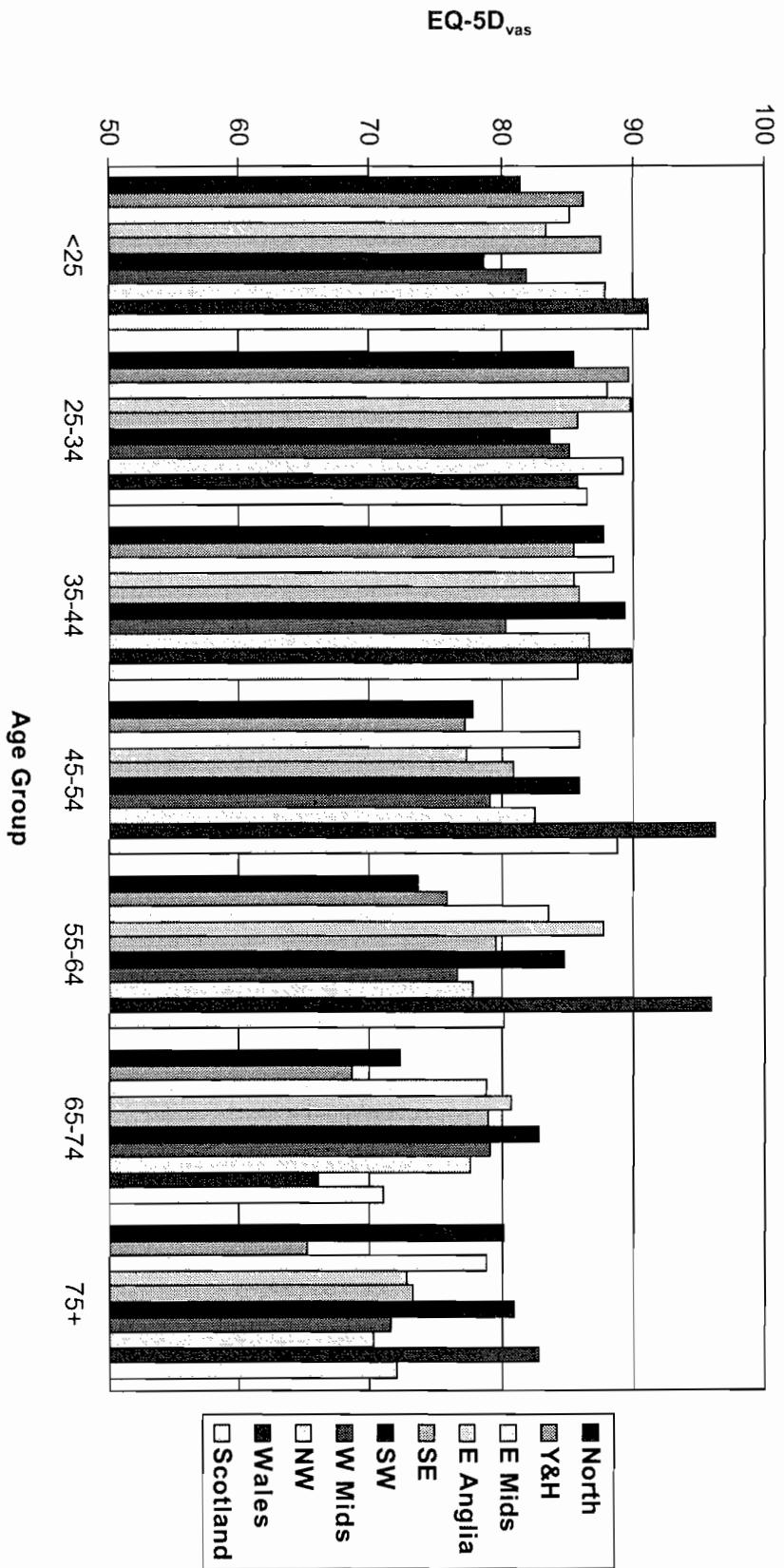


**Table 2.3.5****Self Rated Health Status by Age and Social Class for Females**

	Non-manual	Social Class		Sig. Level of F Test
		Manual	Non-manual	
All	Mean Count Std Deviation	84.43 1107 15.85	79.24 739 18.24	0.000
Age Under 25	Mean Count Std Deviation	86.69 80 13.05	84.28 75 14.68	0.282
Age 25-34	Mean Count Std Deviation	89.08 287 12.19	81.68 125 17.53	0.000
Age 35-44	Mean Count Std Deviation	86.84 188 14.91	86.08 107 14.96	0.676
Age 45-54	Mean Count Std Deviation	83.59 175 16.78	80.21 90 18.02	0.131
Age 55-64	Mean Count Std Deviation	82.39 152 16.44	78.05 128 18.78	0.040
Age 65-74	Mean Count Std Deviation	78.10 137 18.02	74.94 109 19.35	0.186
Age 75+	Mean Count Std Deviation	77.10 88 17.88	70.82 105 18.67	0.019
Significance Level of F Test		0.000	0.000	

**Figure 2.3.6**

**Self Rated Health Status by Age and Standard Region for Females**



**Table 2.3.6****Self Rated Health Status by Age and Standard Region for Females**

Region										Sig. Level of F Test	
	North	Y&H	E Mids	E Anglia	SE	SW	W Mids	NW	Wales	Scotland	
All											
	Mean	79.79	79.21	85.36	83.40	82.41	84.46	79.57	82.33	85.34	82.06
	Count	122	155	190	85	490	189	167	242	76	199
	Std Deviation	18.15	18.11	13.84	13.27	17.30	15.19	17.89	17.16	19.04	17.68
Age Under 25											
	Mean	81.50	86.32	85.29	83.55	87.58	78.73	82.06	88.00	91.29	91.24
	Count	10	22	17	11	52	11	18	10	7	17
	Std Deviation	13.34	13.37	12.18	11.55	13.59	17.23	15.75	12.95	14.55	7.74
Age 25-34											
	Mean	85.52	89.75	88.11	89.86	85.81	83.71	85.29	89.33	85.92	86.67
	Count	23	28	55	14	100	42	34	58	24	45
	Std Deviation	12.53	9.54	14.73	7.99	14.77	15.63	15.25	12.85	19.46	15.38
Age 35-44											
	Mean	87.87	85.52	83.47	85.57	86.01	89.41	80.36	86.73	89.93	85.79
	Count	15	23	30	14	85	32	28	30	14	33
	Std Deviation	15.84	15.58	7.08	10.60	14.79	17.46	18.26	13.53	17.64	15.28
Age 45-54											
	Mean	77.78	77.23	86.03	77.40	80.96	86.04	79.12	82.57	96.25	88.89
	Count	18	13	29	10	72	27	25	49	4	19
	Std Deviation	19.30	21.64	13.42	22.85	18.51	10.83	21.19	16.55	2.50	10.30
Age 55-64											
	Mean	73.72	75.90	83.68	87.73	79.62	84.79	76.58	77.86	96.00	80.19
	Count	18	30	25	15	73	29	19	37	8	32
	Std Deviation	24.48	17.10	13.79	8.28	18.94	13.29	18.09	18.21	4.54	18.42
Age 65-74											
	Mean	72.39	68.55	78.89	80.75	79.08	82.89	79.15	77.71	66.08	71.04
	Count	18	22	19	12	66	27	20	35	12	27
	Std Deviation	18.24	21.50	14.72	15.82	18.05	17.99	10.56	18.16	22.45	22.10
Age 75+											
	Mean	80.20	65.24	78.80	72.78	73.17	80.90	71.52	70.22	82.86	72.08
	Count	20	17	15	9	42	21	23	23	7	26
	Std Deviation	17.18	15.44	18.78	6.67	20.35	12.22	21.89	21.13	13.18	18.13
Significance Level of F Test		0.098	0.000	0.068	0.028	0.000	0.342	0.167	0.000	0.004	0.000

## **APPENDIX A**

P.1319

## SELF-COMPLETION BOOKLET

Respondent Serial Number:

--	--	--	--	--	--

901-4

Card No.:      0      9

905-6

### OWN HEALTH QUESTIONS

Tick one box in each group to show which statements best describe your own health state today. The boxes on the left are there to help you see the different levels within each group.

#### MOBILITY

- |                                     |                                       |                            |     |
|-------------------------------------|---------------------------------------|----------------------------|-----|
| <input type="checkbox"/>            | I have no problems in walking about   | <input type="checkbox"/> 1 | 907 |
| <input checked="" type="checkbox"/> | I have some problems in walking about | <input type="checkbox"/> 2 |     |
| <input checked="" type="checkbox"/> | I am confined to bed                  | <input type="checkbox"/> 3 |     |

#### SELF-CARE

- |                                     |   |                            |     |
|-------------------------------------|---|----------------------------|-----|
| <input type="checkbox"/>            | I have no problems with self-care               | <input type="checkbox"/> 1 | 908 |
| <input checked="" type="checkbox"/> | I have some problems washing or dressing myself | <input type="checkbox"/> 2 |     |
| <input checked="" type="checkbox"/> | I am unable to wash or dress myself             | <input type="checkbox"/> 3 |     |

#### USUAL ACTIVITIES

- |                                     |  |                            |     |
|-------------------------------------|--|----------------------------|-----|
| <input type="checkbox"/>            | I have no problems with performing my usual activities (e.g. work, study, housework, family or leisure activities) | <input type="checkbox"/> 1 | 909 |
| <input checked="" type="checkbox"/> | I have some problems with performing my usual activities   | <input type="checkbox"/> 2 |     |
| <input checked="" type="checkbox"/> | I am unable to perform my usual activities   | <input type="checkbox"/> 3 |     |

#### PAIN/DISCOMFORT

- |                                     |                                    |                            |     |
|-------------------------------------|------------------------------------|----------------------------|-----|
| <input type="checkbox"/>            | I have no pain or discomfort       | <input type="checkbox"/> 1 | 910 |
| <input checked="" type="checkbox"/> | I have moderate pain or discomfort | <input type="checkbox"/> 2 |     |
| <input checked="" type="checkbox"/> | I have extreme pain or discomfort  | <input type="checkbox"/> 3 |     |

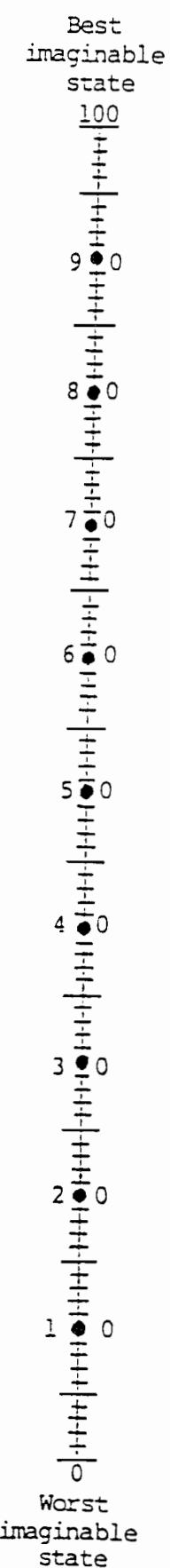
#### ANXIETY/DEPRESSION

- |                                     |                                      |                            |     |
|-------------------------------------|--------------------------------------|----------------------------|-----|
| <input type="checkbox"/>            | I am not anxious or depressed        | <input type="checkbox"/> 1 | 911 |
| <input checked="" type="checkbox"/> | I am moderately anxious or depressed | <input type="checkbox"/> 2 |     |
| <input checked="" type="checkbox"/> | I am extremely anxious or depressed  | <input type="checkbox"/> 3 |     |

SPARE

912-80

## CATEGORY RATING THERMOMETER



## **APPENDIX B**

## APPENDIX B

### Estimated weights for EQ-5D health states

1 1 1 1 1	1.000	1 1 1 1 2	0.848	1 1 1 1 3	0.414	1 1 1 2 1	0.796
1 1 1 2 2	0.725	1 1 1 2 3	0.291	1 1 1 3 1	0.264	1 1 1 3 2	0.193
1 1 1 3 3	0.028	1 1 2 1 1	0.883	1 1 2 1 2	0.812	1 1 2 1 3	0.378
1 1 2 2 1	0.760	1 1 2 2 2	0.689	1 1 2 2 3	0.255	1 1 2 3 1	0.228
1 1 2 3 2	0.157	1 1 2 3 3	-0.008	1 1 3 1 1	0.556	1 1 3 1 2	0.485
1 1 3 1 3	0.320	1 1 3 2 1	0.433	1 1 3 2 2	0.362	1 1 3 2 3	0.197
1 1 3 3 1	0.170	1 1 3 3 2	0.099	1 1 3 3 3	-0.066	1 2 1 1 1	0.815
1 2 1 1 2	0.744	1 2 1 1 3	0.310	1 2 1 2 1	0.692	1 2 1 2 2	0.621
1 2 1 2 3	0.187	1 2 1 3 1	0.160	1 2 1 3 2	0.089	1 2 1 3 3	-0.076
1 2 2 1 1	0.779	1 2 2 1 2	0.708	1 2 2 1 3	0.274	1 2 2 2 1	0.656
1 2 2 2 2	0.585	1 2 2 2 3	0.151	1 2 2 3 1	0.124	1 2 2 3 2	0.053
1 2 2 3 3	-0.112	1 2 3 1 1	0.452	1 2 3 1 2	0.381	1 2 3 1 3	0.216
1 2 3 2 1	0.329	1 2 3 2 2	0.258	1 2 3 2 3	0.093	1 2 3 3 1	0.066
1 2 3 3 2	-0.005	1 2 3 3 3	-0.170	1 3 1 1 1	0.436	1 3 1 1 2	0.365
1 3 1 1 3	0.200	1 3 1 2 1	0.313	1 3 1 2 2	0.242	1 3 1 2 3	0.077
1 3 1 3 1	0.050	1 3 1 3 2	-0.021	1 3 1 3 3	-0.186	1 3 2 1 1	0.400
1 3 2 1 2	0.329	1 3 2 1 3	0.164	1 3 2 2 1	0.277	1 3 2 2 2	0.206
1 3 2 2 3	0.041	1 3 2 3 1	0.014	1 3 2 3 2	-0.057	1 3 2 3 3	-0.222
1 3 3 1 1	0.342	1 3 3 1 2	0.271	1 3 3 1 3	0.106	1 3 3 2 1	0.219
1 3 3 2 2	0.148	1 3 3 2 3	-0.017	1 3 3 3 1	-0.044	1 3 3 3 2	-0.115
1 3 3 3 3	-0.280	2 1 1 1 1	0.850	2 1 1 1 2	0.779	2 1 1 1 3	0.345
2 1 1 2 1	0.727	2 1 1 2 2	0.656	2 1 1 2 3	0.222	2 1 1 3 1	0.195
2 1 1 3 2	0.124	2 1 1 3 3	-0.041	2 1 2 1 1	0.814	2 1 2 1 2	0.743
2 1 2 1 3	0.309	2 1 2 2 1	0.691	2 1 2 2 2	0.620	2 1 2 2 3	0.186
2 1 2 3 1	0.159	2 1 2 3 2	0.088	2 1 2 3 3	-0.077	2 1 3 1 1	0.487
2 1 3 1 2	0.416	2 1 3 1 3	0.251	2 1 3 2 1	0.364	2 1 3 2 2	0.293
2 1 3 2 3	0.128	2 1 3 3 1	0.101	2 1 3 3 2	0.030	2 1 3 3 3	-0.135
2 2 1 1 1	0.746	2 2 1 1 2	0.675	2 2 1 1 3	0.241	2 2 1 2 1	0.623
2 2 1 2 2	0.552	2 2 1 2 3	0.118	2 2 1 3 1	0.091	2 2 1 3 2	0.020
2 2 1 3 3	-0.145	2 2 2 1 1	0.710	2 2 2 1 2	0.639	2 2 2 1 3	0.205
2 2 2 2 1	0.587	2 2 2 2 2	0.516	2 2 2 2 3	0.082	2 2 2 3 1	0.055
2 2 2 3 2	-0.016	2 2 2 3 3	-0.181	2 2 3 1 1	0.383	2 2 3 1 2	0.312
2 2 3 1 3	0.147	2 2 3 2 1	0.260	2 2 3 2 2	0.189	2 2 3 2 3	0.024
2 2 3 3 1	-0.003	2 2 3 3 2	-0.074	2 2 3 3 3	-0.239	2 3 1 1 1	0.367
2 3 1 1 2	0.296	2 3 1 1 3	0.131	2 3 1 2 1	0.244	2 3 1 2 2	0.173
2 3 1 2 3	0.008	2 3 1 3 1	-0.019	2 3 1 3 2	-0.090	2 3 1 3 3	-0.255
2 3 2 1 1	0.331	2 3 2 1 2	0.260	2 3 2 1 3	0.095	2 3 2 2 1	0.208
2 3 2 2 2	0.137	2 3 2 2 3	-0.028	2 3 2 3 1	-0.055	2 3 2 3 2	-0.126
2 3 2 3 3	-0.291	2 3 3 1 1	0.273	2 3 3 1 2	0.202	2 3 3 1 3	0.037
2 3 3 2 1	0.150	2 3 3 2 2	0.079	2 3 3 2 3	-0.086	2 3 3 3 1	-0.113

UK Population Norms for EQ-5D

---

2 3 3 3 2	-0.184	2 3 3 3 3	-0.349	3 1 1 1 1	0.336	3 1 1 1 2	0.265
3 1 1 1 3	0.100	3 1 1 2 1	0.213	3 1 1 2 2	0.142	3 1 1 2 3	-0.023
3 1 1 3 1	-0.050	3 1 1 3 2	-0.121	3 1 1 3 3	-0.286	3 1 2 1 1	0.300
3 1 2 1 2	0.229	3 1 2 1 3	0.064	3 1 2 2 1	0.177	3 1 2 2 2	0.106
3 1 2 2 3	-0.059	3 1 2 3 1	-0.086	3 1 2 3 2	-0.157	3 1 2 3 3	-0.322
3 1 3 1 1	0.242	3 1 3 1 2	0.171	3 1 3 1 3	0.006	3 1 3 2 1	0.119
3 1 3 2 2	0.048	3 1 3 2 3	-0.117	3 1 3 3 1	-0.144	3 1 3 3 2	-0.215
3 1 3 3 3	-0.380	3 2 1 1 1	0.232	3 2 1 1 2	0.161	3 2 1 1 3	-0.004
3 2 1 2 1	0.109	3 2 1 2 2	0.038	3 2 1 2 3	-0.127	3 2 1 3 1	-0.154
3 2 1 3 2	-0.225	3 2 1 3 3	-0.390	3 2 2 1 1	0.196	3 2 2 1 2	0.125
3 2 2 1 3	-0.040	3 2 2 2 1	0.073	3 2 2 2 2	0.002	3 2 2 2 3	-0.163
3 2 2 3 1	-0.190	3 2 2 3 2	-0.261	3 2 2 3 3	-0.426	3 2 3 1 1	0.138
3 2 3 1 2	0.067	3 2 3 1 3	-0.098	3 2 3 2 1	0.015	3 2 3 2 2	-0.056
3 2 3 2 3	-0.221	3 2 3 3 1	-0.248	3 2 3 3 2	-0.319	3 2 3 3 3	-0.484
3 3 1 1 1	0.122	3 3 1 1 2	0.051	3 3 1 1 3	-0.114	3 3 1 2 1	-0.001
3 3 1 2 2	-0.072	3 3 1 2 3	-0.237	3 3 1 3 1	-0.264	3 3 1 3 2	-0.335
3 3 1 3 3	-0.500	3 3 2 1 1	0.086	3 3 2 1 2	0.015	3 3 2 1 3	-0.150
3 3 2 2 1	-0.037	3 3 2 2 2	-0.108	3 3 2 2 3	-0.273	3 3 2 3 1	-0.300
3 3 2 3 2	-0.371	3 3 2 3 3	-0.536	3 3 3 1 1	0.028	3 3 3 1 2	-0.043
3 3 3 1 3	-0.208	3 3 3 2 1	-0.095	3 3 3 2 2	-0.166	3 3 3 2 3	-0.331
3 3 3 3 1	-0.358	3 3 3 3 2	-0.429	3 3 3 3 3	-0.594	unconscious <sup>2</sup>	-
						0.402	

Source : A1 TARIFF BASED ON UK MVH SURVEY (1993)

---

<sup>2</sup> The value for unconscious is the mean observed value. It does not result from the regression model.