

**Department of Health, Social Services and Public Safety**  
**An Roinn Sláinte, Seirbhísí Sóisialta agus Sábháilteachta Poiblí**

# **Health and Lifestyle Report**

**2001**

**A Report from the Health and Social Wellbeing Survey 1997**

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## Preface

This report is based on the 1997 Northern Ireland Health and Social Wellbeing Survey.

It looks at levels of risk factors for disease, physical measures of health and lifestyle issues. It is a reflection of health status among adults aged over 16 in Northern Ireland. We have surprisingly lower levels of some risk factors for disease than other areas in Great Britain; for example levels of high blood pressure or alcohol intake. In other risk factors, especially being overweight or obese, there appears to be a picture of ill health that not only presents problems for the current health status but may also lead to high levels of disease in future.

In most, if not all, reports of prevalence of diseases or risk factors, there is a marked social gradient. Ill health remains inextricably linked with levels of income whether that is measured by social groupings or employment status. This is again the case with the results of this survey.

The information contained in this report will be of use to a wide range of people. Those who plan health services, target resources, work to promote health and reduce ill health. We acknowledge all those who worked to develop, carry out and analyse the survey. However any errors of reporting or analysis are the responsibility of the authors: B. Gaffney<sup>1</sup>, V. Gribbin<sup>2</sup>, K. Sweeney<sup>3</sup>, J. Yarnell<sup>4</sup>.

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## **Health and Lifestyles Report**

### **Executive Summary**

The Northern Ireland Health and Social Wellbeing Survey will periodically monitor the general health and health related issues affecting the adult population. This is the first published report based on the first survey. It provides an overview of the general health of the adult population of Northern Ireland and includes information on health and lifestyle factors, risk factors for disease and physical measures.

A random sample of 3520 addresses in Northern Ireland was selected for inclusion in the survey. The first stage was a face-to-face interview and the second was a physical appraisal by a nurse to obtain information such as blood pressure, body mass index and cholesterol. Interviews were sought with each adult aged 16 years and over in a household. One adult from each household was also randomly selected for the physical examination. If an interview was obtained from the selected respondent they were then asked for their consent to take part in the physical appraisal. The overall household response rate for the survey was 75%.

Although methodology and time periods differed slightly, it was possible to make general comparisons with information from previous surveys carried out in Northern Ireland, England and Scotland.

### **Long-standing Illness**

The Health and Social Wellbeing survey reported that 37% of men and 40% of women indicated that they had suffered a long-standing illness. These percentages were slightly higher than those found in the Continuous Household Survey 1996/97 for Northern Ireland.

There were discernible gender differences in relation to the incidence of long standing

illness in the 25-34 and 65-74 year age groups with women reporting higher levels than men.

As expected, the proportion of people with a long-standing illness increased with age. From less than 1 in 5 between the ages of 16-24, prevalence increased to over two thirds of those 75 or over.

Men in the skilled non-manual socio-economic had the lowest level of long-standing illness (27%) and those in the unskilled group had the highest (44%). Women in both of the non-manual socio-economic groups had a lower level of long-standing illness than women in any of the manual groups.

When asked specifically about whether their long-standing illness limited their activities 7% of men and 10% of women aged between 16-24 indicated that it had. The incidence of limiting long-standing illness increased with age to 54% of men and 55% of women aged 75 and over.

The most noticeable difference in response to the question on limiting long-standing illness was between categories of economic activity. Of those in employment, 10% of men and 12% of women indicated that they had a limiting long-standing illness, compared to 27% of unemployed men and 20% of unemployed women.

### **Blood Pressure**

17% of men and 25% of women reported having been informed by a health professional that they had high blood pressure.

The incidence of diagnosed high blood pressure increased with age for both men and women.

### **Severe Back Pain**

Men and women in non-manual occupations

reported a lower prevalence of severe back pain than those in manual occupations.

### **Smoking**

32% of people aged 16 and above reported that they currently smoke, with more men smoking than women, 35% compared to 30%.

The main difference in levels of smoking between men and women was in the over 45 year age group. This was mainly attributable to the increased incidence of cigar and pipe smoking in men, rather than a higher incidence of cigarette smoking.

Socio-economic status was associated with smoking prevalence. 27% of men and 24% of women in a professional/managerial occupation currently smoke in contrast to 42% and 43% respectively in the unskilled group.

34% of employed men smoked compared to 57% of unemployed men and 38% of inactive men of working age. The distribution among women was similar with 29% of employed, 35% of unemployed and 39% of inactive women of working age currently smoking.

Almost half of the sample (52% of men and 45% of women) indicated that they were regularly exposed to passive smoking. Exposure decreased with age from 76% of men and 74% of women aged 16-24 to 21% and 19% respectively of those aged over 75 years.

Those in lower socio-economic groups indicated they were exposed to passive smoking more often than those in higher socio-economic groups.

### **Drinking Alcohol**

Previous studies such as the Continuous Household Survey found that Northern

Ireland had much higher numbers of non-alcohol drinkers than in the rest of the United Kingdom. This disparity appears to be lessening with a decrease in abstinence in Northern Ireland.

79% of men and 72% of women were current drinkers. This was still considerably lower than reported in Health Survey for England 1996 where 93% of men and 89% of women were current drinkers.

A higher percentage of people in the younger age groups drank alcohol than in the older age groups.

There were significant differences in the number of current drinkers between socio-economic groups. For example, 86% of men in skilled non-manual occupations currently drink compared to 70% of unskilled men, while 81% of women in professional/managerial occupations drink compared to 56% in the skilled manual occupations.

The survey reported that 23% of male drinkers exceeded the sensible weekly limit of 21 units while 10% of women drinkers drank over the 14 unit sensible limit.

For both men and women, the proportion drinking over sensible limits decreased with age.

Men in the professional/managerial socio-economic group reported the lowest level of drinking above sensible limits.

A higher percentage of women in professional and managerial occupations drank over the recommended limit than any other socio-economic group.

### **Physical Measures**

The average heights in Northern Ireland were 174 cm for men and 161 cm for women.

For men, the average weight was 80.5 kg and for women 68.1 kg.

More than half of those measured for height and weight were either overweight (37%) or obese (19%) Among men, 46% were overweight and 17% obese, a total of 63% over the BMI level of 25kg/m<sup>2</sup>.

50% of women were above a BMI of 25kg/m<sup>2</sup>, 30% being overweight and 20% obese. More men were overweight but similar levels of obesity were reported for men and women.

The mean systolic blood pressure level for all those measured was 134 mmHg for men and 127 mmHg for women, while the mean diastolic levels were 74 mmHg and 69 mmHg respectively.

The Health Survey for England 1996, reported higher levels of blood pressure than those reported in the Health and Wellbeing Survey 1997.

The older the respondent the more likely they are to have hypertension. Among those aged 75 and over, 33% of men and 45% of women were hypertensive.

49% of men and 50% of women had a high cholesterol level, above 5.2 mmol/l.

### **Specific illnesses**

Similar levels of men (15%) and women (13%) indicated that they suffered from a circulatory illness.

Diabetes rose from 1% in 16-24 year old men to 10% in those aged 75 or over and from 0% in 16-24 year old women to 7% in 65-74 year olds.

9% of men and 10% of women indicated that they suffered from asthma. Women in the 65-74 age group showed the highest levels. 37% of men and women showed no cardiovascular risk factors.

The prevalence of the three illnesses, circulatory, diabetes and asthma was higher in women with manual occupations.

### **Stress**

More women (13%) than men (7%) reported a great deal of stress.

### **Risk Factors**

More men (35%) than women (30%) were current smokers with the highest incidence smoking being reported among 25-34 year old men (42%).

The highest incidence of smoking reported by women was among those aged 25-34 (40%).

Over twice as many men as women drank over the recommended weekly limits. Twenty seven percent of men aged 25-34 years drank over the recommended limits compared to 10% of women in the same age group.

High blood pressure or treatment for high blood pressure was found in 20% of men and almost 24% of women for whom physical measurements had been taken.

Similar levels of obesity, 17% of men and 19% of women, and high blood cholesterol 16% and 19% respectively, were reported amongst respondents who had physical measurements taken.

### **Combined Risk Factors**

Smoking and drinking more than recommended limits, high blood cholesterol, hypertension and obesity were considered simultaneously.

4% of men and 6% of women showed three or more cardiovascular risk factors.

### **Risk Factors and other Characteristics**

The proportion of respondents showing various combinations of risk factors was examined.

Respondents under 45 years of age were twice as likely to both smoke and drink above recommended limits (13%) as those aged 45 and over (7%).

Of those 45 years and older, 9% of men and 10% of women were both hypertensive and current smokers.

12% of men drank over the recommended limits and were also obese.

Almost twice the proportion of unemployed or economically inactive women had two or more risk factors compared to women who were employed.

More men and women in manual occupations, or previously employed in manual occupations, reported significantly more multiple risk factors than those in non-manual occupations.

The prevalence of long-standing illness and cardiovascular disease was higher in men and women who were hypertensive.

# 1. Introduction

## 1.1 Background

The Northern Ireland Health and Social Wellbeing Survey was commissioned by the Department of Health and Social Services together with the four Health and Social Services Boards. Fieldwork was carried out by the Central Survey Unit (a branch of NISRA, the Northern Ireland Statistics and Research Agency) between January and July 1997.

A steering group oversaw the development and management of the survey. The group consisted of representatives from the Department of Health and Social Services, the four Health and Social Services Boards, the Health Promotion Agency, the Central Survey Unit and an independent advisor.

The purpose of the Northern Ireland Health and Social Wellbeing Survey is to periodically monitor the general health and health related issues, affecting the adult population. The study was based on previous surveys such as the Change of Heart Baseline Study (1987/88) and the NI Health and Activity Survey (1992). These studies were used in the 1993 Regional Strategy for Northern Ireland Health and Personal Social Services to set targets. Consequently, the Survey Strategy for the NI Health and Personal Social Services, 1994-2004 recommended that a periodic survey be established, the objective being to provide information relating to strategy targets and where possible, to provide data comparable to that collected by health departments in Great Britain.

The areas highlighted in the Northern Ireland health strategy documents provided the core content for the Health and Wellbeing Survey. The 1992-97 strategy set a number of health targets to be monitored through the use of population surveys. These were, cigarette smoking, cholesterol levels, dietary fat intake, blood pressure and alcohol misuse.

The Regional Strategy 1997-2002 (Health and Wellbeing: Into the next Millennium) added a number of other areas, including circulatory diseases, mental health, family and child health and welfare, physical and sensory disability, asthma, and diabetes.

It is important to effectively monitor progress towards targets already set but also to identify issues upon which future efforts should concentrate. For this reason the Northern Ireland Health and Social Wellbeing Survey was also designed to be a major source of new baseline information.

The survey was designed to reflect the questionnaire structure, content and methodological approach of the Health Survey for England. However unlike the English survey, the NI Health and Social Wellbeing survey will not run annually but every few years. As with the English survey, the context of each round of the survey will vary, to both extend the range of coverage and to reflect changing areas of interest.

## 1.2 Methodology

A stratified random sample of 3520 addresses was selected from the Valuation and Land Agency list of private addresses in Northern Ireland. The survey was in two parts, firstly an interview was carried out in person by a trained interviewer and secondly for those who agreed, a nurse carried out a physical appraisal on one randomly selected individual in each household. The interviews and physical appraisals ran from January to July of 1997 and obtained a sample which in most respects matched the 1996-midyear estimates of population accurately enough to lie within the range of sampling error. The overall household response rate for the survey was 75%. A fuller description of the methodology and survey response rates is included in Appendix 1.

### **1.3 Health and Lifestyle report**

This report provides an overview of the general health of the adult population of Northern Ireland and includes information on health and lifestyle factors, risk factors for disease and physical measures. The main topics included are:

- Long-standing illness
- Back pain
- Smoking
- Drinking
- Obesity
- Hypertension
- Cholesterol levels
- Heart disease
- Diabetes
- Asthma
- Stress

The topic areas are examined by a number of classificatory variables, where appropriate, namely; age, sex, Health and Social Services Board area, religion, socio-economic group and economic status. The relationship between health and risk factors was also examined.

Additional reports will look in more detail at other aspects of the Health and Wellbeing Survey.

### **1.4 Notes**

Unless otherwise stated, changes and differences mentioned in the text have been found to be statistically significant at the 95% confidence level.

Figures of 0% in the tables reflect the rounding down of values under 0.5%.

Tables that show 'All' in the final column refer to the results with respect to all respondents, whereas those tables that analyse particular subgroups show 'Total' in the final column.

## **2. General Health**

## Introduction

This section provides details of the respondents' general health, including long-standing illness, high blood pressure, back pain and other musculoskeletal conditions. Analysis of data from the physical measures and more specific issues such as cardiovascular disease, are reported in Chapter 5.

### 2.1 Long-standing Illness

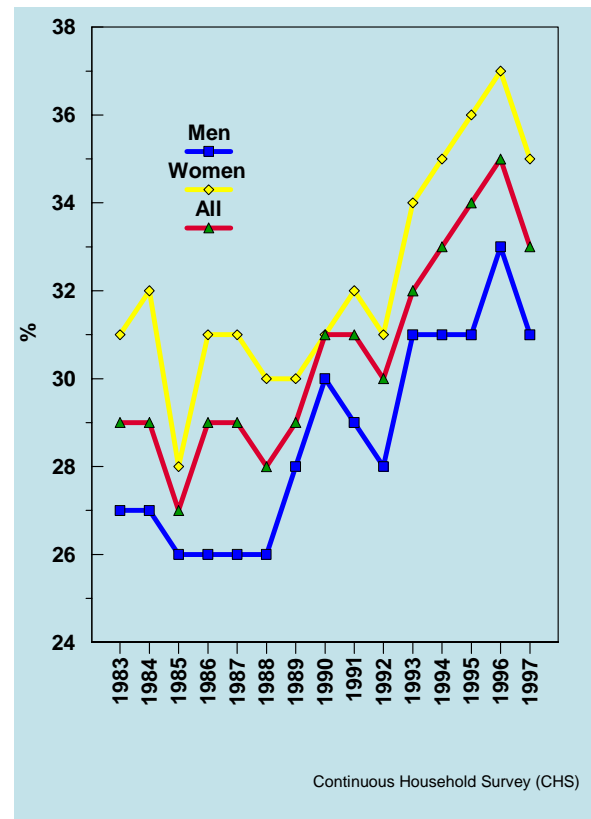
All those who took part in the survey were asked if they had "any long-standing illness, disability or infirmity". The term "long-standing illness" was defined as being any health problem that had troubled the respondent over a period of time, or that they believed was likely to affect them over a period of time.

Both the N.I. Continuous Household Survey and the General Household Survey in G.B. indicate that the reported level of long-standing illness has increased over the years. In the 1972 General Household Survey the proportion of respondents indicating that they suffered from a long-standing illness was 21%, rising to 35% in 1996. In the 1983 Continuous Household Survey, the figure was 29%, rising to 33% in 1996/97 (Figure 2.1).

In the 1997 Health and Social Wellbeing Survey, 37% of men and 40% of women indicated that they had a long-standing illness. These were higher than the levels of long-standing illness in the 1996/97 Continuous Household Survey, of 31% of men and 35% of women. However this may be due to the different nature of the two surveys. The Health and Social Wellbeing Survey may have obtained a higher figure as the questions asked were specifically about health, whereas in the Continuous Household Survey the questions covered a wide range of socio-economic issues.

(Table 2.1)

Figure 2.1 Trends in self-reported long-standing illness from 1983 in Northern Ireland (Persons aged 16 and over)



This context effect may also help to explain a similar difference between the Health Survey for England and the General Household Survey. The Health Survey for England 1996 reported that 39% of men and 40% of women had a long-standing illness as whereas the General Household Survey 1996, reported that 34% of men and 35% of women had a long-standing illness.

### Age and Gender

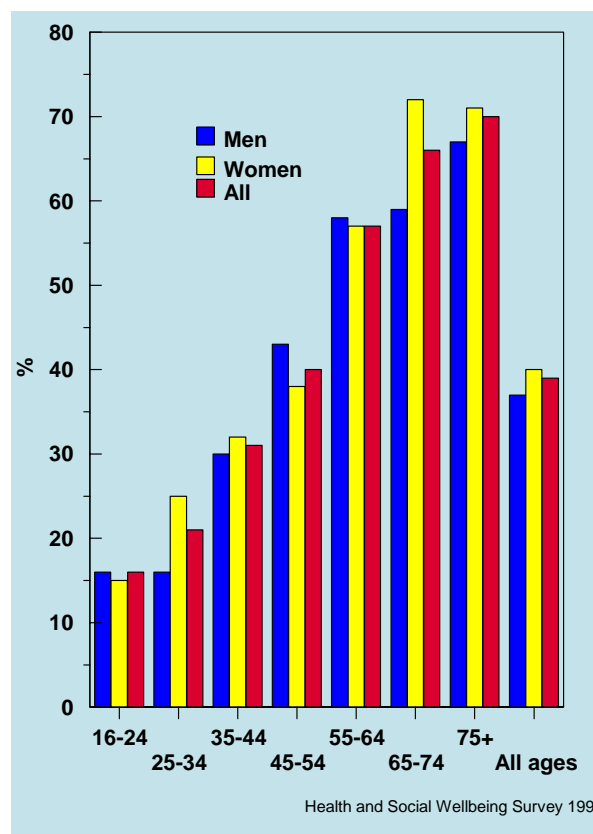
Overall women reported a higher level of long-standing illness (40%) than men (37%). When analysed by age, however, women in the 25-34 and 65-74 age groups had a higher level of long-standing illness than men. This difference was largest in the 65-74 age group, with 72% of women and 59% of men reporting a long-standing illness. In the 25-34 age group, reported levels were 25% of women and 16% of men. There were no

differences between men and women in the other age groups.

The proportion of people with a long-standing illness increased with age and there were marked differences between the age groups. Less than 1 in 5 of those aged 16-24 indicated having a long-standing illness (Figure 2.2) and this increased to over two thirds of those aged 75 or over.

(Table 2.1)

**Figure 2.2 Prevalence of long-standing illness for men and women of different age groups and overall (Persons aged 16 and over).**



### Socio-economic Group

Reported long-standing illness differed across socio-economic groups. Men in the skilled non-manual socio-economic group had the lowest level of long-standing illness (27%) and men in the unskilled socio-economic group had the highest level (44%).

Women in both the non-manual socio-economic groups had a lower level of long-standing illness than women in any of the manual socio-economic groups. For example 34% of professional/managerial women had a long-standing illness in comparison to 55% of women in the skilled manual socio-economic group.

(Table 2.2)

### Employment Status

A person's employment status was also related to reported occurrences of a long-standing illness. Of men in employment, 22% indicated that they had a long-standing illness. This increased to 37% among unemployed men and 58% of those classified inactive but of working age. The distribution of long-standing illness by employment status for women was similar to that of men with 23% of employed women reporting a long-standing illness compared to 32% of unemployed women and 45% of inactive women of working age.

(Table 2.3)

### Health and Social Services Board Areas

There were no differences in reported levels of long-standing illness between the HSS Board areas

(Table 2.4)

## 2.2 Limiting Long-standing Illness

Respondents who reported a long-standing illness were further asked if this illness 'limited' their everyday activities.

### Age and Sex

There was no significant difference between the sexes in relation to the percentage of people who indicated that they suffered from a long-standing illness that had limited their activities. There was, however, an increase in

prevalence with increasing age. Of those aged between 16-24, 7% of men and 10% of women indicated that they had a limiting long-standing illness compared to 54% and 55% of those aged 75 years and over.

(Table 2.5)

### ***Socio-economic category***

With regard to socio-economic group, there were significant differences reported on limiting long-standing illness by those in non-manual occupations in comparison to those in manual occupations. Among males, 20% of non-manual respondents indicated they had a limiting long-standing illness compared to 32% of those in manual employment. For women, these figures were 22% and 35% respectively. After adjustment for age the differences between these groups remained.

(Table 2.6)

### ***Health and Social Services Board Areas***

There was very little difference between HSS Board areas in relation to limiting long-standing illness, all reporting comparable levels. This remained the case after standardisation for age across the HSS Board areas.

(Table 2.7)

### ***Economic Activity***

The most marked differences in limiting long-standing illness were between categories of economic activity. Of employed men and women, 10% and 12% respectively indicated that they had a limiting long-standing illness compared to 27% of men and 20% of women who were unemployed and 51% of men and 36% of women of working age who were economically inactive. These differences were even more marked for women who were over 65 year old and economically

inactive with 56% reporting a long-standing illness.

(Table 2.8)

## **2.3 Blood Pressure**

When asked the question, "Have you ever been told by a doctor/nurse that you had high blood pressure?" 21% of respondents said that they had, 17% of men and 25% of women. This included women who had been told while they were pregnant, when there is a greater tendency towards having high blood pressure. However, this may not have persisted after pregnancy.

### ***Age and Gender***

Prevalence of diagnosed high blood pressure increased with age for both sexes. Among those aged 16-24, 4% of men and 9% of women indicated that they had been diagnosed with high blood pressure, rising to a peak at 34% of men and 43% of women aged 65-74. For those aged 75 and over, prevalence levels fell to 26% and 40% among men and women respectively.

(Table 2.9)

### ***Health and Social Services Board Areas***

There were no significant differences between the HSS Board areas with regard to prevalence of high blood pressure.

(Table 2.10)

### ***Manual/Non-manual***

There was no difference in prevalence of diagnosed high blood pressure between male non-manual and manual occupations. However, among women there was a significant difference, with 21% of women in non-manual occupations reporting high blood pressure compared to 29% of those in manual occupations. When adjusted for age these differences remained.

(Table 2.11)

### ***Economic Activity***

The economic activity of a respondent was related to diagnosed high blood pressure. For both sexes, no significant difference was reported between those who were employed, 12% of men and 17% of women, and those who were unemployed, 13% and 8% respectively. Caution should be used however for results relating to unemployed women, as the low base may have affected significance. Higher levels of diagnosed blood pressure were reported among those who were economically inactive, especially respondents over 65 years of age, 30% of men and 43% of women compared to 22% and 28% respectively of the economically inactive of working age.

*(Table 2.12)*

### **2.4 Pregnancy and high blood pressure**

10% of female respondents indicated that they had been diagnosed with high blood pressure when they were pregnant. This constituted 38% of all women who had been diagnosed as having high blood pressure. Of these pregnant women, 74% were under 45 years of age compared to 21% of women aged 45 and over.

*(Table 2.13)*

### **2.5 Medical treatment for high blood pressure**

People diagnosed with high blood pressure were asked about their medical treatment. Overall, of those under 45 years, 23% said that they currently took medication for high blood pressure compared to 66% of those aged 45 and over.

*(Table 2.14)*

### **2.6 Back Pain**

#### ***Age and Gender***

When asked if they had ever consulted a doctor about back pain, 38% of men and

41% of women indicated that they had. Of those aged 16-24, 17% of men and 25% of women had consulted a doctor regarding back pain. The prevalence of back pain rose with age to a peak among 55-64 year olds of whom 56% of men and 52% of women had seen a doctor about this problem.

*(Table 2.15)*

#### ***Health and Social Services Board Areas***

There were no significant differences in the percentages of those reporting back pain in the four HSS Board areas.

*(Table 2.16)*

#### ***Manual/Non-manual***

The percentage of men who had consulted a doctor about back pain was similar in both manual and non-manual socio-economic groups. However, among women there was a difference by socio-economic group, with 40% of women in non-manual occupations having consulted a doctor about back pain compared to 46% of women in manual occupations. This difference was not affected by age adjustment of the results. Women in the manual group were also more likely than men in the manual group to have consulted a doctor about back pain.

*(Table 2.17)*

#### ***Severe Back Pain***

Of all respondents, 16% of men and 22% of women indicated that they had suffered from "severe" back pain within the previous 12 months. There was a significant difference between those in manual and non-manual occupations with those in non-manual occupations having a lower prevalence of severe back pain.

*(Table 2.18 - 2.19)*

## **2.7 Musculoskeletal conditions**

When respondents were asked if they had any recurring trouble with their joints, 40% of men and 45% of women indicated that they had. These percentages increased with age from 16% of men and 20% of women aged 16-24 saying they suffered from this problem, compared to 56% and 71% respectively among those aged 75 and over.

*(Table 2.20)*

### ***Lower Body***

Of those who indicated that they had recurring trouble with their joints, 59% of men and 63% of women said that this had occurred in their hips, knees or ankles.

Approximately 50% of 16-44 year olds who suffered from pain in their joints, experienced pain in the joints of their lower body compared to over three quarters of those aged 65 and over.

*(Table 2.21)*

### ***Upper Body***

Higher proportions of both men (74%) and women (81%) who said that they had trouble with sore or swollen joints had this trouble in their upper rather than their lower body. However, for both sexes there was a significant difference between 45-64 year olds and those aged 65 or over. Of those aged between 45-64, 78% of men and 85% of women had upper body joint problems compared to 67% and 75% for those aged 65 and over. In view of the high prevalence of these symptoms at all ages it was likely that minor, self limiting conditions were predominantly being detected by these questions.

*(Table 2.22)*

## **Section 2 Tables**

**Table 2.1 Long standing illness by age and sex**

		Age group							All
		16-24	25-34	35-44	45-54	55-64	65-74	75+	
Have a long-standing illness	<b>Men</b>	16%	16%	30%	43%	58%	59%	67%	37%
	<b>Women</b>	15%	25%	32%	38%	57%	72%	71%	40%
<b>Bases</b>	<b>Men</b>	286	317	340	285	228	210	138	1803
	<b>Women</b>	378	474	445	391	274	290	213	2466

Health and Wellbeing Survey 1997

**Table 2.2 Long standing illness by socio-economic group and sex.**

		Socio-economic group					All
		Professional/ Managerial	Skilled non- manual	Skilled manual	Partly Skilled	Unskilled	
Have a long-standing illness	<b>Men</b>	36%	27%	42%	39%	44%	37%
	<i>Age adjusted</i>	28%	29%	36%	39%	42%	
	<b>Women</b>	34%	33%	55%	43%	53%	40%
	<i>Age adjusted</i>	32%	35%	43%	42%	43%	
<b>Bases</b>	<b>Men</b>	386	288	651	274	109	1803
	<b>Women</b>	204	1009	153	656	224	2466

Health and Wellbeing Survey 1997

**Table 2.3 Long standing illness by employment status and sex**

		Employment status				All
		Employed	Unemployed	Inactive working age	Inactive over 65 years	
Have a long-standing illness	<b>Men</b>	22%	37%	58%	64%	37%
	<i>Age adjusted</i>	24%	33%	-	-	-
	<b>Women</b>	23%	32%	45%	72%	40%
	<i>Age adjusted</i>	29%	38%	-	-	-
<b>Bases</b>	<b>Men</b>	1046	115	354	287	1803
	<b>Women</b>	1110	66	833	455	2466

Health and Wellbeing Survey 1997

**Table 2.4 Long standing illness by Health and Social Services Board area and sex**

		HSS Board area				All
		NHSSB	SHSSB	EHSSB	WHSSB	
Have a long-standing illness	<b>Men</b>	37%	39%	36%	37%	37%
	<i>Age adjusted</i>	33%	35%	33%	36%	
	<b>Women</b>	38%	41%	40%	39%	40%
	<i>Age adjusted</i>	37%	40%	40%	40%	
<b>Bases</b>	<b>Men</b>	458	321	766	257	1803
	<b>Women</b>	626	434	1025	381	2466

Health and Wellbeing Survey 1997

**Table 2.5 Limiting long standing illness by age and sex**

		Age group							All
		16-24	25-34	35-44	45-54	55-64	65-74	75+	
<b>Men</b>	Limiting long-standing illness	7%	10%	21%	27%	45%	47%	54%	26%
	Other long-standing illness	9%	6%	9%	16%	14%	11%	13%	11%
	No long-standing illness	84%	84%	71%	58%	42%	41%	33%	63%
<b>Women</b>	Limiting long-standing illness	10%	16%	20%	27%	41%	56%	55%	28%
	Other long-standing illness	5%	9%	12%	11%	16%	16%	16%	11%
	No long-standing illness	85%	75%	68%	62%	43%	28%	29%	60%
<b>Bases</b>	<b>Men</b>	286	317	340	285	228	210	138	1803
	<b>Women</b>	378	474	445	391	274	290	213	2466

Health and Wellbeing Survey 1997

**Table 2.6 Limiting long standing illness by non-manual/manual occupation and sex**

		Non-manual	Manual	All
Have a limiting long-standing illness	<b>Men</b>	20%	32%	27%
	<i>Age adjusted</i>	17%	28%	
	<b>Women</b>	22%	35%	28%
	<i>Age adjusted</i>	24%	32%	
<b>Bases</b>	<b>Men</b>	673	1034	1803
	<b>Women</b>	1213	1033	2466

Health and Wellbeing Survey 1997

**Table 2.7 Limiting long standing illness by Health and Social Services Board area and sex**

		HSS Board area				All
		NHSSB	SHSSB	EHSSB	WHSSB	
Have a limiting long-standing illness	<b>Men</b>	28%	27%	25%	27%	26%
	<i>Age adjusted</i>	24%	24%	23%	26%	
	<b>Women</b>	26%	29%	29%	29%	28%
	<i>Age adjusted</i>	25%	28%	29%	29%	
<b>Bases</b>	<b>Men</b>	458	321	766	257	1803
	<b>Women</b>	626	434	1025	381	2466

Health and Wellbeing Survey 1997

**Table 2.8 Limiting long standing illness by employment status and sex**

		Employment status				All
		Employed	Unemployed	Inactive working age	Inactive over 65 years	
Have a limiting long-standing illness	<b>Men</b>	10%	27%	51%	53%	26%
	<i>Age adjusted</i>	14%	24%	-	-	
	<b>Women</b>	12%	20%	36%	56%	28%
	<i>Age adjusted</i>	14%	24%	-	-	
<b>Bases</b>	<b>Men</b>	1046	115	354	287	1803
	<b>Women</b>	1110	66	833	455	2466

Health and Wellbeing Survey 1997

**Table 2.9 Ever had high blood pressure diagnosed by a doctor/nurse by age and sex**

		Age group							All
		16-24	25-34	35-44	45-54	55-64	65-74	75+	
Diagnosed high blood pressure	<b>Men</b>	4%	5%	12%	25%	25%	34%	26%	17%
	<b>Women</b>	9%	19%	17%	28%	37%	43%	40%	25%
<b>Bases</b>	<b>Men</b>	286	317	340	285	228	210	138	1803
	<b>Women</b>	378	474	445	391	274	290	213	2466

Health and Wellbeing Survey 1997

Includes: Women when pregnant

**Table 2.10 Ever had high blood pressure diagnosed by a doctor/nurse by Health and Social Services Board area and sex.**

		HSS Board area				All
		NHSSB	SHSSB	EHSSB	WHSSB	
Diagnosed high blood pressure	<b>Men</b>	18%	17%	16%	15%	17%
	<i>Age adjusted</i>	15%	15%	15%	15%	
	<b>Women</b>	26%	28%	24%	24%	25%
	<i>Age adjusted</i>	26%	27%	24%	24%	
<b>Bases</b>	<b>Men</b>	458	321	764	257	1803
	<b>Women</b>	626	433	1025	381	2466

Health and Wellbeing Survey 1997

Includes women while pregnant

**Table 2.11 Ever had high blood pressure diagnosed by a doctor/nurse by non-manual/manual occupation and sex.**

		Non-manual	Manual	All
		Diagnosed high blood pressure		
	<b>Men</b>	18%	17%	17%
	<i>Age adjusted</i>	15%	15%	
	<b>Women</b>	21%	29%	25%
	<i>Age adjusted</i>	22%	27%	
<b>Bases</b>	<b>Men</b>	673	1032	1803
	<b>Women</b>	1213	1032	2466

Health and Wellbeing Survey 1997

Includes women while pregnant

**Table 2.12 Ever had high blood pressure diagnosed by a doctor/nurse by employment status and sex**

		Employment status				All
		Employed	Unemployed	Inactive working age	Inactive over 65 years	
Diagnosed high blood pressure	<b>Men</b>	12%	13%	22%	30%	17%
	<i>Age adjusted</i>	12%	13%	-	-	
	<b>Women</b>	17%	8%	28%	43%	25%
	<i>Age adjusted</i>	15%	5%	-	-	
<b>Bases</b>	<b>Men</b>	1044	115	354	287	1803
	<b>Women</b>	1110	66	833	454	2466

Health and Wellbeing Survey 1997

Includes women while pregnant

**Table 2.13 Ever had high blood pressure diagnosed by a doctor/nurse in women by age**

	Age group		All
	16-44	45 and over	
Diagnosed high blood pressure when pregnant as a percentage of all women	11%	8%	10%
Diagnosed high blood pressure when pregnant as a percentage of all women with high blood pressure	74%	21%	38%
<b>Bases</b>	1298	1168	2466
	199	420	619

*Health and Wellbeing Survey 1997*

**Table 2.14 Diagnosed with high blood pressure and currently taking medication by age**

	Age group		Total
	16-44	45 and over	
Currently taking medicine	23%	66%	58%
<b>Bases</b>	136	614	750

*Health and Wellbeing Survey 1997*

**Table 2.15 Consulted a doctor about back pain by age and sex.**

		Age group							All
		16-24	25-34	35-44	45-54	55-64	65-74	75+	
Back Pain	Men	17%	35%	45%	43%	56%	39%	25%	38%
	Women	25%	41%	41%	45%	52%	49%	43%	41%
<b>Bases</b>	<b>Men</b>	286	317	340	285	228	210	138	1803
	<b>Women</b>	378	474	445	391	274	290	213	2466

*Health and Wellbeing Survey 1997*

**Table 2.16 Consulted a doctor about back pain by Health and Social Services Board area and sex**

		HSS Board area				
		NHSSB	SHSSB	EHSSB	WHSSB	All
<b>Back Pain</b>	<b>Men</b>	37%	37%	37%	40%	38%
	<i>Age adjusted</i>	35%	34%	38%	39%	
	<b>Women</b>	42%	41%	41%	41%	41%
	<i>Age adjusted</i>	42%	40%	41%	40%	
<b>Bases</b>	<b>Men</b>	458	321	766	257	1803
	<b>Women</b>	626	433	1025	381	2466

Health and Wellbeing Survey 1997

**Table 2.17 Consulted a doctor about back pain by non-manual/manual occupation and sex**

		Non-manual	Manual	All
<b>Back Pain</b>	<b>Men</b>	36%	40%	38%
	<i>Age adjusted</i>	34%	39%	
	<b>Women</b>	40%	46%	41%
	<i>Age adjusted</i>	40%	46%	
<b>Bases</b>	<b>Men</b>	673	1032	1803
	<b>Women</b>	1213	1032	2466

Health and Wellbeing Survey 1997

**Table 2.18 Back pain by age and sex**

		Age group		
		16-44	45 and over	All
<b>Men</b>	Seen doctor about back pain at some point	21%	24%	22%
	Severe back pain in past 12 mths	12%	19%	16%
	Never seen doctor about back pain	67%	57%	63%
<b>Women</b>	Seen doctor about back pain at some point	18%	21%	20%
	Severe back pain in past 12 mths	18%	26%	22%
	Never seen doctor about back pain	64%	53%	59%
<b>Bases</b>	<b>Men</b>	942	860	1803
	<b>Women</b>	1298	1167	2466

Health and Wellbeing Survey 1997

**Table 2.20 Suffer from recurrent trouble with joints by age and sex**

		Age group							
		16-24	25-34	35-44	45-54	55-64	65-74	75+	All
Sore Joints	Men	16%	35%	38%	44%	56%	53%	56%	40%
	Women	20%	29%	39%	53%	61%	65%	71%	45%
Bases	Men	286	317	340	285	228	210	138	1803
	Women	378	474	445	391	274	289	213	2466

*Health and Wellbeing Survey 1997*

**Table 2.21 Suffer from recurrent trouble with joints in lower body by age and sex**

		Age group			
		16-44	45-64	65 and over	Total
Sore Joints in Lower Body	Men	48%	58%	77%	59%
	Women	53%	60%	78%	63%
Bases	Men	286	253	188	727
	Women	384	373	340	1097

*Health and Wellbeing Survey 1997*

**Table 2.22 Suffer from recurrent trouble with joints in upper body by age and sex**

		Age group			
		16-44	45-64	65 and over	Total
Sore Joints in Upper Body	Men	76%	78%	67%	74%
	Women	82%	85%	75%	81%
Bases	Men	286	253	188	727
	Women	384	373	340	1097

*Health and Wellbeing Survey 1997*

### **3. Tobacco Use**

### 3.1 Tobacco Use

#### Introduction

Smoking is considered to be one of the main preventable factors causing ill health and death in Northern Ireland. As the Regional Strategy for Health and Social Wellbeing 1997-2002 states “During the last 25 years an estimated 67,000 people in Northern Ireland have died from illnesses caused by tobacco use”. Smoking increases the risk of contracting a number of conditions including cancer, heart disease, and stroke.

The Regional Strategy for Health and Social Wellbeing (1997-2002), aims to reduce levels of smoking among those aged 16 and over, from 28% to 26% by 2002 (based on the findings of the Continuous Household Survey for Northern Ireland).

Cigarette smoking has fallen significantly over the years, as shown in the Government publication “Social Trends 1998”. In 1972, 52% of men and 42% of women in Great Britain, aged 16 years or over, smoked cigarettes. In 1982, the figures were 38% and 33% respectively while in 1996/97 these were 29% and 28%, illustrating a decrease in the percentage of the British population who smoked cigarettes. However, these figures also showed that the gap between male and female smokers has significantly narrowed. It fell from a 10% difference in 1972 to a 1% difference in 1996/97. The Northern Ireland figures go back to 1984, where the Continuous Household Survey showed that 36% of men and 29% of women smoked, falling to 31% for men and 27% for women in 1996/97. This showed the same trend as in Great Britain.

The analysis of smoking and tobacco use in this report was based on the demographic characteristics of a number of smoking subgroups, namely current smokers, ex-smokers and those who have never smoked. Each of these groups was reported on in turn, with men and women analysed separately. In

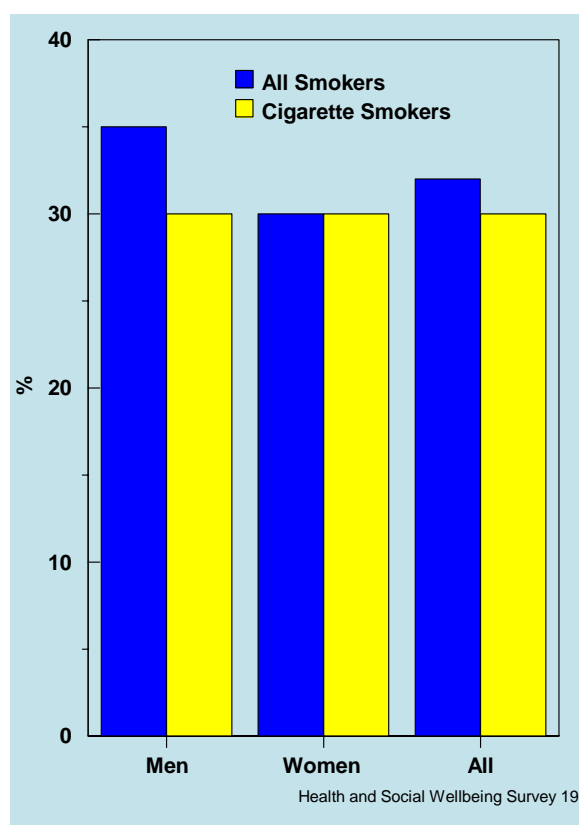
addition, smokers of cigarettes, cigars and pipes were analysed by their age and sex. As cigarette smokers constitute the majority of smokers, the average daily consumption of cigarettes was reported. People’s exposure to environmental smoke (passive smoking) was explored, showing both the extent of their exposure and the places where exposure most commonly occurred.

### 3.2 Smoking prevalence

32% of people aged 16 and above reported that they currently smoke, with more men smoking than women, 35% compared to 30%. For those who smoke only cigarettes, the figures were 30% for both sexes. This indicated that 5% of men smoke cigars or a pipe compared to a negligible percentage of women (Figure 3.1).

(Table 3.1)

Figure 3.1 Smoking prevalence for men, women and overall. (Persons aged 16 and over)

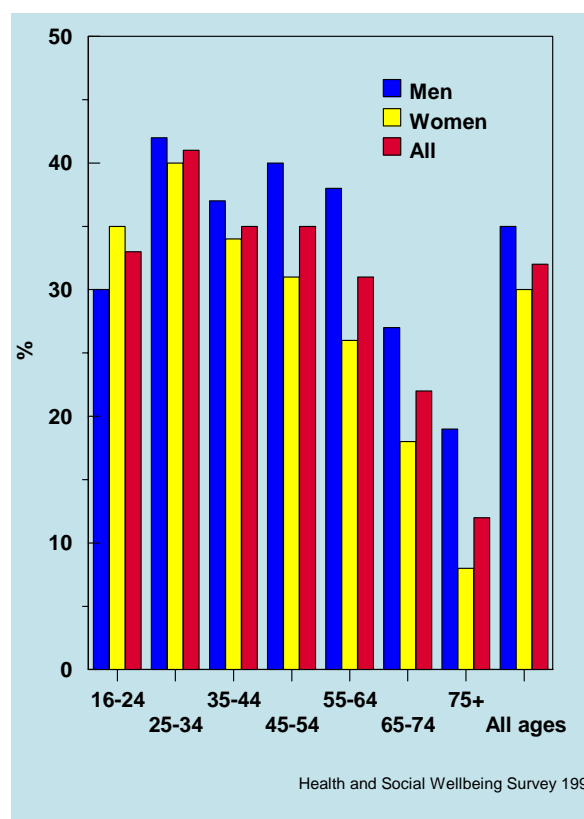


### Sex and Age group

In line with the general trend discussed previously on a narrowing gap between levels of male and female cigarette smokers, little difference was reported in the Health and Wellbeing Survey 1997 between the sexes (Figure 3.2). Any differences reported were amongst current smokers in the older age groups, over 45 years, and are attributable to increased incidence of cigar and pipe smoking among men rather than cigarette smoking. When analysed by age group, the proportion of current cigarette smokers remained fairly constant for both men and women until 65 years of age. Levels then decreased from 38% of 55-64 year old men to 19% of those aged over 75 years. A similar decrease was reported amongst women, from 26% of 55-64 year olds to 8% of those aged over 75 years.

(Table 3.1)

Figure 3.2 Smoking prevalence for men and women of different age groups and overall (Persons aged 16 and over)



### Health and Social Services Board Areas

Prevalence of smoking was similar for all four HSS Board areas with no significant difference existing. This remained the case when the figures were adjusted for age.

(Table 3.2)

### Socio-economic group

The results suggested a relationship between socio-economic status and smoking prevalence. Among men in professional/managerial occupations, 27% smoked compared with 42% of those who were unskilled. Among women, 24% of those in the professional/managerial group indicated that they currently smoke whereas this was almost double among unskilled women at 43%.

(Table 3.3)

### Employment status

34% of employed men smoked compared to 57% of unemployed men and 38% of inactive men of working age. The pattern among women differed only slightly with 29% employed, 51% unemployed and 39% inactive women of working age currently smoking.

(Table 3.4)

### Religion

As stated in the methodology (Appendix 1), care must be taken when analysing survey results by religious affiliation which has been linked to deprivation through indicators such as poor housing, low socio-economic group, long-term unemployment and lack of educational attainment. In turn, these factors could adversely affect health and are themselves associated with higher levels of risk factors for ill health.

With regard to the smoking habits of all respondents, 39% of Catholics currently smoke in comparison to 26% of Protestants.

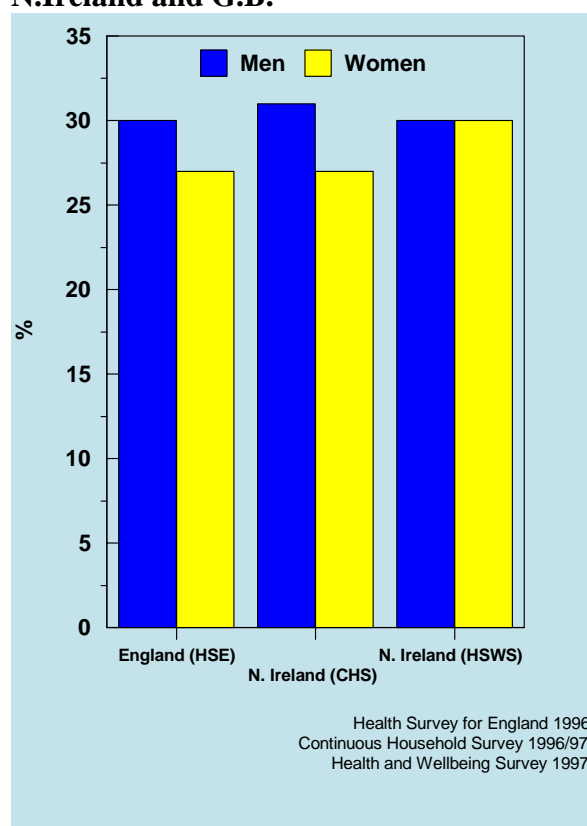
Among men, 41% of Catholics smoke compared to 30% of Protestants. The disparity was greater between Catholic and Protestant women than between men, with 38% of Catholic women currently smoking in contrast to 23% of Protestant women. These differences remained after adjustment for age.

(Table 3.5)

### Comparisons with other countries

Similar questions on smoking were asked in the Continuous Household Survey (1996/97) for England and the Health Survey for England (1996).

**Figure 3.3 Comparative figures of cigarette smoking prevalence between N.Ireland and G.B.**

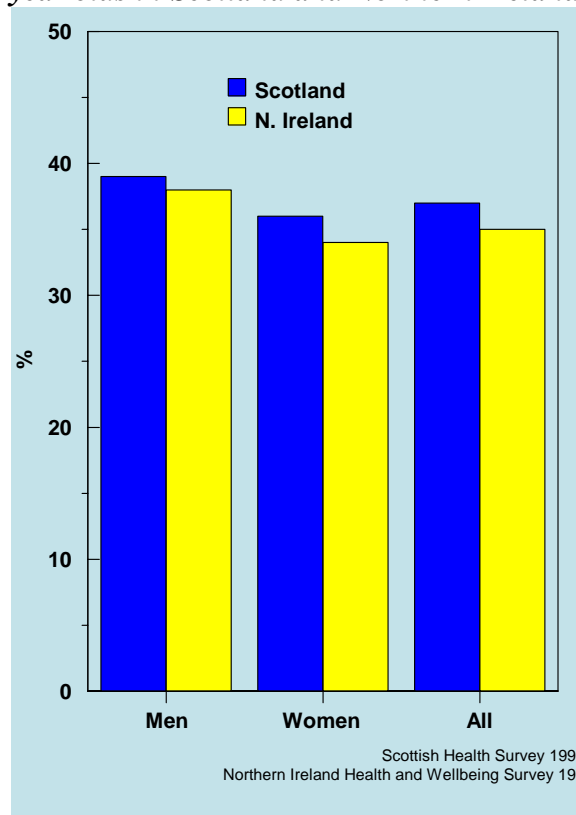


The 1996/97 Continuous Household Survey reported that 31% of men and 27% of women smoked cigarettes. The Health Survey for England 1996 reported similar figures stating that 30% of men and 27% of women smoked cigarettes. These figures differed only slightly, more so for women,

from those found in the Health and Social Wellbeing Survey which reported 30% of men and 30% of women smoked cigarettes (Figure 3.3).

Although the methodology and the time periods differed slightly for the Scottish Health Survey, it was still possible to make some general comparisons. When compared to Scotland, the Northern Ireland population was very similar in their reported smoking levels (Figure 3.4). The 1995 Scottish Health Survey sampled only those who were between 16 and 64 years of age and found that 37% were smokers, 39% of men and 36% of women. When this specific age group was analysed in the Health and Social Wellbeing Survey 1997, a similar distribution was observed with 35% currently smoking, 38% of men and 34% of women.

**Figure 3.4 Smoking prevalence of 16-64 year olds in Scotland and Northern Ireland**



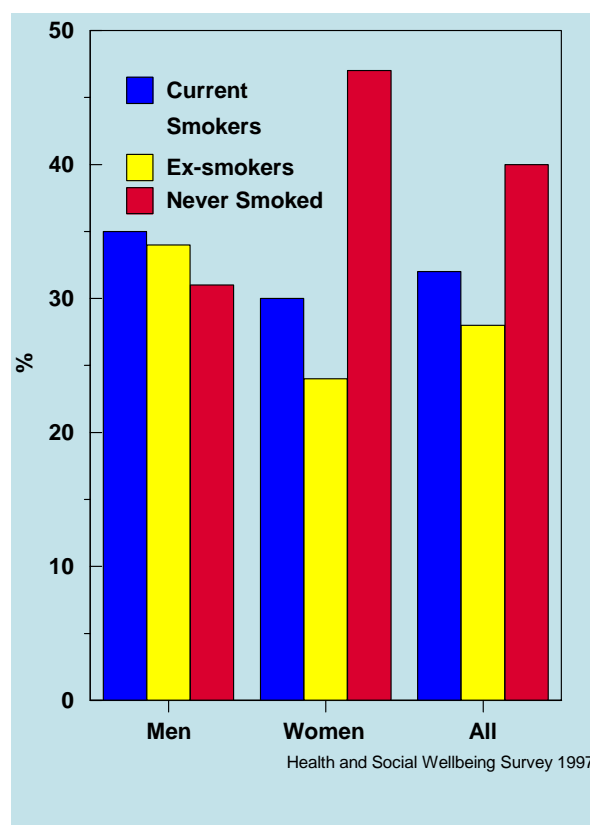
The 1992 N.I. Health and Activity Survey, suggested a lower incidence of smoking among males, reporting that 31% of men and

32% of women between the ages of 16-74 currently smoked compared to 36% of men and 32% of women in the Health and Social Wellbeing Survey.

### 3.3 Never smoked

Overall, 40% of those surveyed had never smoked, with almost half of women (47%) and a third of men (31%) never having smoked (Figure 3.5).

**Figure 3.5 Smoking status by sex. (All persons aged 16 and over)**



Among men, almost half of those aged 16-24 (48%) had never smoked in comparison to only a quarter of those aged over 45 (23-26%). For women, the highest number who had never smoked, 72%, were in the 75+ age group. The proportion of women who reported never having smoked declined with decreasing age to 38% of 35-44, year olds and then increased to 49% amongst 16-24 year olds, a level comparable with men of the same age. While caution should be taken

when comparing these figures, as smoking may have already contributed to the death of many older people, they do reflect changes in society with more women having taken up smoking in recent years.

(Table 3.1)

### 3.4 Ex-smokers

About a third of men (34%) and a quarter of women (24%) were ex-smokers (Figure 3.5). The percentage of women who were ex-smokers increased from 16% among 16-24 year olds to 29% among 65-74 year olds. However, for men, 22% of 16-24 year olds were ex-smokers, increasing to 55% of those aged 75 and over. Among older age groups, higher percentages of men than women were ex-smokers.

(Table 3.1)

### Socio-economic Group

No clear socio-economic pattern could be seen with regard to ex-smokers although differences existed between economic groupings. Among men, levels of ex-smokers were highest in the professional/managerial socio-economic group (42%) and lowest in the skilled non-manual group (28%). Levels of ex-smokers among women were also highest in the professional/managerial group (32%), with little variation across the other socio-economic groups.

(Table 3.3)

### 3.5 Cigarette smokers

The majority of smokers (92%), smoked cigarettes, with the remaining 8% smoking either cigars or pipes. A negligible number of women smoked cigars or a pipe, whereas 16% of male current smokers, smoked tobacco other than in cigarettes. Not only were there differences between the sexes with regard to what people smoke but also in

relation to age groups. For instance, 99% of men aged 16-24 who currently smoke, smoke cigarettes, whereas among male smokers aged 75 or over, the percentage of cigarette smokers fell to 49%. This may be due to both the change in men's smoking habits over the years but also to the fact that as smokers get older their preferences may change.

(Table 3.6)

### 3.6 Average daily cigarette consumption

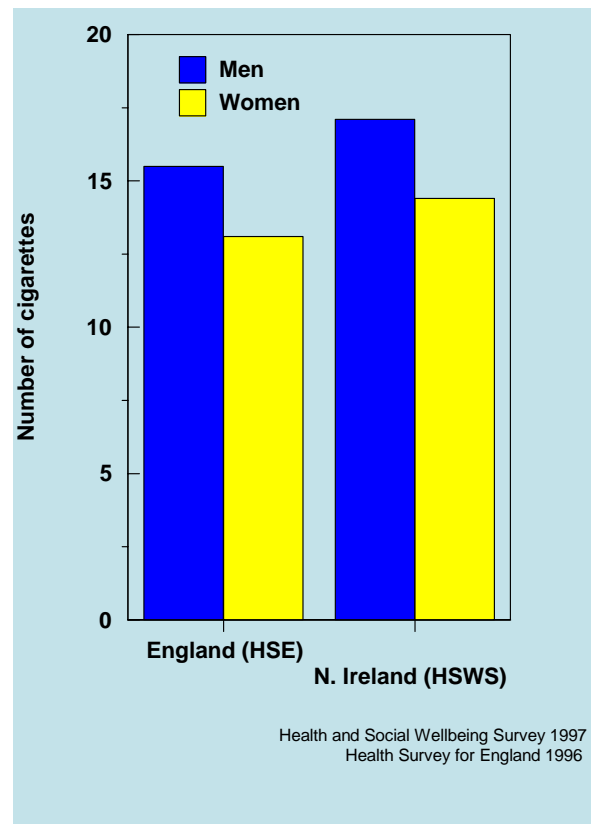
Men who smoked cigarettes, consumed an average of 17 cigarettes per day, compared to an average of 14 cigarettes per day for women. Between the age groups however, there were interesting fluctuations. Men between the ages of 16-24 smoked an average of 14 cigarettes per day, rising to 19 per day for those aged between 35-44 and falling again to 16 per day for those aged 75 and over.

Women aged 16-24, smoked an average of 11 cigarettes per day, which increased to 17 per day for women aged 45-54 years of age and then fell off to an average of 9 per day for those women aged 75 or over.

(Table 3.7)

The Scottish Health Survey (1995) showed that the daily cigarette consumption levels for 16-64 year olds were not markedly different from the same age group in Northern Ireland, with 18 per day smoked by men and 15 per day smoked by women, compared to 17 and 15 respectively in the Health and Social Wellbeing Survey, 1997. However, compared to the Health Survey for England 1996, Northern Ireland smokers smoked more per day, with English men smoking 16 per day on average and women 13 per day (Figure 3.6).

Figure 3.6 Number of cigarettes smoked per day by current cigarette smokers in England and N. Ireland. (All persons aged 16 and over)



### 3.7 Heavy Smokers

Heavy smokers (those smoking 20 cigarettes or more per day) constituted 40% of all cigarette smokers. Among male cigarette smokers, 47% smoked heavily while this figure was 35% for women. The predominance of heavy smoking was among men aged 35-44, with nearly two thirds (62%) smoking 20 or more cigarettes every day, compared to 47% of women in the same age group.

(Table 3.8)

### 3.8 Environmental exposure (Passive Smoking)

Almost half the sample, 52% of men and 45% of women, indicated that they were regularly exposed to passive smoking. Of 16-24 year olds, three quarters (76% of men and

74% of women) said they were exposed to passive smoking regularly. This number declined steadily to one fifth of those aged 75 and over (21% of men and 19% of women). This may be due to a number of factors including changes in leisure time and environment with age, reduced social interaction in the elderly and the possibility that younger people may be more aware of passive smoking.

*(Table 3.9)*

### ***Socio-economic Group***

The socio-economic group of a respondent appears to be related to exposure to passive smoking. For example, 38% of those in the professional/managerial socio-economic group indicated being regularly exposed compared to approximately a half of those in manual socio-economic groups. This difference remained when the figures were age adjusted.

*(Table 3.10)*

### ***The effect of smoking status on passive smoking***

Among current smokers, 52% said they were regularly exposed to passive smoking in contrast to 44% of those who have never smoked. Among those who passively smoke, 49% of current smokers said they were exposed to passive smoking every day compared to 33% of those who have never smoked.

*(Tables 3.11 - 3.12)*

### ***Health and Social Services Board Areas***

For those who were environmentally exposed to smoke every day, the HSS Board area with the highest percentage was the Eastern HSS Board area with 44%, compared to 33% in the Southern HSS Board area.

*(Table 3.13)*

### ***Socio-economic Group***

Reflecting the trend observed among all respondents, the socio-economic group of a passive smoker was related to exposure. Of those in professional/managerial occupations 32% indicated that they were exposed to passive smoking each day in comparison to 46% of those in unskilled occupations.

*(Table 3.14)*

### ***Where passive smoking occurs***

Passive smokers were asked to indicate any places where passive smoking occurred. Over half of passive smokers (52%) said that they were exposed to it in their leisure time (i.e. public bars and clubs etc.) and 23% indicated that it occurred when they visited friends and relatives. When analysed by socio-economic group, 62% of professionals and managers who passively smoked did so in their leisure time compared to 25% at home. This is in contrast to those in the unskilled socio-economic group of whom 45% passively smoked both in their leisure time and at home.

*(Tables 3.15 - 3.16)*

### ***Smoking and Alcohol***

There was a clear relationship between tobacco and alcohol usage. A clear majority of non-drinkers were also non-smokers (83% of men and 84% of women), whereas increased drinking was associated with an increase in low and heavy smoking for both men and women.

*(Table 3.17)*

The methodology used in relation to alcohol consumption was similar to that of the Health Survey for England 1996. This was based on self-reported prevalence of drinking, alcohol type and quantity consumed.

However, this method relied on the ability of the respondent to accurately recall their recent drinking activity and may be subject to response effects including forgetfulness and/or other types of inaccurate recall.

# Section 3 Tables

**Table 3.1 Smoking status by age and sex.**

		Age group							
		16-24	25-34	35-44	45-54	55-64	65-74	75+	All
<b>Men</b>	<b>Current Smokers</b>								
	- All types	30%	42%	37%	40%	38%	27%	19%	35%
	- Cigarettes	30%	40%	32%	32%	30%	23%	10%	30%
	<b>Ex Smokers</b>	22%	27%	29%	37%	39%	47%	55%	34%
	<b>Never Smoked</b>	48%	31%	35%	23%	23%	26%	26%	31%
<b>Women</b>	<b>Current Smokers</b>								
	- All types	35%	40%	34%	31%	26%	18%	8%	30%
	- Cigarettes	35%	40%	34%	31%	26%	18%	7%	30%
	<b>Ex Smokers</b>	16%	20%	28%	26%	28%	29%	21%	24%
	<b>Never Smoked</b>	49%	40%	38%	43%	47%	53%	72%	47%
<b>All</b>	<b>Current Smokers</b>								
	- All types	33%	41%	35%	35%	31%	22%	12%	32%
	- Cigarettes	33%	40%	33%	31%	28%	20%	8%	30%
	<b>Ex Smokers</b>	19%	23%	28%	31%	33%	36%	35%	28%
	<b>Never Smoked</b>	49%	37%	37%	35%	36%	42%	53%	40%
<b>Bases</b>	<b>Men</b>	286	318	339	285	227	208	138	1801
	<b>Women</b>	378	475	446	391	274	290	212	2466

Health and Social Wellbeing Survey 1997

**Table 3.2 Smoking status by Health and Social Services Board area and sex.**

		HSS Board area				
		NHSSB	SHSSB	EHSSB	WHSSB	All
<b>Men</b>	<b>Current Smokers</b>					
	- All types	35%	35%	34%	36%	35%
	Age adjusted	35%	36%	36%	36%	
	- Cigarettes	28%	29%	31%	32%	30%
	Age adjusted	30%	30%	32%	32%	
	<b>Ex Smokers</b>	32%	37%	35%	32%	34%
	Age adjusted	31%	35%	33%	31%	
	<b>Never Smoked</b>	33%	28%	31%	32%	31%
	Age adjusted	34%	29%	31%	33%	
<b>Women</b>	<b>Current Smokers</b>					
	- All types	27%	28%	31%	32%	30%
	Age adjusted	27%	28%	31%	31%	
	- Cigarettes	27%	28%	31%	32%	30%
	Age adjusted	27%	28%	31%	31%	
	<b>Ex Smokers</b>	24%	25%	23%	22%	24%
	Age adjusted	24%	25%	23%	22%	
	<b>Never Smoked</b>	49%	47%	46%	46%	47%
	Age adjusted	49%	47%	45%	47%	
<b>Bases</b>	<b>Men</b>	457	321	766	257	1801
	<b>Women</b>	626	432	1025	381	2466

Health and Social Wellbeing Survey 1997

**Table 3.3 Smoking status by socio-economic group and sex.**

		<b>Socio-economic group</b>					
		<b>Professional/ Managerial</b>	<b>Skilled Non- Manual</b>	<b>Skilled Manual</b>	<b>Partly Skilled</b>	<b>Unskilled</b>	<b>All</b>
<b>Men</b>	<b>Current Smokers</b>						
	- All types	27%	34%	40%	35%	42%	35%
	Age adjusted	29%	33%	40%	37%	47%	
	- Cigarettes	19%	29%	36%	34%	39%	30%
	Age adjusted	22%	27%	37%	36%	43%	
	<b>Ex Smokers</b>	42%	28%	35%	33%	29%	34%
	Age adjusted	35%	29%	33%	31%	29%	
<b>Never Smoked</b>	31%	38%	25%	32%	29%	31%	
Age adjusted	37%	38%	29%	32%	27%		
<b>Women</b>	<b>Current Smokers</b>						
	- All types	24%	24%	31%	39%	43%	30%
	Age adjusted	27%	23%	38%	39%	45%	
	- Cigarettes	24%	24%	31%	39%	43%	30%
	Age adjusted	27%	23%	38%	39%	45%	
	<b>Ex Smokers</b>	32%	25%	28%	21%	23%	24%
	Age adjusted	34%	25%	35%	25%	20%	
<b>Never Smoked</b>	44%	52%	41%	40%	35%	47%	
Age adjusted	42%	53%	30%	40%	36%		
<b>Bases</b>	<b>Men</b>	386	287	651	274	110	1801
	<b>Women</b>	204	1009	153	657	223	2466

Health and Social Wellbeing Survey 1997

**Table 3.4 Smoking status by employment status by sex.**

		<b>Employment status</b>			
		<b>Employed</b>	<b>Unemployed</b>	<b>Inactive working age</b>	<b>Inactive over 65 yrs</b>
<b>Men</b>	<b>Current Smokers</b>				
	- All types	34%	57%	38%	23%
	- Cigarettes	30%	56%	34%	17%
	<b>Ex-smokers</b>	32%	16%	33%	51%
	<b>Never smoked</b>	34%	27%	29%	26%
<b>Women</b>	<b>Current Smokers</b>				
	- All types	29%	51%	39%	12%
	- Cigarettes	29%	51%	39%	12%
	<b>Ex-smokers</b>	26%	14%	21%	25%
	<b>Never smoked</b>	46%	35%	40%	63%
<b>Bases</b>	<b>Men</b>	1046	115	354	287
	<b>Women</b>	1110	66	833	455

Health and Social Wellbeing Survey 1997

**Table 3.5 Smoking status by religion and sex.**

		Religion		
		Catholic	Protestant	All
<b>Men</b>	<b>Current Smokers</b>			
	- All types	41%	30%	35%
	Age adjusted	41%	31%	
	- Cigarettes	36%	25%	30%
	Age adjusted	36%	27%	
	<b>Ex Smokers</b>	28%	38%	34%
	Age adjusted	28%	36%	
	<b>Never Smoked</b>	31%	32%	31%
	Age adjusted	31%	33%	
<b>Women</b>	<b>Current Smokers</b>			
	- All types	38%	23%	30%
	Age adjusted	36%	24%	
	- Cigarettes	38%	23%	30%
	Age adjusted	36%	24%	
	<b>Ex Smokers</b>	23%	25%	24%
	Age adjusted	23%	24%	
	<b>Never Smoked</b>	39%	53%	47%
	Age adjusted	40%	52%	
<b>Bases</b>	<b>Men</b>	646	1132	1801
	<b>Women</b>	986	1448	2466

Health and Social Wellbeing Survey 1997

**Table 3.6 Current smokers - Types of tobacco smoked by age and sex.**

		Age group							Total
		16-24	25-34	35-44	45-54	55-64	65-74	75+	
<b>Men</b>	<b>Cigarettes</b>	99%	93%	86%	77%	73%	84%	49%	84%
	<b>Cigars</b>	1%	7%	10%	12%	15%	6%	17%	9%
	<b>Pipe</b>	-	-	3%	11%	12%	10%	34%	7%
<b>Women</b>	<b>Cigarettes</b>	100%	100%	100%	100%	99%	99%	100%	100%
	<b>Cigars</b>	-	-	-	-	2%	1%	-	0%
	<b>Pipe</b>	-	-	-	1%	-	-	-	0%
<b>Bases</b>	<b>Men</b>	86	134	124	114	87	56	26	627
	<b>Women</b>	132	189	152	121	70	52	16	731

Health and Social Wellbeing Survey 1997

**Table 3.7 The mean number of cigarettes smoked per day by age and sex.**

	Age group							Total
	16-24	25-34	35-44	45-54	55-64	65-74	75+	
	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean
<b>Men</b>	13.7	16.4	19.3	19.2	17.1	16.3	16	17.1
<b>Women</b>	11.4	14.6	16.6	17.1	13.6	10.5	9.4	14.4

*Health and Social Wellbeing Survey 1997*

**Table 3.8 Smoking band by age and sex**

		Age group							Total
		16-24	25-34	35-44	45-54	55-64	65-74	75+	
<b>Men</b>	1-9 cigarettes per day	28%	18%	11%	14%	19%	18%	20%	18%
	10-19 cigarettes per day	49%	41%	27%	29%	29%	34%	46%	35%
	20 cigarettes or over per day	24%	41%	62%	57%	53%	48%	35%	47%
<b>Women</b>	1-9 cigarettes per day	30%	30%	18%	14%	27%	41%	62%	26%
	10-19 cigarettes per day	53%	33%	36%	42%	36%	44%	19%	39%
	20 cigarettes or over per day	17%	37%	47%	45%	37%	15%	19%	35%
<b>All</b>	1-9 cigarettes per day	29%	26%	15%	14%	23%	30%	42%	22%
	10-19 cigarettes per day	52%	36%	32%	36%	32%	39%	32%	38%
	20 cigarettes or over per day	20%	39%	53%	50%	45%	31%	26%	40%
<b>Bases</b>	<b>Men</b>	85	126	109	92	68	49	14	542
	<b>Women</b>	127	188	147	120	69	51	15	718
	<b>All</b>	213	314	256	212	137	100	28	1259

*Health and Social Wellbeing Survey 1997*

**Table 3.9 Time spent regularly in enclosed places where other people are smoking or have been smoking (when not smoking yourself) by age.**

		Age group							All
		16-24	25-34	35-44	45-54	55-64	65-74	75+	
<b>Men</b>	Regular passive smoking	76%	60%	50%	52%	48%	33%	21%	52%
<b>Women</b>	Regular passive smoking	74%	52%	39%	45%	39%	27%	19%	45%
<b>Bases</b>	<b>Men</b>	286	317	340	285	227	209	138	1801
	<b>Women</b>	378	474	445	391	274	289	212	2466

*Health and Social Wellbeing Survey 1997*

**Table 3.10 Time spent regularly in enclosed places where other people are smoking or have been smoking (when not smoking yourself) by socio-economic group**

	Socio-economic group					All
	Professional/ Managerial	Skilled Non-Manual	Skilled Manual	Partly Skilled	Unskilled	
<b>Regular passive smoking</b>	38%	45%	51%	51%	49%	48%
<i>Age adjusted</i>	37%	45%	56%	52%	52%	
<b>Bases</b>	590	1296	804	930	333	4267

*Health and Social Wellbeing Survey 1997*

**Table 3.11 Time spent regularly in enclosed places where other people are smoking or have been smoking (when not smoking yourself) by smoking status.**

		Smoking status			All
		Current Smokers	Ex Smokers	Never Smoked	
<b>Regular passive smoking</b>	Yes	52%	48%	44%	48%
<b>Bases</b>		1358	1196	1710	4267

*Health and Social Wellbeing Survey 1997*

**Table 3.12 Time spent passive smoking by smoking status**

	Smoking status		Total
	Current smoker	Ex/non-smoker	
<b>Every day</b>	49%	33%	39%
<b>At least one hour a week</b>	42%	49%	46%
<b>Less than one hour per week</b>	9%	18%	15%
<b>Bases</b>	701	1331	2032

*Health and Social Wellbeing Survey 1997*

**Table 3.13 Time spent passive smoking by Health and Social Services Board area.**

	HSS Board area				Total
	NHSSB	SHSSB	EHSSB	WHSSB	
<b>Every day</b>	34%	33%	44%	37%	39%
<b>At least one hour a week</b>	52%	49%	40%	52%	46%
<b>Less than one hour per week</b>	14%	17%	16%	11%	15%
<b>Bases</b>	529	345	858	301	2033

*Health and Social Wellbeing Survey 1997*

**Table 3.14 Time spent passive smoking by socio-economic group.**

	Socio-economic group					Total
	Professional & managerial	Skilled non-manual	Skilled manual	Partly Skilled	Unskilled	
Every day	32%	33%	38%	45%	46%	39%
At least one hour a week	45%	50%	47%	46%	45%	46%
Less than one hour per week	24%	17%	15%	9%	10%	15%
<b>Bases</b>	239	578	408	474	161	2033

*Health and Social Wellbeing Survey 1997*

**Table 3.15 Places where passive smoking occurs by age.**

	Age group							Total
	16-24	25-34	35-44	45-54	55-64	65-74	75+	
Home	39%	29%	31%	30%	39%	33%	35%	34%
Work	28%	30%	36%	31%	18%	4%	0%	26%
Visiting family/friends	21%	29%	19%	19%	22%	19%	33%	23%
Leisure time	57%	55%	49%	47%	43%	61%	37%	52%
Other	4%	1%	2%	2%	2%	3%	1%	2%
<b>Bases</b>	498	437	342	325	217	148	69	2033

*Health and Social Wellbeing Survey 1997*

*Not mutually exclusive categories*

**Table 3.16 Places where passive smoking occurs by socio-economic group**

	Socio-economic group					Total
	Professional/ Managerial	Skilled Non-Manual	Skilled Manual	Partly Skilled	Unskilled	
Home	25%	29%	33%	38%	45%	33%
Work	29%	26%	26%	31%	29%	28%
Visiting family/friends	18%	21%	20%	27%	24%	22%
Leisure time	62%	50%	56%	46%	45%	51%
Other	2%	3%	3%	1%	2%	2%
<b>Bases</b>	240	579	408	474	161	1863

*Health and Social Wellbeing Survey 1997*

*Not mutually exclusive categories*

**Table 3.17 Units of alcohol drank per week by smoking status and sex**

		<b>Drinking status</b>				
		<b>Ex/non drinkers</b>	<b>Low (0-10 units)</b>	<b>Moderate (&gt;10-21 units)</b>	<b>Fairly High (&gt;21-50 units)</b>	<b>High (Over 50units)</b>
<b>Men</b>	<b>Ex/non smokers</b>	83%	72%	63%	60%	40%
	<b>1-19 cigarettes per day</b>	7%	17%	20%	23%	22%
	<b>20 cigarettes or over per day</b>	10%	11%	17%	17%	38%
		<b>Ex/non drinkers</b>	<b>Low (0-7 units)</b>	<b>Moderate (&gt;7-14 units)</b>	<b>FairlyHigh (&gt;14-35 units)</b>	<b>High (Over 35units)</b>
<b>Women</b>	<b>Ex/non smokers</b>	84%	70%	57%	41%	28%
	<b>1-19 cigarettes per day</b>	10%	19%	30%	37%	56%
	<b>20 cigarettes or over per day</b>	5%	11%	14%	23%	17%
<b>Bases</b>		374	582	229	366	139
		686	1239	293	155	18

*Health and Social Wellbeing Survey 1997*

## **4. Alcohol Consumption**

## 4.1 Alcohol Consumption

The health risks associated with the consumption of alcohol vary with age, sex and body mass. Recommended “safe levels” of consumption of alcohol are, 21 units per week for men and 14 units per week for women. However, more recently and due to further research (Sensible Drinking: the Report of an Interdepartmental Working Group, Department of Health, December 1995), the safe limits have been changed to 28 units per week for men and 21 units for women. The new system however, is more complex than its predecessor, emphasising daily consumption rather than weekly intake, and as such, has been overlooked in most surveys in favour of the old system. This being the case, for the dual purposes of continuity and comparison, the older cut-offs of 21 units for men and 14 units for women were used here.

### *Non-drinkers*

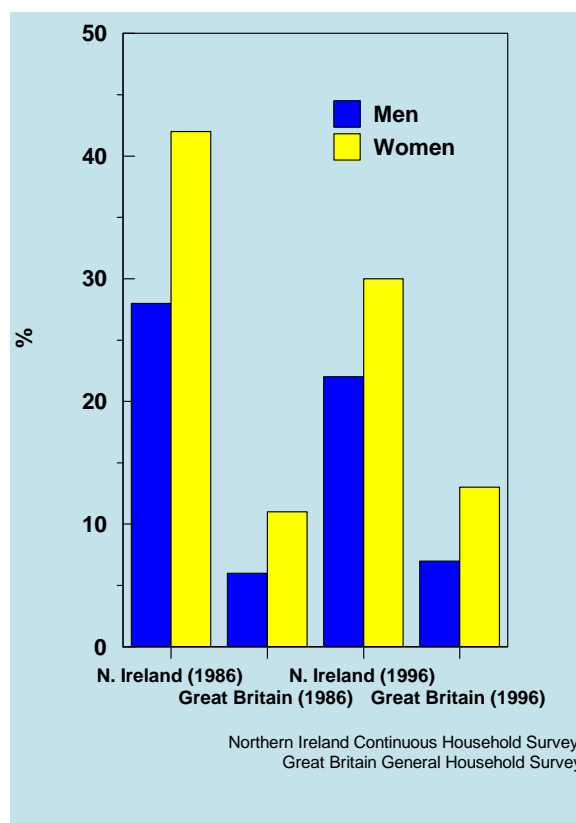
Previous studies such as the Continuous Household Survey found that Northern Ireland had much higher numbers of non-drinkers than in the rest of the United Kingdom. However this pattern is changing as the gap between non-drinkers in Northern Ireland and the rest of Great Britain has narrowed (Figure 4.1).

In the 1986 Continuous Household Survey, 28% of men aged 18 or over and 42% of women were non-drinkers. In Britain in 1986 these figures were 6% for men and 11% for women (General Household Survey). However, the 1996 Continuous Household Survey, shows that abstention in Northern Ireland has fallen to 22% of men and 30% of women compared with the 1996 British figure of 7% for men and 13% for women (General Household Survey).

As indicated previously, methodology and time periods may differ slightly for the Continuous Household Survey and the

Health and Social Wellbeing Survey, but it is still possible to make some general comparisons. The 1997 Health and Social Wellbeing Survey reported a similar level of abstention to the 1996 Continuous Household Survey with 21% of all men aged 16 or over and 28% of all women aged 16 or over being non-drinkers. The youngest age group, 16-24 years, reported higher levels of non-drinkers than those in the 25-34 age group. Levels on non-drinkers then tended to increase with age to the highest level among men (46%) and women (58%) aged 75 years or over.

**Figure 4.1 Numbers not drinking in 1986 and 1996 in Great Britain and N. Ireland. (All aged 18 and over)**



Non-drinkers include respondents who have never drunk and those who no longer drink alcohol. The Health Survey for England, 1996 and the Scottish Health Survey, 1995 reported similar levels of respondents who presently drink, which used to drink and who never drank alcohol. Looking just at those

non-drinkers who have never drunk, the English study showed that 4% of men and 7% of women, aged 16 and over, have never drunk. In the Scottish study, for those aged 16-64 these figures were 3% and 7% respectively.

However, various studies have shown that Northern Ireland had a higher percentage of respondents who have never drunk alcohol. For example, the Health and Activity Survey 1994 reported that 19% of men and 30% of women have never drunk alcohol. The 1997 Health and Social Wellbeing Survey found a similar trend, although it reported a lower level. It indicated that 14% of men and 22% of women, 16 years of age or older, have never drunk. For those aged 16-64, the same age group as the Scottish survey, this was reported at 11% for men and 17% for women who have never drunk.

The Health and Wellbeing Survey 1997 reported a tendency for proportions of those who have never drunk to increase with age, especially amongst women. Women over the age of 45 years were almost twice as likely to have never drunk than men in the corresponding age group. Highest percentages of those who have never drunk were shown to be among respondents aged 75 years or over (52% of women, 28% of men). Among the youngest age groups, the percentage of respondents who have never drunk was higher among 16-24 year olds than those aged 25-34 years. Similar levels of those who have never drunk were reported for 16-24 year old men (15%) and women (17%).

## 4.2 Current Drinkers

### Age and sex

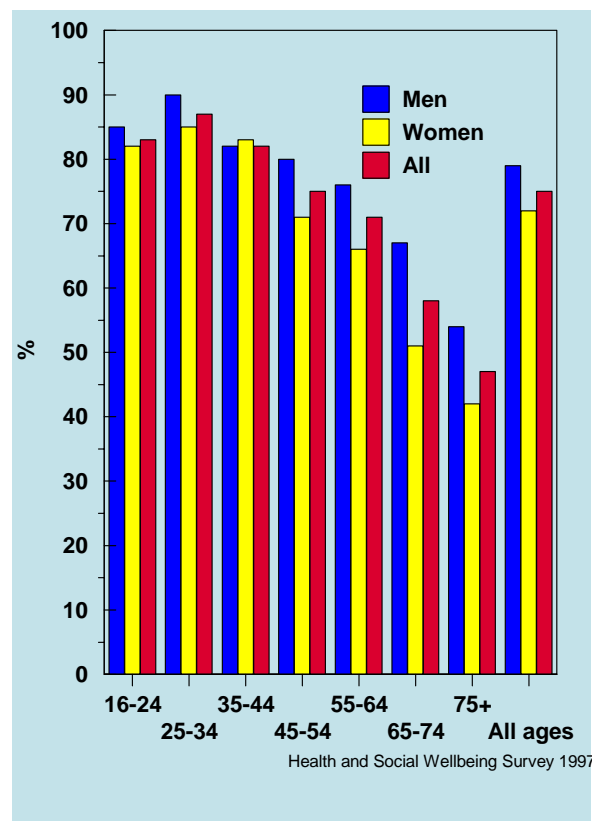
In the Northern Ireland Health and Social Wellbeing Survey 1997, 79% of men and 72% of women were current drinkers. This

was lower than in England where 93% of men and 89% of women indicated that they currently drink (The Health Survey for England, 1996). However, the 1997 Health and Social Wellbeing Survey figures are very similar to those from the 1996/97 Continuous Household Survey (78% and 70% respectively).

A higher percentage of younger people drink alcohol than those in older age groups (Figure 4.2). This was especially the case with regard to women. Of women between the ages of 16 and 24, 82% currently drink alcohol, in comparison with 42% of those aged 75 and over. The figures for men for these two age groups were 85% and 54% respectively. It was the 25-34 year old age group that contained the highest percentage of people who drank alcohol (90% of men and 85% of women).

(Table 4.1)

Figure 4.2 Drinking prevalence by age and sex. (All aged 16 and over)



A higher percentage of younger people drink alcohol than those in older age groups (Figure 4.2). This was especially the case with regard to women. Of women between the ages of 16 and 24, 82% currently drink alcohol, in comparison with 42% of those aged 75 and over. The figures for men for these two age groups were 85% and 54% respectively. It was the 25-34 year old age group that contained the highest percentage of people who drank alcohol (90% of men and 85% of women).

(Table 4.1)

### Health and Social Services Board Areas

There is little difference across the HSS Board areas in terms of alcohol consumption. The figures generally reflect overall consumption in Northern Ireland.

(Table 4.2)

### Socio-economic Group

There were significant differences between individual socio-economic groups with regard to percentages of those who currently drink alcohol. For example, 86% of men in skilled non-manual occupations currently drink compared to 70% of unskilled men. These differences remain when age adjusted. Among women, 81% of those in professional/managerial positions indicated that they currently drink compared to 56% in skilled manual occupations. When adjusted for age, the figure for female skilled manual workers who drink rose from 56% to 68%. The difference between female skilled manual workers and professionals remained significant.

(Table 4.3)

### Religion

Although initial analysis indicated that more Catholic women (76%) than Protestant women (70%) were current drinkers, this difference was not significant after

adjustment for age. There was also no difference in the proportion of Catholic and Protestant men who drank, although more Catholic than Protestant men had never drunk after adjustment for age (16% and 11% respectively).

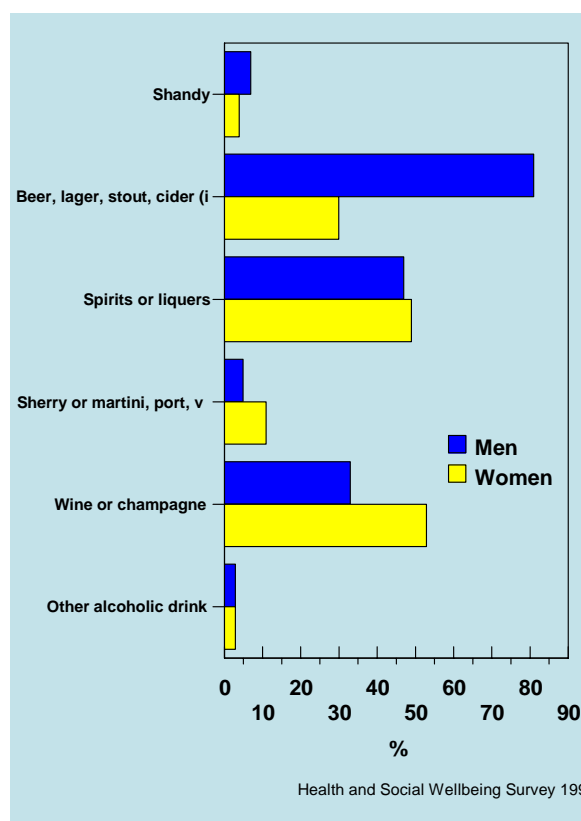
(Table 4.4)

## 4.3 Types of alcoholic drink

Current drinkers were shown a list of types of alcoholic drink and asked which ones they had consumed over the previous year. Those who responded were given the opportunity to indicate multiple responses (Figure 4.3). Almost three times as many men (81%) drank beer or cider compared to women (30%), while almost twice as many women drank wine (53%) than men (33%). Similar levels of spirits or liqueurs were drunk by men and women, 47% and 49% respectively.

(Table 4.5)

Figure 4.3 Preference in alcoholic drinks by sex. (All aged 16 and over)



Among 16-24 year old men, 92% drank beer or cider. This decreased with age to 58% of those aged 75 years or over. Conversely, 39% of 16-24 year olds drank spirits or liqueurs, which increased to 56% of over 75 year olds. Wine drinking reached its highest level, 43%, amongst 45-54 year old men with the youngest and oldest age groups reporting levels of 27% and 20% respectively.

Women's drinking patterns appeared to be more complex but again, drinking preferences changed with age. Beer drinking among women was highest for 16-24 year olds (60%) and then declined steadily to 4% of over 75 year olds. Spirit and liqueur drinking varied across age groups, 45-56%, and was lowest among women 75 years or over (34%). Wine drinking amongst women showed a similar pattern to that amongst men, increasing from 38% of 16-24 year old women to its highest level amongst 45-54 year olds (65%) and decreasing to 28% of over 75 year olds. Women aged 75 years or over reported the lowest levels of drinking, with the exception of sherry or port. After remaining at relatively low levels across all age groups, the proportion of women drinking sherry or port increased to 52% among this oldest age group.

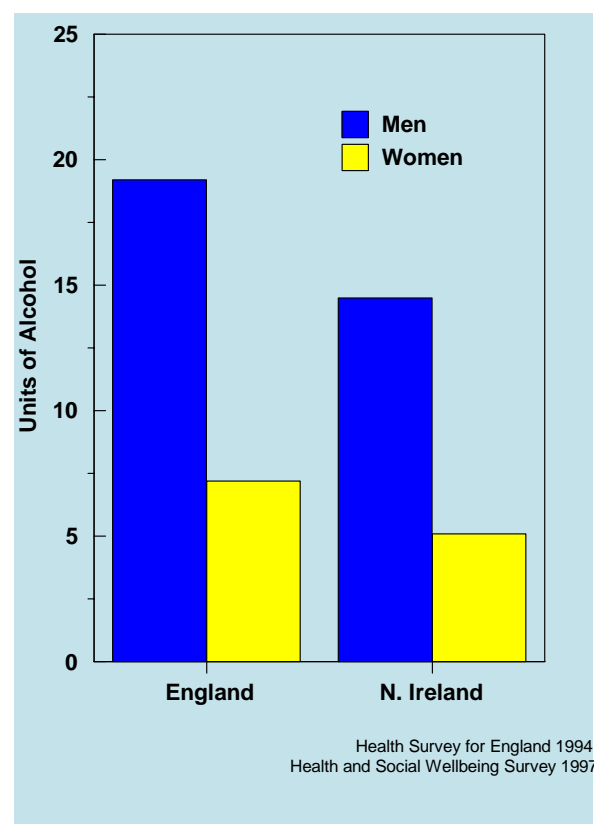
#### 4.4 Average weekly intake of units of alcohol

The mean number of units of alcohol consumed per week was 15 units for men and 5 units for women. The highest mean number of units drunk each week was among 16-24 year olds, 18 units for men and 8 units for women. This gradually decreased with age for both sexes to 6 units per week for men and 1 for women among those 75 years of age or older. This may reflect a trend during life but the increased prevalence of non-drinkers may also be a factor.

(Table 4.6)

The average number of units of alcohol drunk per week was higher among drinkers in England than in Northern Ireland (Figure 4.4). The Health Survey for England 1996, found that 18 units per week were drunk by men and 7 units by women, compared to the 15 and 5 units reported in the Health and Social Wellbeing Survey 1997 (Both sets of figures were based on all current drinkers aged 16 and over).

Figure 4.4 Units of alcohol drunk by current drinkers in N. Ireland and in England. (All aged 16 and over)



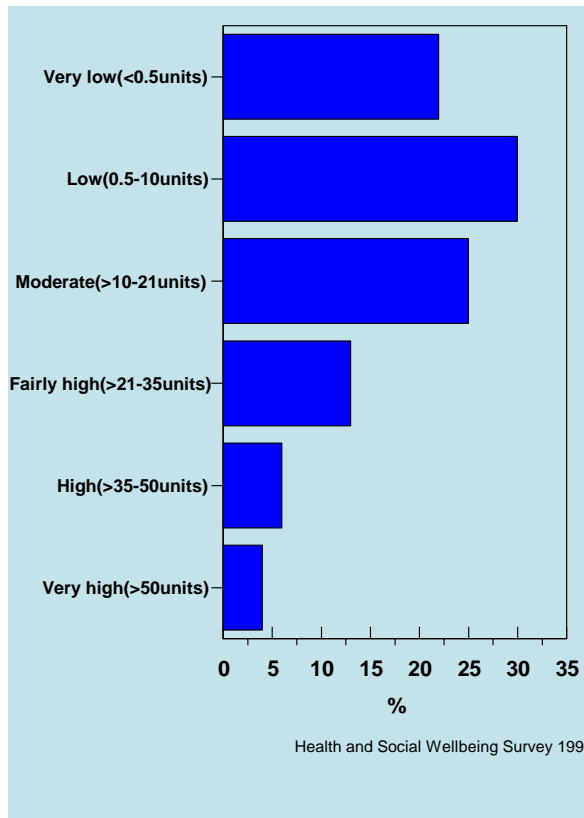
#### 4.5 Levels of alcohol consumption

Figures 4.5a and 4.5b show the units of alcohol consumed in an average week by men and women. Almost twice as many women (43%) drank less than 0.5 units per week compared to men (22%) while 4% of men drank over dangerous limits in contrast to 1% of women. The number of units per week viewed as excessive and dangerous for health was, 50 units or over for men and 35

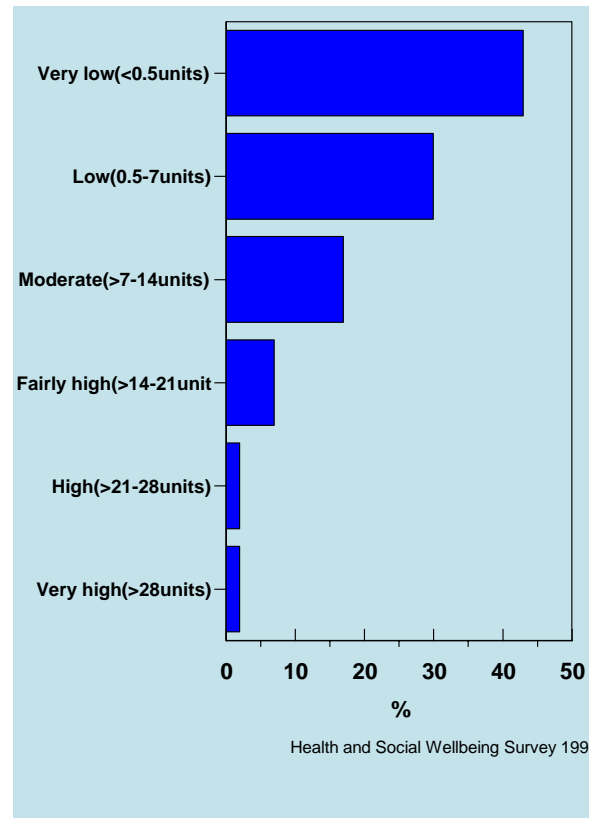
units or over for women (It should be noted that the number of women who drank over this limit was very small). Among men the distribution of drinking over dangerous limits tended to decrease with age. 8% of 16-24 year olds men drank over the 50-unit limit and this level decreased to 3% of those over 75 years. Among women, 3% of 16-24 year olds drank above the 35-unit limit but from age 35 onwards levels of 1% or less were reported.

(Table 4.7)

**Figure 4.5a: Units of alcohol drank by men. (Men aged 16 and over)**



**Figure 4.5b: Units of alcohol drank by women (Women aged 16 and over)**



Among men the distribution of drinking over dangerous limits tended to decrease with age. 8% of 16-24 year olds men drank over the 50-unit limit and this level decreased to 3% of those over 75 years. Among women, 3% of 16-24 year olds drank above the 35-unit limit but from age 35 onwards levels of 1% or less were reported.

(Table 4.7)

#### 4.6 Drinking above sensible limits among current drinkers and all respondents

##### Exceeding sensible limits - Current Drinkers

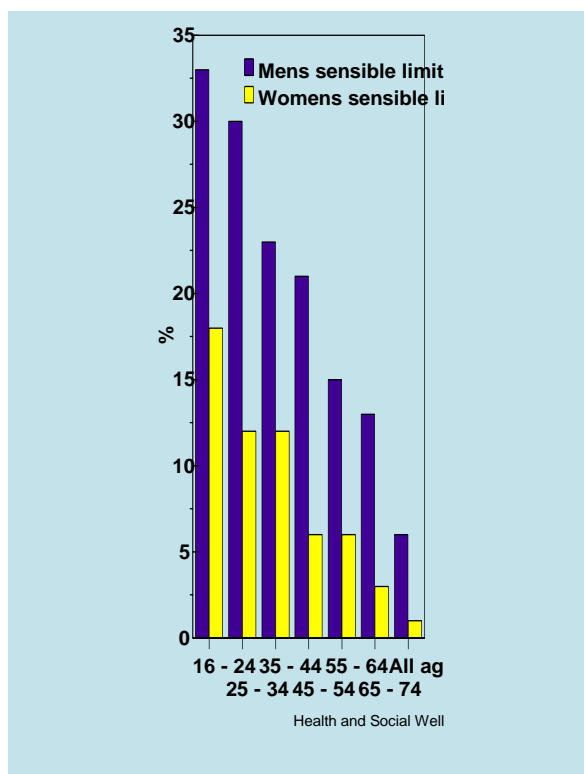
##### Age and Sex

The survey showed that 23% of male drinkers exceeded the sensible limit of 21

units per week while 10% of women drinkers drank over their 14-unit limit. For all age groups, with the exception of those over 75 years, significantly more men drank over sensible limits than women. Levels of drinking above sensible limits were age related (Figure 4.6). Among men, those who drank over sensible limits decreased with increasing age, falling from 33% of 16-24 year olds to 6% of those aged 75 years or over. The same distribution of drinking over sensible limits decreasing with age was evident among women, falling from 18% of those aged 16-24 years to 1% of those aged 75 or over.

(Table 4.8)

**Figure 4.6 Current drinkers who exceed sensible drinking limits by sex and age band**



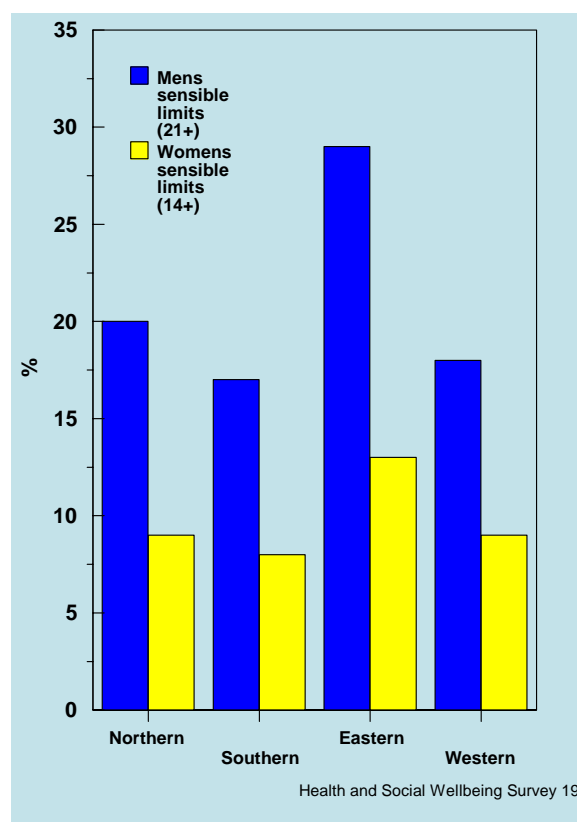
### Health and Social Services Board Areas

The Eastern HSS Board area reported higher levels of men and women who drank above sensible limits than any other HSS Board areas (Figure 4.7). 29% of men in the

Eastern HSS Board area drank over the 21 unit sensible limit compared to 17-20% of men in other HSS Board areas. This differential stood after adjustment for age. Among women, 13% in the Eastern HSS Board area reported drinking over the 14 unit sensible limit compared to 8-9% for all other HSS Board areas, however, when adjusted for age this was not significant.

(Table 4.9)

**Figure 4.7 Current drinkers who exceed sensible drinking limits by sex and Health Board Area**



### Socio-economic Group

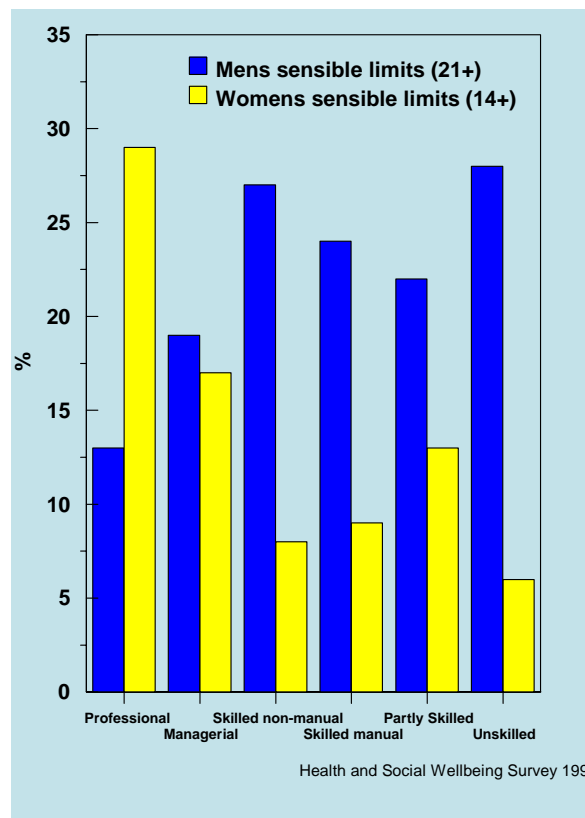
Overall, more men (23%) tended to drink over recommended alcohol limits than women (11%). When adjusted for age, this distribution remained the same except for more women in professional occupations (24%) drinking over the sensible limit than their male counterparts (15%).

Professional/managerial men reported the lowest levels of drinking over sensible limits (18%) while skilled non-manual and skilled manual men reported significantly higher levels (27% and 24% respectively)(Figure 4.8). When adjusted for age, all groups except the partly skilled, reported higher level of those drinking above sensible limits than men in the professional/managerial socio-economic group.

The distribution of drinking above sensible limits was the opposite amongst women with more women in professional/managerial occupations (19%) drinking above sensible limits. When adjusted for age, more women in the professional/managerial socio-economic group (24%) drank over sensible limits than women in any other socio-economic group (7-11%).

(Table 4.10)

**Figure 4.8 Current drinkers who exceed sensible drinking limits by sex and socio-economic group**

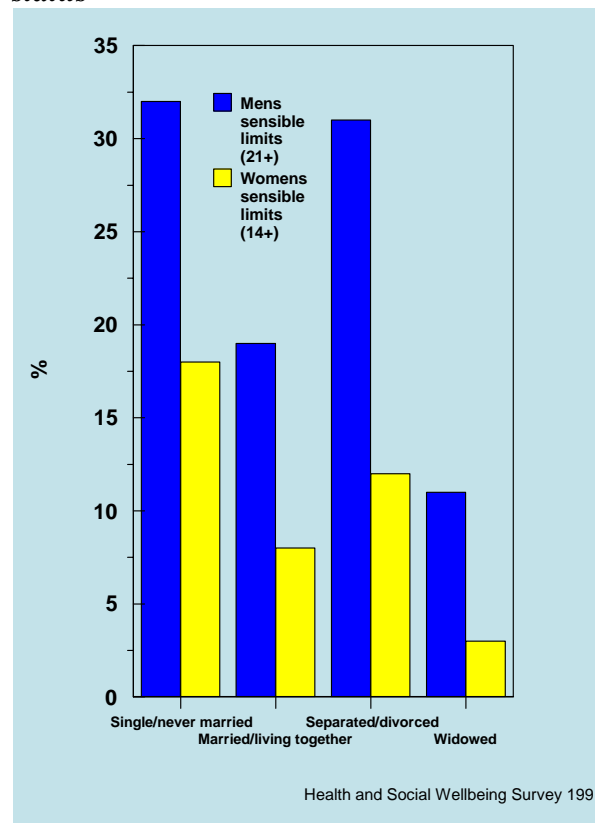


### Marital Status

Figure 4.9 shows current drinkers who drank above the sensible limit, by their marital status. It reported that higher percentages of single, divorced or separated people drank over the recommended limit than those who were married or living with their partner. 32% of single men and 31% of separated or divorced men drank over the limit compared to 19% of married men. Among women, 18% of those who were single and 12% of those divorced or separated drank over the 14 units per week limit in comparison to 8% of married women. When adjusted for age, the number of divorced or separated women who drank over the recommended limit fell to a level similar to women who were married or living with a partner, 6% and 7% respectively.

(Table 4.11)

**Figure 4.9 Current drinkers who exceed sensible drinking limits by sex and marital status**



## **Exceeding sensible limits - All Respondents**

### ***Age and Sex***

As a percentage of all respondents, 18% of men and 7% of women drank over the sensible limit of 21 units per week and 14 units per week respectively. In general there was a decrease in levels of drinking over sensible limits with increasing age. Among those aged 16-24, 28% of men and 15% of women exceeded sensible limits, while at 75+ years reported levels had fallen to 3% for men and 0.3% for women.

*(Table 4.12)*

### ***Health and Social Services Board Area***

At HSS Board area level there was a significant difference in those reporting drinking above the sensible limit between the Southern and Eastern HSS Board areas. 13% of men in the Southern HSS Board area drank above the sensible limit compared to 23% of those in the Eastern HSS Board area. For women, these figures were 5% and 9% respectively. This difference remained when adjusted for age.

*(Table 4.13)*

### ***Socio-economic Group***

A higher proportion of women in professional and managerial occupations drank over the sensible limit than any other socio-economic group, a fact that remained when figures were age adjusted.

*(Table 4.14)*

### ***Smoking Status***

Amongst ex or non-drinkers there was a tendency for men (27%) and women (34%) to be non-smokers compared to 14% of men and 15% of women who smoked heavily. The clear majority of men (76%) and women

(96%) who did not drink or drank below sensible limits were ex or non-smokers. For those who drank above sensible limits, 24% of men were not current smokers while 46% smoked over 20 cigarettes per day. The same distribution could be seen amongst women who drank over sensible limits with 4% being ex or non-smokers and 15% being heavy smokers.

*(Table 4.15)*

# Section 4 Tables

**Table 4.1 Drinking status by age and sex.**

		Age range							
		16-24	25-34	35-44	45-54	55-64	65-74	75+	All
<b>Men</b>	<b>Currently drink</b>	85%	90%	82%	80%	76%	67%	54%	79%
	<b>Drank, not now</b>	0%	4%	7%	7%	12%	11%	18%	8%
	<b>Never drank</b>	15%	5%	12%	13%	12%	22%	28%	14%
<b>Women</b>	<b>Currently drink</b>	82%	85%	83%	71%	66%	51%	42%	72%
	<b>Drank, not now</b>	2%	5%	4%	8%	6%	10%	6%	6%
	<b>Never drank</b>	17%	10%	13%	21%	28%	39%	52%	22%
<b>All</b>	<b>Currently drink</b>	83%	87%	82%	75%	71%	58%	47%	75%
	<b>Drank, not now</b>	1%	5%	5%	8%	9%	10%	11%	6%
	<b>Never drank</b>	16%	8%	12%	18%	21%	32%	42%	19%
<b>Bases</b>	<b>Men</b>	286	317	340	285	227	210	138	1803
	<b>Women</b>	378	474	445	391	274	288	213	2463
	<b>Total</b>	664	791	786	676	501	498	351	4266

Health and Social Wellbeing Survey 1997

**Table 4.2: Drinking status by sex and Health and Social Services Board area**

		HSS Board area				
		NHSSB	SHSSB	EHSSB	WHSSB	All
<b>Men</b>	<b>Currently drink</b>	77%	77%	81%	80%	79%
	<i>Age adjusted</i>	79%	78%	83%	81%	
	<b>Drank, not now</b>	8%	8%	8%	6%	8%
	<i>Age adjusted</i>	7%	7%	7%	5%	
	<b>Never drank</b>	15%	15%	12%	15%	14%
	<i>Age adjusted</i>	14%	15%	10%	14%	
<b>Women</b>	<b>Currently drink</b>	72%	67%	74%	73%	72%
	<i>Age adjusted</i>	72%	67%	74%	72%	
	<b>Drank, not now</b>	5%	6%	6%	5%	6%
	<i>Age adjusted</i>	5%	5%	6%	5%	
	<b>Never drank</b>	23%	28%	20%	22%	22%
	<i>Age adjusted</i>	23%	27%	19%	23%	
<b>Bases</b>	<b>Men</b>	458	321	767	256	1803
	<b>Women</b>	626	431	1025	381	2463

Health and Social Wellbeing Survey 1997

**Table 4.3: Drinking status by socio-economic group and sex.**

		Socio-economic group						
		Professional/ Managerial	Skilled Manual	Non- Manual	Skilled Manual	Partly Skilled	Unskilled	All
<b>Men</b>	<b>Currently drink</b>	<b>79%</b>	<b>86%</b>	<b>80%</b>	<b>77%</b>	<b>70%</b>	<b>79%</b>	
	<i>Age adjusted</i>	84%	86%	82%	78%	70%		
	<b>Drank, not now</b>	<b>8%</b>	<b>5%</b>	<b>7%</b>	<b>10%</b>	<b>13%</b>	<b>8%</b>	
	<i>Age adjusted</i>	7%	5%	6%	10%	14%		
	<b>Never drank</b>	<b>13%</b>	<b>9%</b>	<b>13%</b>	<b>13%</b>	<b>17%</b>	<b>14%</b>	
	<i>Age adjusted</i>	9%	9%	13%	12%	16%		
<b>Women</b>	<b>Currently drink</b>	<b>81%</b>	<b>79%</b>	<b>56%</b>	<b>70%</b>	<b>69%</b>	<b>72%</b>	
	<i>Age adjusted</i>	82%	78%	68%	70%	73%		
	<b>Drank, not now</b>	<b>4%</b>	<b>5%</b>	<b>13%</b>	<b>4%</b>	<b>11%</b>	<b>6%</b>	
	<i>Age adjusted</i>	4%	5%	11%	4%	8%		
	<b>Never drank</b>	<b>15%</b>	<b>17%</b>	<b>31%</b>	<b>26%</b>	<b>20%</b>	<b>22%</b>	
	<i>Age adjusted</i>	14%	17%	21%	26%	19%		
<b>Bases</b>	<b>Men</b>	386	288	651	274	110	1803	
	<b>Women</b>	204	1008	154	656	222	2463	

Health and Social Wellbeing Survey 1997

**Table 4.4 Drinking status by religion and sex.**

		Religion		
		Catholic	Protestant	All
<b>Men</b>	<b>Currently drink</b>	<b>80%</b>	<b>78%</b>	<b>79%</b>
	<i>Age adjusted</i>	80%	81%	
	<b>Drank, not now</b>	<b>5%</b>	<b>9%</b>	<b>8%</b>
	<i>Age adjusted</i>	5%	8%	
	<b>Never drank</b>	<b>16%</b>	<b>13%</b>	<b>14%</b>
	<i>Age adjusted</i>	16%	11%	
<b>Women</b>	<b>Currently drink</b>	<b>76%</b>	<b>70%</b>	<b>72%</b>
	<i>Age adjusted</i>	74%	71%	
	<b>Drank, not now</b>	<b>5%</b>	<b>6%</b>	<b>6%</b>
	<i>Age adjusted</i>	5%	6%	
	<b>Never drank</b>	<b>20%</b>	<b>24%</b>	<b>22%</b>
	<i>Age adjusted</i>	21%	23%	
<b>Bases</b>	<b>Men</b>	646	1132	1803
	<b>Women</b>	985	1449	2463

Health and Social Wellbeing Survey 1997

**Table 4.5 Current drinkers - Preferred alcoholic drinks by age and sex**

		Age group							Total
		16-24	25-34	35-44	45-54	55-64	65-74	75+	
<b>Men</b>	<b>Shandy</b> (exclude bottles\cans)	5%	6%	10%	4%	7%	10%	4%	7%
	<b>Beer, lager, stout, cider</b> (includes bottles)	92%	93%	90%	74%	64%	67%	58%	81%
	<b>Spirits or liqueurs</b> , e.g. gin, whisky, rum	39%	44%	42%	50%	55%	61%	56%	47%
	<b>Sherry or martini, port, vermouth, cinzano</b>	5%	4%	4%	5%	5%	6%	12%	5%
	<b>Wine, champagne, babycham</b>	27%	31%	37%	43%	35%	23%	20%	33%
	<b>Other alcoholic drink</b>	9%	2%	2%	1%	-	-	-	3%
<b>Women</b>	<b>Shandy</b> (exclude bottles\cans)	3%	6%	6%	4%	3%	4%	1%	4%
	<b>Beer, lager, stout, cider</b> (includes bottles)	60%	43%	27%	14%	8%	5%	4%	30%
	<b>Spirits or liqueurs</b> , e.g. gin, whisky, rum	49%	45%	53%	56%	48%	52%	34%	49%
	<b>Sherry or martini, port, vermouth, cinzano</b>	5%	5%	7%	11%	15%	21%	52%	11%
	<b>Wine, champagne, baby cham</b>	38%	54%	61%	65%	57%	51%	28%	53%
	<b>Other alcoholic drink</b>	8%	4%	1%	1%	-	-	-	3%
<b>Bases</b>	<b>Men</b>	242	282	274	226	165	137	72	1399
	<b>Women</b>	307	401	360	274	174	138	79	1733

*Health and Social Wellbeing Survey 1997*

*Categories not mutually exclusive*

**Table 4.6 Mean units of alcohol consumed per week by age and sex.**

	Age group							Total
	16-24	25-34	35-44	45-54	55-64	65-74	75+	
	Mean	Mean	Mean	Mean	Mean	Mean	Mean	
<b>Men</b>	18.3	18	14.8	13.1	12.2	10.2	5.7	14.5
<b>Women</b>	8.1	5.6	5.5	3.9	3.5	2.5	1.1	5.1

*Health and Social Wellbeing Survey 1997*

**Table 4.7 Units of alcohol drank per week by age and sex.**

	Age group								Total
	16-24	25-34	35-44	45-54	55-64	65-74	75+		
<b>Men, units of alcohol</b>	< .5 units	20%	10%	19%	21%	29%	30%	51%	22%
	0.5 - 10 units	26%	30%	29%	32%	32%	34%	32%	30%
	10.1 - 21 units	21%	29%	29%	26%	24%	23%	12%	25%
	21.1 - 35 units	18%	16%	13%	11%	7%	9%	2%	13%
	35.1 - 50 units	7%	9%	7%	7%	6%	2%	-	6%
	over 50 units	8%	6%	3%	3%	2%	2%	3%	4%
<b>Women, units of alcohol</b>	<.5 units	29%	37%	39%	46%	50%	71%	74%	43%
	0.5 - 7 units	32%	32%	28%	31%	35%	16%	21%	30%
	7.1 - 14 units	21%	19%	21%	18%	9%	10%	4%	17%
	14.1 - 21 units	11%	9%	8%	5%	1%	1%	1%	7%
	21.1 - 35 units	4%	2%	4%	1%	5%	0%	-	3%
	over 35 units	3%	2%	0%	-	-	1%	-	1%
<b>Bases</b>	<b>Men</b>	238	282	274	226	165	137	72	1396
	<b>Women</b>	299	393	358	274	174	138	79	1716

*Health and Social Wellbeing Survey 1997*

**Table 4.8 Current drinkers who drink above sensible limits by age and sex.**

		Age group							
		16-24	25-34	35-44	45-54	55-64	65-74	75+	Total
<b>Men</b>	<b>21 units or more</b>	33%	30%	23%	21%	15%	13%	6%	23%
<b>Women</b>	<b>14 units or more</b>	18%	12%	12%	6%	6%	3%	1%	10%
<b>Bases</b>	<b>Men</b>	238	283	274	227	166	137	72	1397
	<b>Women</b>	299	393	358	274	174	138	80	1716

Health and Social Wellbeing Survey 1997

**Table 4.9 Current drinkers who drink above sensible limits by Health and Social Services Board area and sex**

		Health Board area				
		NHSSB	SHSSB	EHSSB	WHSSB	Total
<b>Men</b>	<b>21 units or over</b>	20%	17%	29%	18%	23%
	<i>Age adjusted</i>	21%	17%	28%	18%	
<b>Women</b>	<b>14 units or over</b>	9%	8%	13%	9%	10%
	<i>Age adjusted</i>	8%	8%	11%	8%	
<b>Bases</b>	<b>Men</b>	347	242	604	203	1396
	<b>Women</b>	439	277	735	265	1716

Health and Social Wellbeing Survey 1997

**Table 4.10 Current drinkers who drink above sensible limits by socio-economic group and sex.**

		Socio-economic group					
		Professional Managerial	Skilled Manual	Non-Manual	Skilled Partly Skilled	Unskilled	Total
<b>Men</b>	<b>21 units or over</b>	18%	27%	24%	22%	28%	23%
	<i>Age adjusted</i>	15%	24%	26%	21%	28%	
<b>Female</b>	<b>14 units or over</b>	19%	8%	9%	13%	6%	11%
	<i>Age adjusted</i>	24%	8%	10%	11%	7%	
<b>Bases</b>	<b>Men</b>	299	241	510	206	76	1332
	<b>Women</b>	164	770	81	436	149	1601

Health and Social Wellbeing Survey 1997

**Table 4.11 Current drinkers who drink above sensible limits by marital status and sex.**

		Marital status				Total
		Single/Never Married	Married/Living Together	Separated/ Divorced	Widowed	
<b>Men</b>	<b>21 units or over</b>	<b>32%</b>	<b>19%</b>	<b>31%</b>	<b>11%</b>	<b>23%</b>
	<i>Age adjusted</i>	26%	19%	25%	6%	
<b>Women</b>	<b>14 units or over</b>	<b>18%</b>	<b>8%</b>	<b>12%</b>	<b>3%</b>	<b>11%</b>
	<i>Age adjusted</i>	11%	7%	6%	1%	
<b>Bases</b>	<b>Men</b>	412	858	80	45	1395
	<b>Women</b>	485	912	157	163	1717

Health and Social Wellbeing Survey 1997

**Table 4.12 Percentage of respondents who drink above or below sensible limits or who do not drink by age and sex.**

		Age group							Total
		16-24	25-34	35-44	45-54	55-64	65-74	75+	
<b>Men</b>	<b>Under limit</b>	<b>57%</b>	<b>63%</b>	<b>62%</b>	<b>64%</b>	<b>64%</b>	<b>58%</b>	<b>51%</b>	<b>61%</b>
	<b>Over limit</b>	<b>28%</b>	<b>27%</b>	<b>19%</b>	<b>17%</b>	<b>11%</b>	<b>9%</b>	<b>3%</b>	<b>18%</b>
	<b>Never/ex drinkers</b>	<b>15%</b>	<b>10%</b>	<b>19%</b>	<b>20%</b>	<b>25%</b>	<b>34%</b>	<b>47%</b>	<b>21%</b>
<b>Women</b>	<b>Under limit</b>	<b>66%</b>	<b>75%</b>	<b>73%</b>	<b>67%</b>	<b>61%</b>	<b>48%</b>	<b>39%</b>	<b>64%</b>
	<b>Over limit</b>	<b>15%</b>	<b>10%</b>	<b>10%</b>	<b>4%</b>	<b>4%</b>	<b>1%</b>	<b>0%</b>	<b>7%</b>
	<b>Never/Ex drinkers</b>	<b>19%</b>	<b>15%</b>	<b>18%</b>	<b>29%</b>	<b>35%</b>	<b>51%</b>	<b>61%</b>	<b>29%</b>
<b>Bases</b>	<b>Men</b>	281	314	337	282	219	207	135	1774
	<b>Women</b>	369	463	434	387	268	280	202	2403

Health and Social Wellbeing Survey 1997

**Table 4.13 Respondents who drink above or below sensible limits or who do not drink by Health and Social Services Board area and sex.**

		HSS Board area				Total	
		NHSSB	SHSSB	EHSSB	WHSSB		
<b>Men</b>	<b>Under limit</b>	<b>62%</b>	<b>63%</b>	<b>58%</b>	<b>65%</b>	<b>61%</b>	
	<i>age adjusted</i>	61%	63%	58%	66%		
	<b>Over limit</b>	<b>16%</b>	<b>13%</b>	<b>23%</b>	<b>15%</b>		<b>18%</b>
	<i>age adjusted</i>	18%	14%	25%	15%		
	<b>Never/ex drinkers</b>	<b>23%</b>	<b>24%</b>	<b>20%</b>	<b>20%</b>		
<i>age adjusted</i>	21%	22%	17%	19%			
<b>Women</b>	<b>Under limit</b>	<b>65%</b>	<b>61%</b>	<b>64%</b>	<b>66%</b>	<b>64%</b>	
	<i>age adjusted</i>	66%	61%	64%	65%		
	<b>Over limit</b>	<b>6%</b>	<b>5%</b>	<b>9%</b>	<b>6%</b>		<b>7%</b>
	<i>age adjusted</i>	7%	6%	10%	7%		
	<b>Never/Ex drinkers</b>	<b>29%</b>	<b>34%</b>	<b>27%</b>	<b>29%</b>		
<i>age adjusted</i>	28%	33%	26%	28%			
<b>Bases</b>	<b>Men</b>	451	318	752	254	1774	
	<b>Women</b>	614	421	1001	367	2403	

Health and Social Wellbeing Survey 1997

**Table 4.14 Respondents who drink above or below sensible limits or who do not drink by socio-economic group and sex.**

		Socio-economic group					Total
		Professional/ Managerial	Skilled Non- Manual	Skilled Manual	Partly Skilled	Unskilled	
<b>Men</b>	<b>Under limit</b>	<b>65%</b>	<b>63%</b>	<b>61%</b>	<b>60%</b>	<b>50%</b>	<b>61%</b>
	<i>Age adjusted</i>	72%	65%	59%	61%	48%	
	<b>Over limit</b>	<b>14%</b>	<b>23%</b>	<b>19%</b>	<b>17%</b>	<b>19%</b>	<b>18%</b>
	<i>Age adjusted</i>	12%	22%	22%	18%	23%	
	<b>Never/Ex drinkers</b>	<b>22%</b>	<b>14%</b>	<b>21%</b>	<b>23%</b>	<b>31%</b>	<b>21%</b>
	<i>Age adjusted</i>	16%	14%	18%	22%	30%	
<b>Women</b>	<b>Under limit</b>	<b>65%</b>	<b>72%</b>	<b>50%</b>	<b>60%</b>	<b>64%</b>	<b>65%</b>
	<i>Age adjusted</i>	61%	71%	59%	60%	67%	
	<b>Over limit</b>	<b>16%</b>	<b>7%</b>	<b>5%</b>	<b>9%</b>	<b>4%</b>	<b>8%</b>
	<i>Age adjusted</i>	21%	7%	9%	10%	7%	
	<b>Never/Ex drinkers</b>	<b>19%</b>	<b>22%</b>	<b>46%</b>	<b>31%</b>	<b>32%</b>	<b>27%</b>
	<i>Age adjusted</i>	18%	22%	32%	30%	27%	
<b>Bases</b>	<b>Men</b>	382	281	642	268	108	1681
	<b>Women</b>	203	987	149	635	218	2191

*Health and Social Wellbeing Survey 1997*

**Table 4.15 Smoking status by units of alcohol drunk per week**

		Smoking status			
		Ex/non smokers	1-19 per day	20 or over per day	
<b>Men</b>	<b>Ex/non drinkers</b>		<b>27%</b>	<b>9%</b>	<b>14%</b>
	<b>Low (0-10 units)</b>		<b>36%</b>	<b>35%</b>	<b>25%</b>
	<b>Moderate (&gt;10-21 units)</b>		<b>13%</b>	<b>16%</b>	<b>15%</b>
	<b>Fairly High (&gt;21-50 units)</b>		<b>19%</b>	<b>30%</b>	<b>25%</b>
	<b>High (Over 50 units)</b>		<b>5%</b>	<b>11%</b>	<b>21%</b>
<b>Women</b>	<b>Ex/non drinkers</b>		<b>34%</b>	<b>15%</b>	<b>15%</b>
	<b>Low (0-7 units)</b>		<b>52%</b>	<b>51%</b>	<b>54%</b>
	<b>Moderate (&gt;7-14 units)</b>		<b>10%</b>	<b>19%</b>	<b>16%</b>
	<b>Fairly High (&gt;14-35 units)</b>		<b>4%</b>	<b>12%</b>	<b>14%</b>
	<b>High (Over 35 units)</b>		<b>0%</b>	<b>2%</b>	<b>1%</b>
<b>Bases</b>	<b>Men</b>		1150	286	254
	<b>Women</b>		1683	460	248

*Health and Social Wellbeing Survey 1997*

## **5. Physical Measurement and Specific Diseases**

## Physical Measures

One adult in each household was selected to take part in a physical appraisal. Respondents who had, at interview stage, agreed to the physical examination had a number of measurements taken. These included height, weight, blood pressure and a blood sample taken for blood cholesterol levels. This section reports on the results of these physical measurements. All those respondents whose measurements were considered by the nurse to be unreliable, for example, through excessive clothing or movement, were excluded from the analysis. The section also includes data on circulatory disease (angina, heart attack, stroke, heart murmur and other heart trouble), diabetes asthma and stress.

### 5.1 Height and Weight

#### *Height*

The average height in Northern Ireland was 174 cm for men and 161 cm for women. Among men, those in the 16-24 age group, averaged 176 cm while those of 75 years of age and over averaged 169 cm. Heights among women averaged from 162 cm for 16-24 year olds to 155 cm for those aged 75 years of age and over.

*(Table 5.1)*

For both sexes, those in manual occupations appeared to have a lower mean height than those in non-manual occupations. Men in manual occupations were on average 173 cm tall compared to 176 cm for those in non-manual occupations. Among women mean heights for the same two socio-economic groups were 159 cm and 162 cm respectively.

*(Table 5.2)*

Similar average heights were reported for men (174 cm) and women (161cm) in the Health Survey for England 1996 as in the

Health and Social Wellbeing Survey 1997. The Scottish Health Survey 1995, reported that the average height for those aged 16-64 was 175 cm for men and 161 cm for women, similar to those reported in the Northern Ireland Health and Wellbeing Survey 1997.

#### *Weight*

For men, the average weight was 80.5 kg and for women, 68.1 kg. For both men and women, those aged between 45-54 had the highest average weight. Men aged 45-54 years weighed on average 84.7 kg compared to 73.9 kg among 16-24 year olds and 75.4 kg for those aged 75 years and over. Women aged 45-54 years had an average weight of 73.8 kg compared to 63.3 kg among 16-24 year olds and 62.1 kg, the average weight of women in the age group 75+ years.

*(Table 5.3)*

Among men, non-manual workers had higher average weights than those in manual occupations, 83 kg compared to 80 kg. However, for women the reverse was the case. Women in non-manual occupations had a mean weight of 68 kg compared to 70 kg among women in manual occupations.

*(Table 5.4)*

The average weight of men and of women reported in the Health Survey for England 1996, were 80 kg and 67.3 kg respectively in comparison to weights of 80.5 kg for men and 68.1 kg reported in the Northern Ireland Health and Wellbeing Survey 1997.

The average weight for men and for women in Scotland was lower than in Northern Ireland. The Scottish Health Survey 1995 reported the average weight for men and women between the ages of 16-64 as 79.7 kg and 66.7 kg respectively, while the Health and Social Wellbeing Survey 1997 reported the weights for the same age group as 81 kg for men and 68.5 kg for women.

Those in the middle age groups in the Health and Social Wellbeing Study 1997 were slightly heavier and smaller than those reported in the English Survey 1996, especially amongst women. This resulted in higher levels of excess weight for height in Northern Ireland

## 5.2 Body Mass Index

### Obesity

Body Mass Index (BMI) is calculated from weight and height (weight (Kg)/height squared ( $m^2$ )) and is the most widely used measure of obesity. BMI provides an index within which a measure of 26 - 30  $kg/m^2$  is considered as an estimation of those overweight, while a BMI of over 30  $kg/m^2$  is an estimation of obesity. As illustrated in Figure 5.1, 56% of all those whose height and weight were measured were either overweight (37%) or obese (19%).

More men than women were overweight or obese, 63% compared to 50%. 46% of men were overweight in contrast to 30% of women while 20% of women were obese in comparison to 17% of men, although the latter difference was not significant. This pattern occurred in nearly all age groups, the exception being 16-24 year olds when more women (34%) tended to be overweight and obese than men (23%).

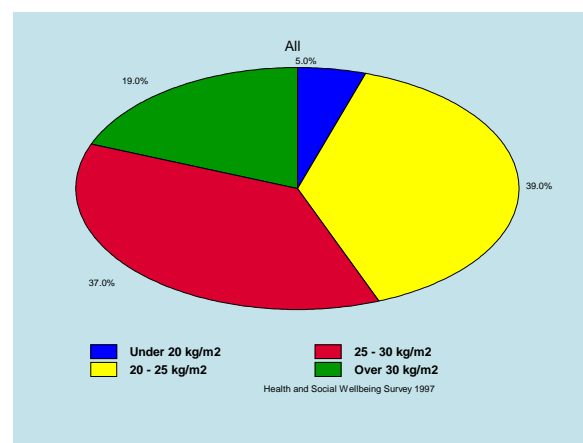
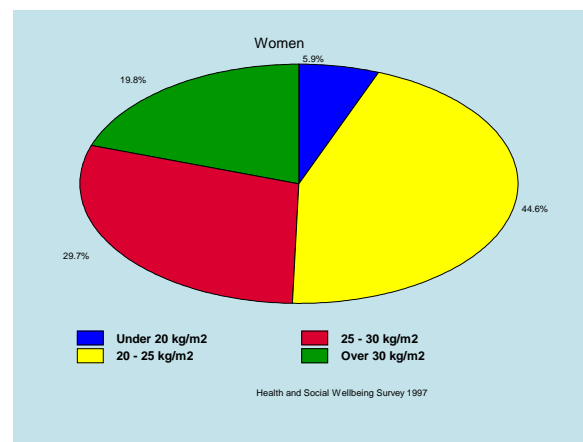
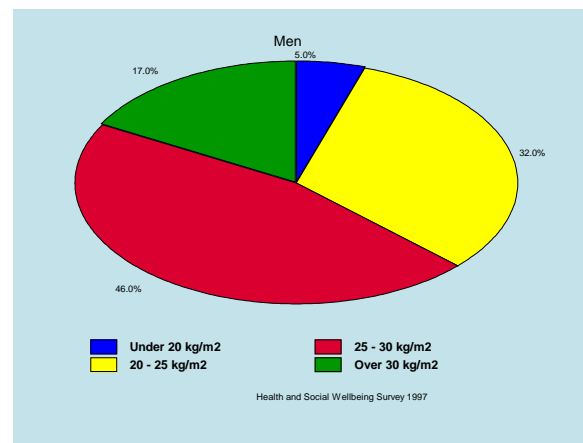
The proportion of overweight men increased substantially with age from 17% among the 16-24 year age group to 46% of the 25-34 age group and 59% of those aged 35-44 years. With regard to obesity, men's levels in the 16-44 age groups varied (6-13%) but not significantly. An increase in levels of obesity was reported for those aged 45-54 years (26%) but thereafter levels fell but not significantly.

The proportion of overweight women increased only gradually with age in comparison to men, from 25% of 16-24 year olds to 38% of those aged 65-74 years. There

were also some significant increases in obesity between age groups, from 9% of 16-24 year olds to 18% of 25-34 year olds and from 13% of those aged 35-44 years to 31% of those aged 45-54 years.

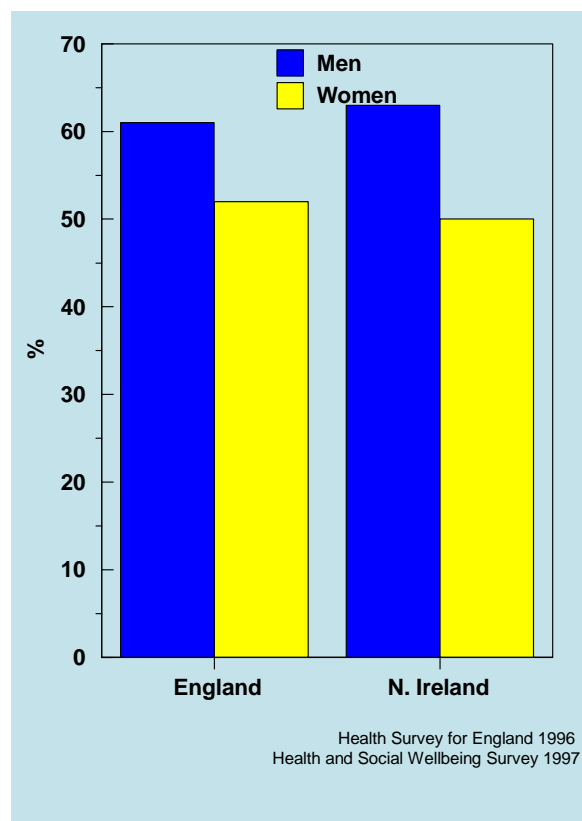
(Table 5.5)

Figure 5.1 The Body Mass Index grouping of respondents by sex and overall



As shown in Figure 5.2, the Health Survey for England 1996, reported very similar levels of those who were overweight and obese, 61% of men and 54% of women compared to 63% of men and 50% of women in the Health and Social Wellbeing Survey 1997. Levels of obesity for both the Health Survey for England 1996 and the Health and Wellbeing Study 1997 were reported at 17% for men and 20% for women.

**Figure 5.2 Percentage of respondents over the recommended BMI of 25 kg/m<sup>2</sup> for men and women and compared with England**



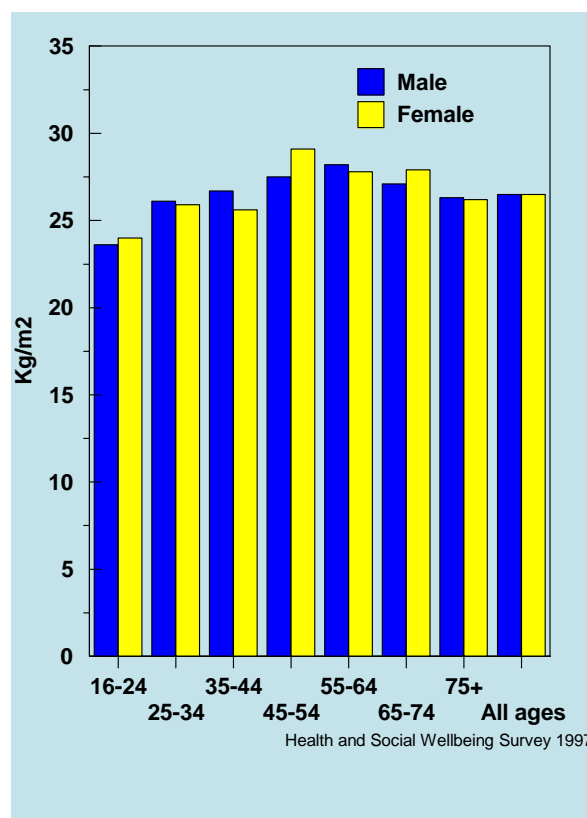
### Mean Body Mass Index

The mean BMI for respondents was 26.5 kg/m<sup>2</sup>, classified as overweight, for both men and women. Among men, BMI increased from 23.6 kg/m<sup>2</sup> in 16-24 year olds to 28.2 kg/m<sup>2</sup> in 55-64 year olds and then decreased to 26.3 kg/m<sup>2</sup> in those aged 75 and over. The mean BMI among women increased from 24 kg/m<sup>2</sup> in 16-24 year olds to 29.1 kg/m<sup>2</sup> in 45-

54 year olds and then decreased again to 26.2 kg/m<sup>2</sup> in those of 75 years old and over (Figure 5.3). The mean BMI was similar in all four HSS Board areas and in both major religious groups.

(Table 5.6)

**Figure 5.3 The Mean Body Mass Index of respondents by sex and age band**



The BMI scores for Northern Ireland were very similar to those reported in the Health Survey for England 1996 (26.3 kg/m<sup>2</sup> for men and 26 kg/m<sup>2</sup> for women), although there was a significant difference in the surveys for women aged 45-54. The average BMI for women aged between 45-54 was 26.6 kg/m<sup>2</sup> in the 1996 Health Survey for England while this reported as 29.1 kg/m<sup>2</sup> in the 1997 Health and Social Wellbeing Survey.

The 1991/92 N.I. MONICA study (a World Health Organisation project for the monitoring of trends and determinants of cardiovascular disease), reported the mean

BMI to be 26.1 kg/m<sup>2</sup> for men compared to 27 kg/m<sup>2</sup> found for the corresponding age range in the 1997 Health and Social Wellbeing Survey. The MONICA surveys of 1983/83 and 1986/87 and successive Health Surveys for England showed a steady increase in mean BMI for men.

The 1991/92 N.I. MONICA Study reported women's mean BMI at 25.4 kg/m<sup>2</sup> while the Health and Social Wellbeing Survey 1997 found it to be 26.5 kg/m<sup>2</sup>. This is interesting to note considering that prior MONICA surveys did not show a clear trend toward increased BMI levels in women.

Comparison between the 1991/92 MONICA Survey and the 1997 Health and Social Wellbeing Survey suggests an increase in obesity among men and women. The MONICA study reported that 13% of men and 15% of women were obese while the Health and Social Wellbeing Survey showed that for the corresponding age group, 19% of men and 22% of women were obese.

### Self Perception Of Weight

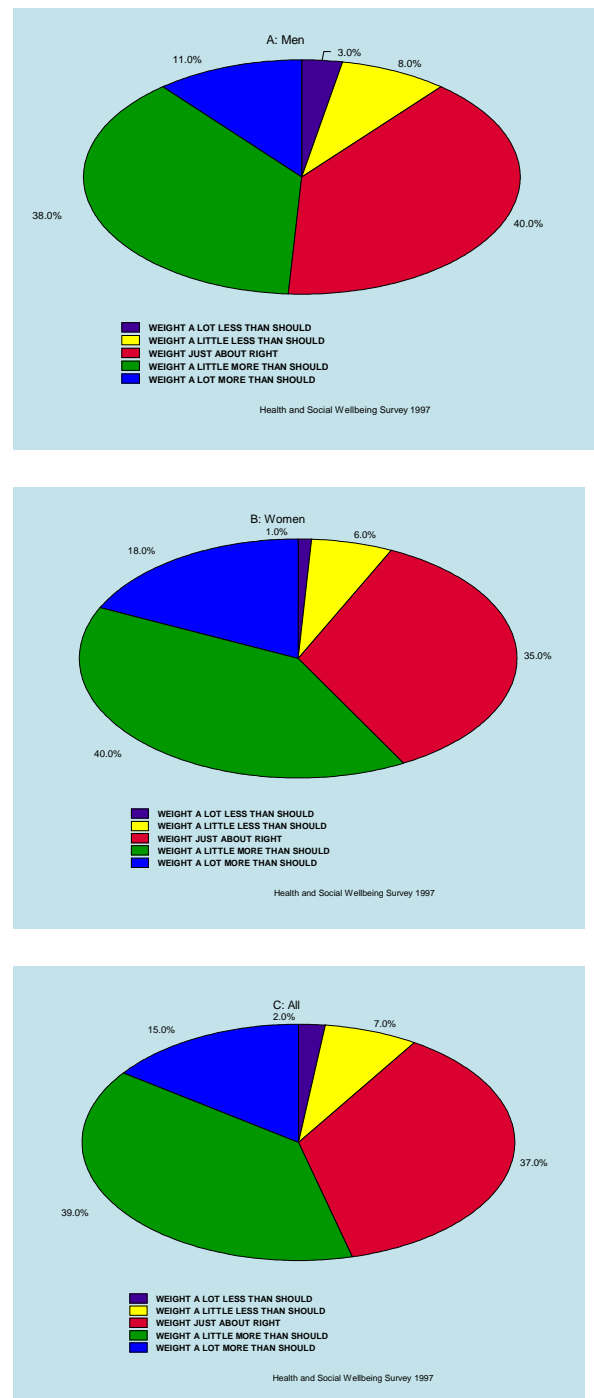
People's perception of their weight in relation to their height, was investigated (Figure 5.4). In general these perceptions were very accurate. Those who believed they were the correct weight for their height had a mean BMI of 23.9 kg/m<sup>2</sup>, while those who believed that they weighed a lot more than they should, had a mean BMI of 33.8 kg/m<sup>2</sup>. This was the case for both sexes and most age groups, suggesting that personal perception of weight quite accurately mirrored the mean BMI.

More women than men, 58% compared to 49%, saw themselves as weighing more than they should. Women tended to see themselves as overweight at a lower BMI than men. This was best illustrated among women aged 16-24 as no women in this age group thought they weighed a lot less than they should while 47% believed that they weighed more than they should compared

to 7% and 22% of men respectively, in this age group. This was despite the fact that the mean BMI of women in this age group was lower than the mean BMI of men.

(Table 5.7)

Figure 5.4: Perception of weight to height by sex



### 5.3 Blood pressure

#### Age

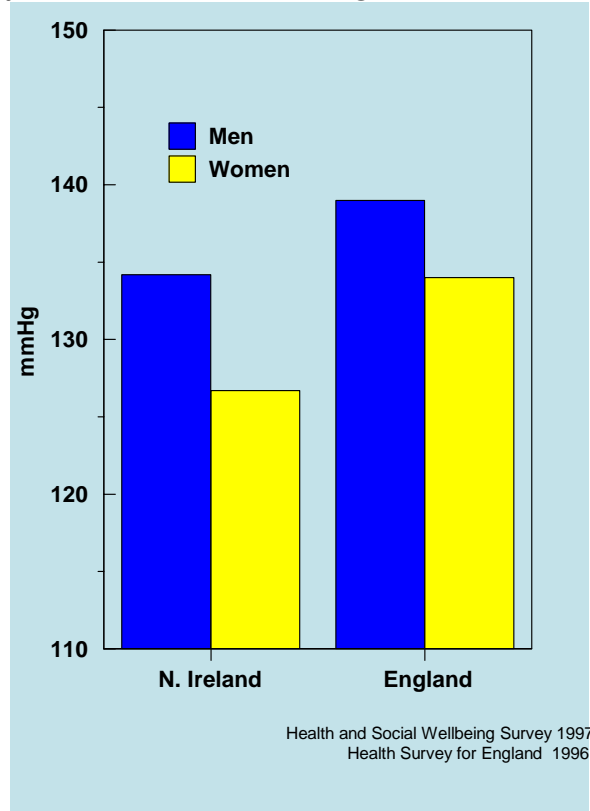
Both diastolic (DBP) and systolic blood pressure (SBP) were measured during the physical examination. The mean systolic level for all those measured was 134 mmHg for men and 127 mmHg for women, while the mean diastolic levels were 74 mmHg and 69 mmHg respectively. Both systolic and diastolic blood pressure levels tended to increase with age. The SBP increased from 125 mmHg among 16-24 year old men to 148 mmHg for 75 year olds and over. For women the SBP increased from 118 mmHg to 152 mmHg respectively. The mean DBP level among 16-24 year old men was 60mmHg. This increased to 82 mmHg among the 55-64 age group and then decreased to 73 mmHg among those aged 75 and over. The mean diastolic blood pressure of women increased from 62 mmHg among 16-24 year olds to 74 mmHg in 65-74 year olds and 73 mmHg in those 75 years or over.

(Tables 5.8 - 5.9)

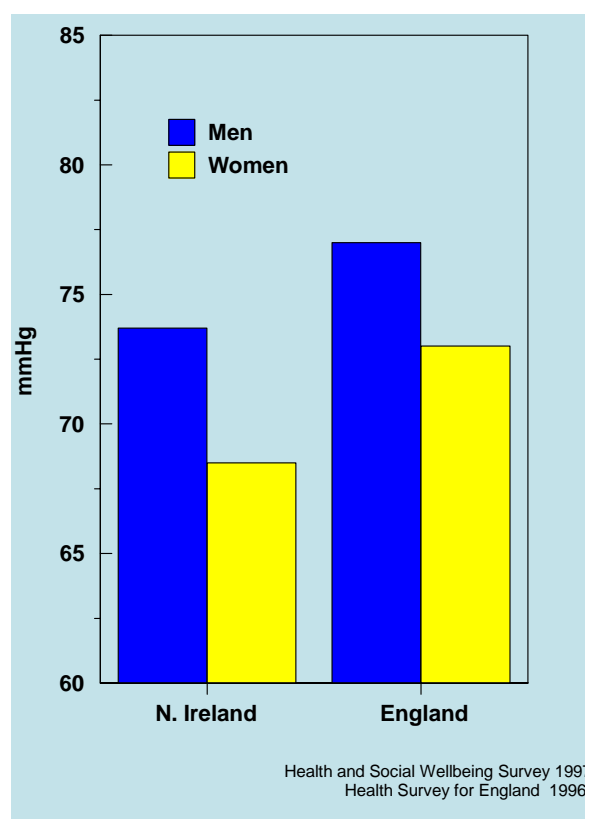
The Health Survey for England 1996, used similar methodology for blood pressure measurements as the Health and Wellbeing Survey 1997 and, as illustrated in Figures 5.5a and 5.5b, showed higher levels of blood pressure. Systolic blood pressure levels of 139 mmHg and 134 mmHg for men and women were reported in England in comparison to 134 mmHg and 127 mmHg reported in Northern Ireland. Diastolic blood pressure levels reported in the English survey were 77 mmHg for men and 73 mmHg for women compared to the levels reported in Northern Ireland of 74 mmHg and 69 mmHg respectively.

Possible reasons for these differences between the English and Northern Ireland surveys are uncertain. However, small consistent differences in the amount of time provided for the measurement of blood pressure may account for the differences.

**Figure 5.5a Mean Systolic Blood Pressure for men and women in England and in N.I.**



**Figure 5.5b Mean Diastolic Blood Pressure for men and women in England and in N.I.**



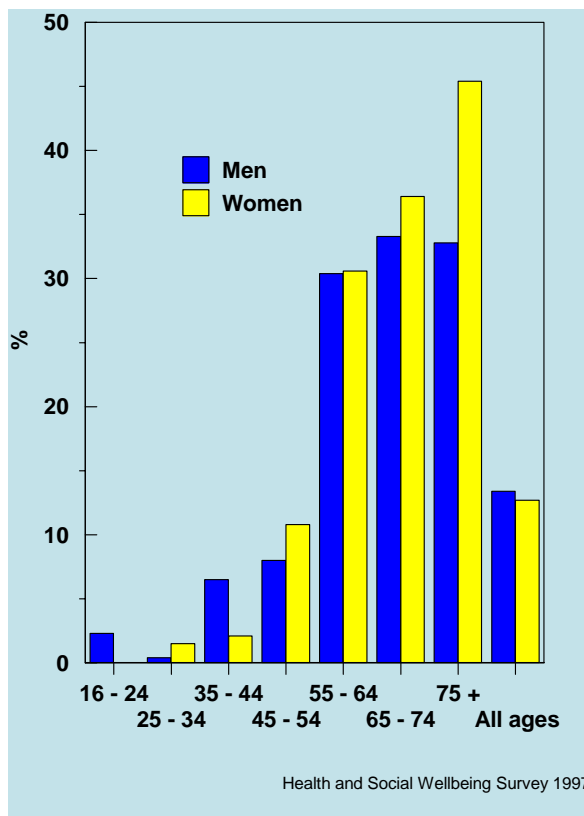
## Hypertension

Hypertension is defined as anyone who has one or a combination of one of the following;

- (i) A SBP of 160 mmHg or over.
- (ii) A DBP of 95 mmHg or over.
- (iii) Being treated for hypertension.

As can be seen in Figure 5.6, approximately 13% of both sexes were hypertensive. In relation to age, the older the respondent the higher the prevalence of hypertension. For example, the incidence of hypertension increased from 2% for men and 0% for women aged 16-24 years to 33% and 45% respectively at 75+ years.

**Figure 5.6 Percentage of men and women who are hypertensive**



### Health and Social Services Board Areas

There were differences between the HSS Board areas in the percentage of male

respondents with hypertension. When adjusted for age, differences remained between the Eastern and Western HSS Board areas with 8% of men in the Eastern HSS Board area suffering from hypertension compared to 18% in the Western HSS Board area. The Southern HSS Board area also had a high incidence of men with hypertension at 15%. There were no significant differences between the HSS Board areas in the incidence of hypertension among women.

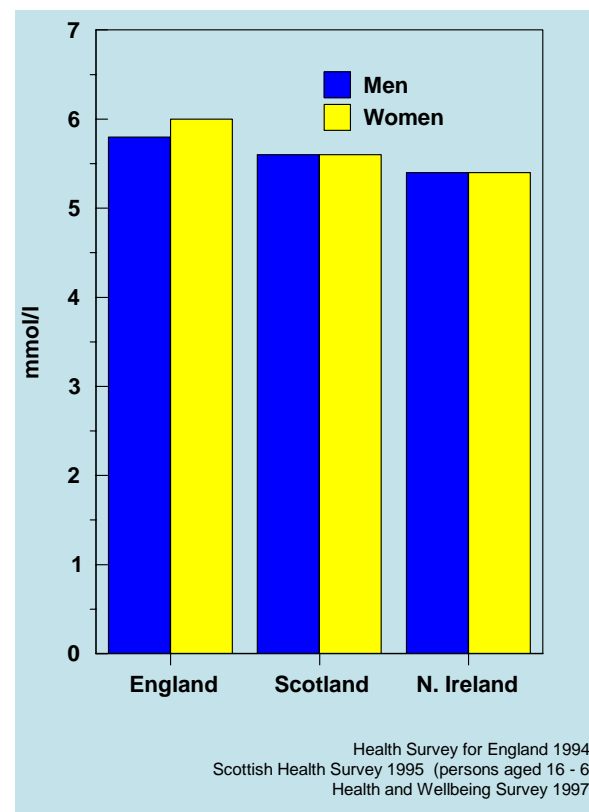
(Table 5.10 - 5.11)

## 5.4 Cholesterol

### Sex and Age

A blood sample was taken from consenting respondents during the physical examination and a cholesterol level was obtained through laboratory analysis. Figure 5.7, shows average cholesterol levels by age and sex.

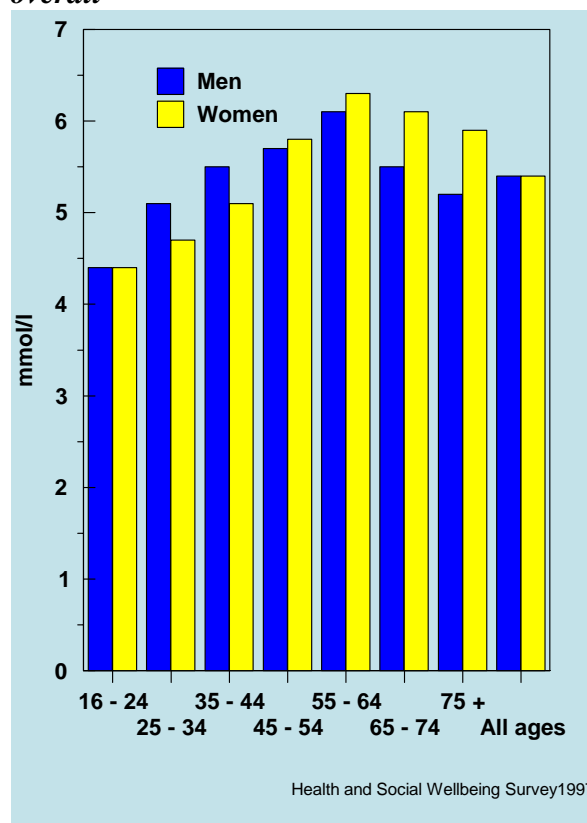
**Figure 5.7 Comparative Cholesterol levels of men and women in England, Scotland and N. Ireland**



The mean cholesterol level of those tested was 5.4 mmol/l for both men and women, which was higher than the desirable level of under 5.2 mmol/l. However, it was lower than the measures reported in the Health Survey for England 1994 which were 5.8 mmol/l for men and 6.0 mmol/l for women. The Scottish Health Survey 1995 reported levels of 5.6 mmol/l for both sexes.

The mean cholesterol level increased with age from 4.4mmol/l for men between the ages of 16-24, to 6.1mmol/l for 55-64 year olds and then decreased to 5.2 mmol/l for those aged 75 years or over (Figure 5.8).

**Figure 5.8 Mean Cholesterol levels for men and women in each age group and overall**



Women's levels were very similar to those reported in men. For example, of those aged 16-24 years the mean cholesterol level was 4.4 mmol/l and this increased to 6.3 mmol/l for 55-64 year olds and then decreased to 5.9 mmol/l for 75 year olds and over.

**(Table 5.12)**

### **Socio-economic group**

There were no significant differences between the mean cholesterol levels of male or female manual and non-manual workers.

**(Table 5.13)**

### **Optimal Cholesterol Levels**

Overall, 49% of men and 50% of women were below the optimal cholesterol level of under 5.2 mmol/l. This varied between age groups with 61% of 16-44 year old men being under the optimal level compared to 37% of those aged 75 and over. Among women these figures were 73% and 24% respectively. All four HSS Board areas had similar proportions of people with cholesterol levels below 5.2 mmol/l.

**(Table 5.14)**

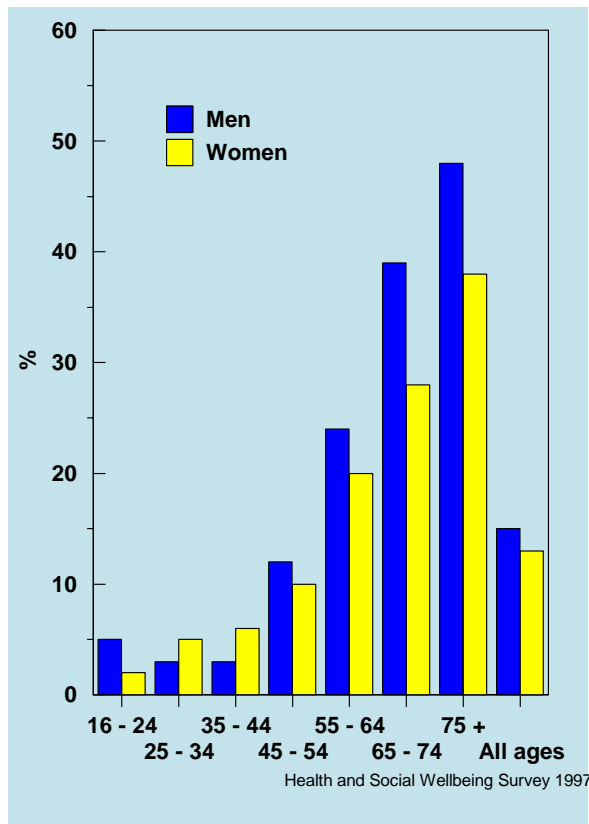
## **5.5 Prevalence of Circulatory Illnesses, Diabetes and Asthma.**

### **Circulatory Illness**

Circulatory illness includes anyone who indicated that they suffered from one of the following, Angina, Heart Attack, Stroke, Heart Murmur or other Heart trouble. Overall less than one sixth of men (15%) and women (13%) in the sample indicated that they suffered from a circulatory illness (Figure 5.9). Little variation in the incidence of circulatory illness was reported among men (3-5%) under the age of 45. However the incidence of circulatory illness increased with age from 12% of men aged 45-54 to 48% of men in the 75+ age group. Among women, levels of circulatory illness increased from 2% of 16-24 year olds to 38% of women aged 75 years or over.

**(Table 5.15)**

**Figure 5.9** Prevalence of Circulatory illnesses for men and women in each age group and overall

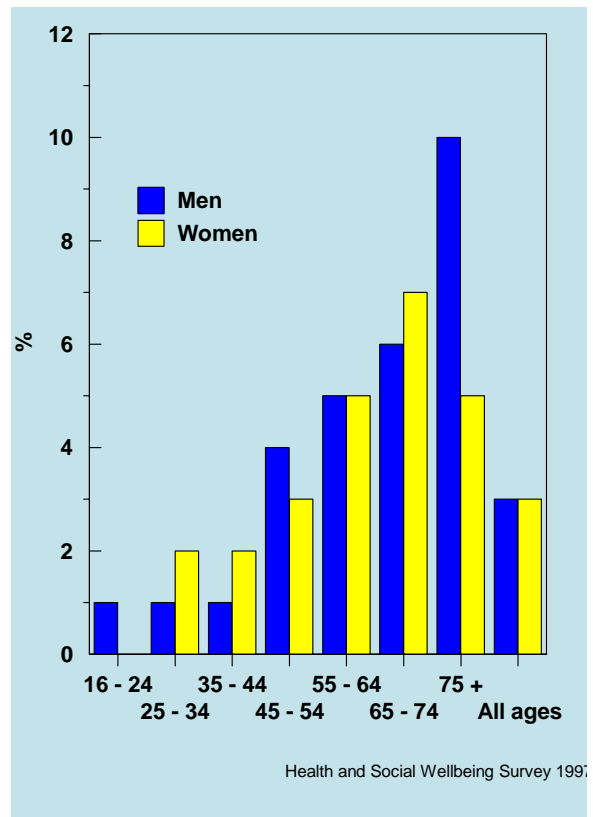


**Diabetes**

As with circulatory illness, diabetes was equally prevalent in both men and women at 3% overall. Diabetes in men increased with age from 1% among those aged 16-44 to 10% of those aged 75 years or over. Among women the incidence of diabetes increased from zero among 16-24 year olds to 7% of those aged 65-74 (Figure 5.10).

*(Table 5.15)*

**Figure 5.10** Prevalence of Diabetes for men and women in each age group and overall

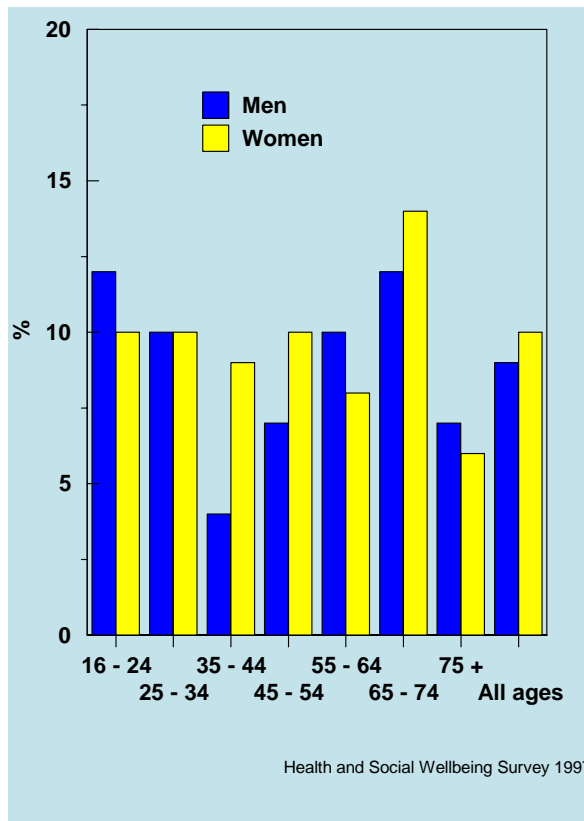


**Asthma**

Overall, 9% of men and 10% of women indicated that they suffered from the respiratory condition asthma (Figure 5.11). While there was some variation across age group for men, the lowest level was reported among 35-44 year olds (4%). Reported levels of asthma among women were similar across all age groups (6-10%) except for those aged 65-74 years who reported the highest incidence (14%) of asthma.

*(Table 5.15)*

**Figure 5.11 Prevalence of Asthma for men and women in each age group and overall**



## 5.6 Socio-economic group

17% of men in manual occupations suffered from circulatory illness compared to 13% of those in non-manual jobs, but when adjusted for age there were no differences between the socio-economic groups for circulatory illness, diabetes or asthma. However, women in the manual socio-economic group reported higher levels of circulatory illness (14%), diabetes (4%) and asthma (11%) than those in non-manual occupations (11%, 2% and 8% respectively). When adjusted for age socio-economic group differences remained with respect to diabetes and asthma.

*(Table 5.16)*

## 5.7 Ischaemic Heart Disease

### Age and Sex

Ischaemic Heart Disease (IHD) includes the more specific illnesses of angina and heart attack. Overall, 10% of men and 7% of women indicated they had IHD, although it was mainly found in older age groups. IHD was reported by no one, male or female in the 16-24 or 25-34 age groups but had been experienced by 35% of men and 29% of women aged 75 years or over. Of those who said that they had a long-standing illness, 24% of men and 16% of women indicated that they had IHD.

*(Table 5.17)*

## 5.8 Stress

Stress is believed to be an illness in itself and also contributes to ill health. To measure stress, people were asked how much stress or worry they felt they had been under throughout the previous year (Figure 5.12).

*(Table 5.18)*

### High stress levels

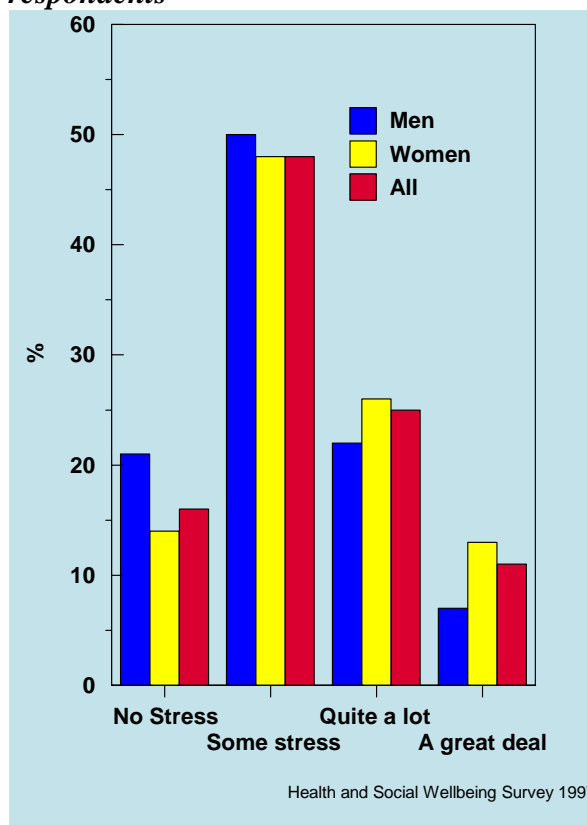
Overall, one in ten respondents indicated that they had been under a great deal of stress during the previous year.

More women (13%) than men (7%) reported a great deal of stress and this was found across all age groups between 16-54. This was particularly evident among those aged 16-34 with 3 to 5 times as many women as men reporting a great deal of stress.

The prevalence of high stress levels also varied with age tending to be the lowest among the young and the old. 1% of men and 5% of women aged 16-24 reported a high stress level, rising to 12% of men aged 55-64 and 17% of women aged 35-64.

*(Table 5.18)*

**Figure 5.12 Self-reported stress levels of respondents**



### High stress levels

Overall, one in ten respondents indicated that they had been under a great deal of stress during the previous year.

More women (13%) than men (7%) reported a great deal of stress and this was found across all age groups between 16-54. This was particularly evident among those aged 16-34 with 3 to 5 times as many women as men reporting a great deal of stress.

The prevalence of high stress levels also varied with age tending to be the lowest among the young and the old. 1% of men and 5% of women aged 16-24 reported a high stress level, rising to 12% of men aged 55-64 and 17% of women aged 35-64.

*(Table 5.18)*

### Low stress levels

Distribution patterns of respondents who had experienced no stress or worry mirrored those exhibited for high levels of stress. Overall significantly more men (21%) than women (14%) felt no stress. For men and women the proportion of those who experienced low stress levels decreased from 23% of men and 15% of women aged 16-24 to 14% of men and 8% of women in the 35-54 age group. Levels of those who had felt no stress in the past year then gradually rose with age to 43% of men and 26% of women aged 75+.

*(Table 5.18)*

### Socio-economic group

Overall, men in both socio-economic groups were more likely to experience no stress (17% non-manual, 23% manual) than women (12% and 15% respectively), while women in both socio-economic groups were more likely to experience a great deal of stress (11% non-manual, 16% manual) than men (8% and 7% respectively). Looking at the differences in stress levels between the two socio-economic groups, more men and women in manual occupations (23% and 15% respectively) experienced no stress compared to those in manual occupations (17% of men, 12% of women). Among men, there was little difference reported between socio-economic groups with increasing stress levels. However, among women, those in manual occupations (16%) reported having experienced a great deal of stress in contrast to women in the non-manual group (11%).

*(Table 5.19)*

# Section 5 Tables

**Table 5.1 Mean height of respondents by age and sex.**

		<b>Age group</b>							<b>Total</b>
		<b>16-24</b>	<b>25-34</b>	<b>35-44</b>	<b>45-54</b>	<b>55-64</b>	<b>65-74</b>	<b>75+</b>	
		Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean
<b>Men</b>	<b>Height (in cm)</b>	176.4	175.2	174.6	175.7	172.5	172.7	169.1	174.3
<b>Women</b>	<b>Height (in cm)</b>	162.2	162.7	162.4	159.3	158.8	157.9	154.9	160.6

*Health and Wellbeing Survey 1997***Table 5.2 Mean height of those in non-manual and manual occupations by age and sex.**

		<b>Non-manual</b>		<b>Manual</b>
		Mean		Mean
<b>Men's height (cm)</b>	<b>16-44</b>	176.3		174.8
	<b>45-64</b>	176.8		172.2
	<b>65 and over</b>	172.8		170.5
	<b>All</b>	175.9		173.1
<b>Women's height (cm)</b>	<b>16-44</b>	163.6		161.2
	<b>45-64</b>	160.2		157.7
	<b>65 and over</b>	158.4		156.2
	<b>All</b>	162		159.3

*Health and Wellbeing Survey 1997***Table 5.3 Mean weight of respondents by age and sex.**

		<b>Age group</b>							<b>Total</b>
		<b>16-24</b>	<b>25-34</b>	<b>35-44</b>	<b>45-54</b>	<b>55-64</b>	<b>65-74</b>	<b>75+</b>	
		Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean
<b>Men</b>	<b>Weight (in kg)</b>	73.9	80.2	81	84.7	84.4	80.4	75.4	80.5
<b>Women</b>	<b>Weight (in kg)</b>	63.3	68.6	67.6	73.8	69.9	69.4	62.1	68.1

*Health and Wellbeing Survey 1997*

**Table 5.4 Mean weight of those in non-manual and manual occupations by age and sex**

		Non-manual	Non-manual
		Mean	Mean
<b>Men's weight (kg)</b>	16-44	81.1	78.4
	45-64	85.8	83.1
	65 +	80.2	77.6
	All	82.6	79.6
<b>Women's weight (kg)</b>	16-44	67.1	67.4
	45-64	69.6	75.1
	65 +	65.1	67.9
	All	67.6	69.7

*Health and Wellbeing Survey 1997*

**Table 5.5 Body Mass Index by age and sex.**

		Age group							Total
		16-24	25-34	35-44	45-54	55-64	65-74	75+	
<b>Men</b>	Underweight	16%	4%	1%	1%	4%	6%	9%	5%
	About right	60%	36%	28%	27%	19%	26%	28%	32%
	Overweight	17%	46%	59%	46%	53%	48%	48%	46%
	Obese	6%	14%	13%	26%	25%	21%	16%	17%
<b>Women</b>	Underweight	13%	6%	3%	1%	3%	6%	8%	6%
	About right	53%	51%	57%	33%	32%	28%	40%	45%
	Overweight	25%	25%	27%	35%	36%	38%	32%	30%
	Obese	9%	18%	13%	31%	30%	29%	20%	20%
<b>All</b>	Underweight	14%	5%	2%	1%	3%	6%	8%	5%
	About right	55%	44%	45%	30%	26%	27%	35%	39%
	Overweight	23%	35%	39%	40%	44%	43%	39%	37%
	Obese	8%	16%	13%	29%	28%	25%	18%	19%
<b>Bases</b>	<i>Men</i>	90	137	126	122	92	70	50	686
	<i>Women</i>	165	169	187	160	107	78	59	925
	<i>All</i>	255	306	313	281	199	148	109	1612

*Health and Wellbeing Survey 1997*

**Table 5.6 Mean Body Mass Index by age and sex.**

		Age group							Total
		16-24	25-34	35-44	45-54	55-64	65-74	75+	
		Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean
<b>Men</b>	<b>BMI</b>	23.6	26.1	26.7	27.5	28.2	27.1	26.3	26.5
<b>Women</b>	<b>BMI</b>	24	25.9	25.6	29.1	27.8	27.9	26.2	26.5

*Health and Wellbeing Survey 1997*

**Table 5.7 Perception of weight to height and Mean Body Mass Index by age and sex.**

		Age group														Total	
		16-24		25-34		35-44		45-54		55-64		65-74		75+		Col %	Mean
		Col %	Mean	Col %	Mean	Col %	Mean	Col %	Mean	Col %	Mean	Col %	Mean	Col %	Mean	Col %	Mean
<b>Men</b>	<b>Weight a lot less than should</b>	<b>7%</b>	20	<b>5%</b>	20.5	<b>0%</b>	19.6	<b>0%</b>	24.6	<b>2%</b>	25.9	<b>6%</b>	18.7	<b>2%</b>	20.1	<b>3%</b>	20.5
	<b>Weight a little less than should</b>	<b>14%</b>	20.9	<b>9%</b>	21.4	<b>4%</b>	22.9	<b>10%</b>	23	<b>4%</b>	20.9	<b>5%</b>	21.4	<b>11%</b>	22.2	<b>8%</b>	21.8
	<b>Weight just about right</b>	<b>57%</b>	22.8	<b>35%</b>	24.6	<b>36%</b>	24.8	<b>37%</b>	25.6	<b>38%</b>	25.6	<b>40%</b>	26.4	<b>44%</b>	24.6	<b>40%</b>	24.8
	<b>Weight a little more than should</b>	<b>18%</b>	27	<b>42%</b>	27.8	<b>52%</b>	27.8	<b>37%</b>	28.6	<b>41%</b>	29	<b>35%</b>	28.9	<b>33%</b>	28.4	<b>38%</b>	28.2
	<b>Weight a lot more than should</b>	<b>4%</b>	34.3	<b>10%</b>	31	<b>8%</b>	30.3	<b>16%</b>	32.4	<b>16%</b>	34.5	<b>15%</b>	30.7	<b>10%</b>	32.2	<b>11%</b>	32.1
<b>Women</b>	<b>Weight a lot less than should</b>	-	-	<b>2%</b>	18.4	<b>1%</b>	20.6	-	-	<b>1%</b>	24.7	<b>1%</b>	23.6	<b>1%</b>	19.4	<b>1%</b>	20.1
	<b>Weight a little less than should</b>	<b>5%</b>	20.5	<b>8%</b>	20.3	<b>5%</b>	21.6	<b>4%</b>	21.9	<b>4%</b>	22.2	<b>5%</b>	21.8	<b>14%</b>	21.2	<b>6%</b>	21.2
	<b>Weight just about right</b>	<b>48%</b>	22.1	<b>35%</b>	22.8	<b>35%</b>	22.6	<b>19%</b>	23.8	<b>32%</b>	23.4	<b>31%</b>	24.1	<b>56%</b>	25.6	<b>35%</b>	23.1
	<b>Weight a little more than should</b>	<b>37%</b>	25.4	<b>38%</b>	26.4	<b>43%</b>	25.6	<b>47%</b>	27.3	<b>44%</b>	28.5	<b>43%</b>	28.8	<b>17%</b>	27.6	<b>40%</b>	26.8
	<b>Weight a lot more than should</b>	<b>10%</b>	29.9	<b>18%</b>	34	<b>16%</b>	34	<b>30%</b>	36.6	<b>19%</b>	34.8	<b>20%</b>	34.5	<b>12%</b>	34	<b>18%</b>	34.5
<b>All</b>	<b>Weight a lot less than should</b>	<b>3%</b>	20	<b>3%</b>	19.9	<b>1%</b>	20.5	<b>0%</b>	24.6	<b>1%</b>	25.6	<b>3%</b>	19.2	<b>2%</b>	19.8	<b>2%</b>	20.4
	<b>Weight a little less than should</b>	<b>8%</b>	20.7	<b>9%</b>	20.9	<b>4%</b>	22.1	<b>7%</b>	22.6	<b>4%</b>	21.6	<b>5%</b>	21.6	<b>13%</b>	21.6	<b>7%</b>	21.5
	<b>Weight just about right</b>	<b>51%</b>	22.4	<b>35%</b>	23.6	<b>35%</b>	23.5	<b>27%</b>	24.8	<b>35%</b>	24.5	<b>35%</b>	25.3	<b>51%</b>	25.2	<b>37%</b>	23.9
	<b>Weight a little more than should</b>	<b>30%</b>	25.8	<b>40%</b>	27.1	<b>47%</b>	26.6	<b>43%</b>	27.8	<b>43%</b>	28.7	<b>39%</b>	28.9	<b>24%</b>	28.1	<b>39%</b>	27.4
	<b>Weight a lot more than should</b>	<b>8%</b>	30.8	<b>14%</b>	33.1	<b>13%</b>	33.1	<b>24%</b>	35.4	<b>18%</b>	34.7	<b>18%</b>	33	<b>11%</b>	33.2	<b>15%</b>	33.8
<b>Bases</b>	<b>Men</b>		90		137		126		122		93		70		49		686
	<b>Women</b>		164		168		187		160		107		75		59		920
	<b>All</b>		254		305		313		281		200		145		108		1606

Health and Wellbeing Survey 1997

**Table 5.8 Mean systolic blood pressure by age and sex**

		Age group							Total
		16-24	25-34	35-44	45-54	55-64	65-74	75+	
		Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean
<b>Men</b>	<b>Systolic blood pressure</b>	124.6	129.6	130.8	131.2	142.8	144.4	147.5	134.2
<b>Women</b>	<b>Systolic blood pressure</b>	118.2	118.1	117.2	128.3	137.4	143.5	152	126.7

*Health and Wellbeing Survey 1997*

**Table 5.9 Mean diastolic blood pressure by age and sex.**

		Age group							Total
		16-24	25-34	35-44	45-54	55-64	65-74	75+	
		Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean
<b>Men</b>	<b>Diastolic blood pressure</b>	59.9	68.9	76	78	81.6	77.8	74.4	73.7
<b>Women</b>	<b>Diastolic blood pressure</b>	61.5	66.2	67.5	71.7	73.1	73.9	72.7	68.5

*Health and Wellbeing Survey 1997*

**Table 5.10 Hypertension by age and sex**

		16-24	25-34	35-44	45-54	55-64	65-74	75+	Total
<b>Men</b>	<b>Hypertensive</b>	2.3%	0.4%	6.5%	8.0%	30.4%	33.3%	32.8%	13.4%
<b>Women</b>	<b>Hypertensive</b>	0.0%	1.5%	2.1%	10.8%	30.6%	36.4%	45.4%	12.7%
<b>Bases</b>	<b>Men</b>	90	138	132	123	94	81	58	716
	<b>Women</b>	170	189	193	160	113	91	74	989

*Health and Wellbeing Survey 1997*

*Hypertension = SBP of 160 mmHg + or DBP of 95 mmHg + or being treated for Hypertension*

**Table 5.11 Hypertension by Health and Social Services Board area and sex.**

		HSS Board area				Total
		NHSSB	SHSSB	EHSSB	WHSSB	
<b>Men</b>	<b>Hypertensive</b>	10.6%	18.8%	10.9%	17.9%	13.4%
	<i>Age adjusted</i>	8.9%	15.3%	8.2%	17.6%	
<b>Women</b>	<b>Hypertensive</b>	10.8%	16.1%	11.5%	15.2%	12.7%
	<i>Age adjusted</i>	12.2%	16.2%	13.9%	15.5%	
<b>Bases</b>	<b>Men</b>	187	123	288	117	716
	<b>Women</b>	245	177	420	148	989

*Health and Wellbeing Survey 1997*

*Hypertension = SBP of 160 mmHg + or DBP of 95 mmHg + or being treated for Hypertension*

**Table 5.12 Mean cholesterol level by age and sex**

		Age group							Total Mean
		16-24 Mean	25-34 Mean	35-44 Mean	45-54 Mean	55-64 Mean	65-74 Mean	75+ Mean	
<b>Men</b>	<b>Cholesterol level</b>	4.4	5.1	5.5	5.7	6.1	5.5	5.2	5.4
<b>Women</b>	<b>Cholesterol level</b>	4.4	4.7	5.1	5.8	6.3	6.1	5.9	5.4

*Health and Wellbeing Survey 1997*

**Table 5.13 Mean cholesterol level of those in non-manual and manual occupations by age and sex.**

	Age group	Non-manual	Manual
		Mean	Mean
<b>Men's cholesterol level (mmol/l)</b>	16-44	5.1	5.2
	45-64	5.9	5.8
	65 +	5.4	5.4
	All	5.4	5.4
<b>Women's cholesterol level (mmol/l)</b>	16-44	4.7	4.8
	45-64	6.2	6
	65 +	5.9	6
	All	5.3	5.4

*Health and Wellbeing Survey 1997*

**Table 5.14 Cholesterol level by age and sex**

		Age group		
		16-44	45 +	Total
<b>Men</b>	<b>Desirable range &lt;5.2</b>	61%	37%	49%
	<b>Mildly raised 5.2 - 6.4</b>	28%	42%	35%
	<b>Moderately raised 6.5 - 7.7</b>	9%	18%	13%
	<b>Severely raised, 7,8+</b>	2%	4%	3%
<b>Women</b>	<b>Desirable range &lt;5.2</b>	73%	24%	50%
	<b>Mildly raised 5.2 - 6.4</b>	21%	41%	30%
	<b>Moderately raised 6.5 -7.7</b>	6%	29%	17%
	<b>Severely raised, 7,8+</b>	0%	6%	3%
<b>Base</b>	<b>Men</b>	325	311	636
	<b>Women</b>	434	379	813

*Health and Wellbeing Survey 1997*

**Table 5.15 Illness type by age and sex**

		Age group							All
		16-24	25-34	35-44	45-54	55-64	65-74	75+	
<b>Men</b>	<b>circulatory</b>	5%	3%	3%	12%	24%	39%	48%	15%
	<b>diabetes</b>	1%	1%	1%	4%	5%	6%	10%	3%
	<b>asthma</b>	12%	10%	4%	7%	10%	12%	7%	9%
<b>Women</b>	<b>circulatory</b>	2%	5%	6%	10%	20%	28%	38%	13%
	<b>diabetes</b>	0%	2%	2%	3%	5%	7%	5%	3%
	<b>asthma</b>	10%	10%	9%	10%	8%	14%	6%	10%
<b>Bases</b>	<b>Men</b>	286	317	340	285	227	210	138	1803
	<b>Women</b>	379	473	446	390	275	290	212	2465

Health and Wellbeing Survey 1997

**Table 5.16 Illness type by non-manual / manual occupation and sex.**

		Non-Manual	Manual	All
<b>Men</b>	<b>circulatory</b>	13%	17%	15%
	<i>Age adjusted</i>	11%	14%	
	<b>diabetes</b>	3%	4%	3%
	<i>Age adjusted</i>	3%	3%	
<b>Women</b>	<b>asthma</b>	8%	9%	9%
	<i>Age adjusted</i>	9%	9%	
	<b>circulatory</b>	11%	14%	13%
	<i>Age adjusted</i>	12%	12%	
<b>Women</b>	<b>diabetes</b>	2%	4%	3%
	<i>Age adjusted</i>	2%	4%	
	<b>asthma</b>	8%	11%	10%
	<i>Age adjusted</i>	8%	11%	
<b>Bases</b>	<b>Men</b>	673	1034	1803
	<b>Women</b>	1213	1033	2465

Health and Wellbeing Survey 1997

**Table 5.17 Ischaemic heart disease by age and sex.**

		Age group							All
		16-24	25-34	35-44	45-54	55-64	65-74	75+	
<b>Men</b>	<b>Ischaemic disease</b>	0%	0%	2%	7%	18%	29%	35%	10%
<b>Women</b>	<b>Ischaemic disease</b>	0%	0%	1%	3%	12%	22%	29%	7%
<b>Bases</b>	<b>Men</b>	286	317	340	285	228	210	138	1803
	<b>Women</b>	378	474	445	391	274	290	213	2465

Health and Wellbeing Survey 1997

**Table 5.18 Amount of stress suffered in the last year by age and sex**

		<b>Age group</b>							
		<b>16-24</b>	<b>25-34</b>	<b>35-44</b>	<b>45-54</b>	<b>55-64</b>	<b>65-74</b>	<b>75+</b>	<b>All</b>
<b>Men</b>	<b>No worry or stress</b>	23%	21%	14%	14%	19%	28%	43%	21%
	<b>Just a little</b>	59%	49%	51%	50%	47%	45%	38%	50%
	<b>Quite a lot</b>	17%	24%	26%	26%	22%	20%	11%	22%
	<b>A great deal of worry or stress</b>	1%	5%	9%	11%	12%	7%	8%	7%
<b>Women</b>	<b>No worry or stress</b>	15%	11%	8%	8%	16%	20%	26%	14%
	<b>Just a little</b>	57%	50%	49%	46%	43%	42%	44%	48%
	<b>Quite a lot</b>	23%	26%	26%	29%	24%	27%	22%	26%
	<b>A great deal of worry or stress</b>	5%	13%	17%	17%	17%	11%	9%	13%
<b>Bases</b>	<b>Men</b>	286	316	340	285	227	501	138	1803
	<b>Women</b>	378	473	445	391	274	289	212	2465

*Health and Wellbeing Survey 1997*

**Table 5.19 Amount of stress suffered in the last year by non-manual/manual occupation and sex.**

		<b>Non-manual</b>	<b>Manual</b>	<b>All</b>
<b>Men</b>	<b>No worry or stress</b>	17%	23%	21%
	<b>Just a little</b>	51%	49%	50%
	<b>Quite a lot</b>	24%	21%	22%
	<b>A great deal of worry or stress</b>	8%	7%	7%
<b>Women</b>	<b>No worry or stress</b>	12%	15%	14%
	<b>Just a little</b>	49%	46%	48%
	<b>Quite a lot</b>	28%	24%	26%
	<b>A great deal of worry or stress</b>	11%	16%	13%
<b>Bases</b>	<b>Men</b>	673	1033	1800
	<b>Women</b>	1213	1032	2463

*Health and Wellbeing Survey 1997*

## **6. Combined Risks of Cardiovascular Disease**

## 6.1 Combined Risks of Cardiovascular Disease

### *Introduction*

In this chapter the proportion of men and women with multiple risk factors and risk factor associations with acute and chronic disease have been examined. Five risk factors were analysed; smoking, drinking over the recommended limit, high blood cholesterol, hypertension and obesity. Smoking and alcohol consumption data was available for all respondents while high blood pressure, hypertension and obesity measures were obtained from those adults, one from each household, who had consented to each physical measurement. Only adults, who had been measured for all three risk factors and for whom reliable data was obtained, were included in the analysis of these three risk factors.

### *Long-Standing Illness*

Overall almost two fifths of respondents reported some long-standing illness. This rose from less than one sixth of those aged 16 – 24 year olds, to over two thirds of respondents aged 75 years or more.

*(Table 6.1)*

Overall, about one sixth of the population reported experiencing acute illness in the previous two weeks. In younger men and women, around 10% of the population reported illness in the previous two weeks, rising to over one fifth of the population aged 75 years or more.

*(Table 6.2)*

### *Cardiovascular Disease*

All respondents were asked if they had ever had angina, heart attack or stroke (cardiovascular diseases) diagnosed by a doctor. Among all respondents, cardiovascular disease was reported more

commonly among men (11%) than women (8%). Levels of cardiovascular disease among the younger age groups, 16-44 were very low but thereafter, increased with age. 9% of men aged 45-54 suffered from cardiovascular disease in comparison to 41% of men aged 75 or over. Similarly, 4% of 45-54 year old women experienced these diseases and this increased to 32% of those aged 75 or over.

*(Table 6.3)*

## 6.2 Cardiovascular Risk Factors

### *Smoking and Drinking*

More men (35%) than women (30%) were current smokers, with the highest incidence of smoking being reported among 25-34 year old men (42%). Lower levels of smoking were reported for younger and older men, 30% among 16-24 year olds and 19% among those aged 75 and over. Among women, the highest incidence of smoking was also among those aged 25-34 (40%) decreasing to 7% in those aged 75 and over.

Over twice as many men (18%) as women (7%) drank over the recommended limits and this remained true across all age groups. The highest levels of drinking above recommended limits were reported among younger age groups, those aged 16-34 years. Thereafter there was a gradual decrease in drinking above recommended limits with age, decreasing from 27% of men and 10% of women aged 25-34 to 3% of men and 0% of women aged 75 years and over.

*(Table 6.4a)*

### *Physical Measures*

The prevalence of risk factors measured in the physical examination were also analysed. These risk factors were; high blood cholesterol (defined as a level of 6.5 mmol/l

or more), high blood pressure (defined as blood pressure of 160/95 mmHg or treatment for hypertension) and obesity (defined as a body mass index of 30 kg/m<sup>2</sup> or more). Only respondents who had been measured for all three risk factors and for whom reliable data was available, were included in this analysis.

All three risk factors tended to show a high prevalence in men and women aged 45 and over. Men and women also reported a similar overall incidence of levels of risk factors. High blood pressure was experienced by 20% of men and 24% of women, obesity by 17% and 19% respectively and high cholesterol by 16% of men and 19% of women. Overall, among men there was little variation in the incidence of risk factors, however significantly more women suffered from hypertension (24%) than high cholesterol (19%) or obesity (19%).

*(Table 6.4b)*

### ***Multiple risk factors***

The proportion of those with one or more of the five risk factors (smoking, drinking more than recommended limits, high blood cholesterol, hypertension and obesity) was also examined. Once again only subjects who had agreed to a physical examination and had all these variables measured were included in this analysis. Overall, the same percentage of men (37%) and women (37%) showed no cardiovascular risk factors. Comparable levels, 4% of men and 6% of women, showed three or more risk factors. The highest incidence of three or more cardiovascular risk factors was seen in middle age (13% of women and 9% of men).

*(Table 6.5)*

## **6.3 Risk Factors and other characteristics**

### ***Smoking and Drinking***

Smoking and drinking were explored in more detail with individual clinical risk factors presented for men and women who smoked or drank over recommended limits. Since smoking and drinking were more common in the young, and hypertension, high blood cholesterol and obesity were more common in older individuals, results were separated for younger and older age groups.

Levels of smoking and drinking above the recommended limit among men under 45 years age group was almost twice that reported by women under 45, 13% compared to 7%. In the older age group, 9% of men and 10% of women were hypertensive and also smoked, and were at particular risk of stroke and heart disease. Twelve per cent of men over 45 years drank over the recommended limits and were also obese in contrast to 2% of women in the same age group. Only 6% of men and women in the older age group of over 45 years smoked and were also obese.

*(Table 6.6)*

### ***Employment status***

The associations between risk factors and employment status were examined. It was found that no difference in the incidence of risk factors between employed and unemployed or economically inactive men or women existed.

*(Table 6.7)*

### ***Religion***

The proportion of individuals showing two or more risk factors did not differ between the two main religions.

*(Table 6.8)*

### ***Health and Social Services Board Areas***

The association of multiple risk factors with individual HSS Board areas was examined. Among men with two or more risk factors there were no significant differences between HSS Board areas. However more women reported two risk factors in the Eastern HSS Board area (22%) than in the Western HSS Board area (13%).

(Table 6.9)

### ***Socio-economic Group***

Multiple risk factors differed by socio-economic group among women only, with no difference reported between men in manual and non-manual occupations. For women in manual occupations, or previously employed in manual occupations, more multiple risk factors were reported, with significant differences between manual and non-manual workers reporting two risk factors, 25% and 16% respectively, as well as at the three or more risk factor level, 10% compared to 3%.

(Table 6.10)

## **6.4 Comparisons to all adults**

### ***Long-standing Illness***

The prevalence of long-standing illness among those with different risk factors was examined. Over half of men (55%) and women (57%) with hypertension suffered from a long-standing illness in comparison to over a third (37% of men and 40% of women) of the survey population. Women with high cholesterol levels also had a higher level of long-standing illness (57%) than the survey population, whereas high cholesterol levels in men were not associated with a high incidence of long-standing illness.

Drinking above sensible limits was associated with a decrease in long-standing illness rather than an increase. For example,

26% of men and 32% of women who drank above sensible limits reported having a long-standing illness in comparison to 37% of men and 40% of women in the survey population. This is likely to be explained by an age differential between heavy drinkers and those with long-standing illness. Higher levels of drinking are associated with younger age groups while higher levels of long-standing illness are associated with older age groups.

(Table 6.11)

### ***Cardiovascular Disease***

The incidence of cardiovascular disease (angina, heart attack or stroke) in those with different risk factors had a similar pattern to long-standing illness. Men and women with hypertension had a higher incidence of cardiovascular disease (24% and 15% respectively) than those in the survey population (11% of men and 8% of women), while men and women who drank above sensible limits had a lower incidence of cardiovascular disease (4% and 1%).

(Table 6.11)

### ***Risks vs. cardiovascular disease***

Men and women with two or more risk factors were twice as likely to suffer from cardiovascular disease (14% and 10% respectively) in comparison to those with no risk factors (7% of men and 4% of women). Those with only one risk factor had a similar incidence of cardiovascular disease as those with no risk factors.

(Table 6.12)

# Section 6 Tables

**Table 6.1 Long-standing illness by age and sex**

		Age group							All
		16-24	25-34	35-44	45-54	55-64	65-74	75 +	
Have a long-standing illness	Men	16%	16%	30%	43%	58%	59%	67%	37%
	Women	15%	25%	32%	38%	57%	72%	71%	40%
<b>Bases</b>	<b>Men</b>	286	317	340	285	228	210	138	1803
	<b>Women</b>	378	474	445	391	274	290	213	2466

*Health and Wellbeing Survey 1997*

**Table 6.2 Ill in last 2 weeks by age and sex**

		Age group							All
		16-24	25-34	35-44	45-54	55-64	65-74	75 +	
Ill in last 2 weeks	Men	10%	8%	14%	17%	21%	23%	21%	15%
	Women	7%	13%	12%	19%	26%	28%	27%	17%
<b>Bases</b>	<b>Men</b>	286	317	340	285	228	210	138	1803
	<b>Women</b>	378	474	445	391	274	290	213	2466

*Health and Wellbeing Survey 1997*

**Table 6.3 Prevalence of cardiovascular disease by age and sex**

		Age group							All
		16-24	25-34	35-44	45-54	55-64	65-74	75 +	
Cardiovascular disease	Men	-	0%	2%	9%	19%	33%	41%	11%
	Women	-	-	2%	4%	13%	24%	32%	8%
<b>Bases</b>	<b>Men</b>	286	317	340	285	228	210	138	1803
	<b>Women</b>	378	474	445	391	274	290	213	2466

*Health and Wellbeing Survey 1997*

**Table 6.4a All respondents - prevalence of risk factors by age and sex**

		Age group							
		16-24	25-34	35-44	45-54	55-64	65-74	75 +	All
<b>Men</b>	<b>Smoker</b>	30%	42%	37%	40%	38%	26%	19%	35%
	<b>Drinking over recommended limit</b>	27%	27%	19%	16%	11%	9%	3%	18%
<b>Women</b>	<b>Smoker</b>	35%	40%	34%	31%	26%	18%	7%	30%
	<b>Drinking over recommended limit</b>	15%	10%	9%	4%	4%	1%	0.30%	7%
<b>Bases</b>	<b>Men</b>	286	317	340	285	228	210	138	1803
	<b>Women</b>	378	474	445	391	274	290	213	2466

*Health and Wellbeing Survey 1997*

**Table 6.4b Physical measures only - prevalence of risk factors by age and sex**

		Age group							
		16-24	25-34	35-44	45-54	55-64	65-74	75 +	All
<b>Men</b>	<b>High cholesterol (6.5mmol/l+)</b>	6%	10%	13%	19%	35%	19%	12%	16%
	<b>Hypertensive</b>	10%	2%	14%	24%	36%	40%	34%	20%
	<b>Obese</b>	4%	15%	13%	25%	21%	25%	19%	17%
<b>Women</b>	<b>High cholesterol (6.5mmol/l+)</b>	1%	5%	11%	29%	46%	36%	32%	19%
	<b>Hypertensive</b>	10%	15%	14%	32%	42%	38%	47%	24%
	<b>Obese</b>	8%	19%	12%	30%	28%	26%	17%	19%
<b>Bases</b>	<b>Men</b>	78	128	115	113	85	56	39	613
	<b>Women</b>	124	143	164	144	96	66	51	787

*Health and Wellbeing Survey 1997*

**Table 6.5 Risk factors of respondents by age and sex.**

		Age group			
		16-44	45-64	65 +	Total
<b>Men</b>	<b>None</b>	44%	28%	32%	37%
	<b>One</b>	37%	30%	47%	36%
	<b>Two</b>	18%	33%	17%	23%
	<b>Three or more</b>	1%	9%	4%	4%
<b>Women</b>	<b>None</b>	47%	24%	27%	37%
	<b>One</b>	36%	38%	42%	37%
	<b>Two</b>	14%	25%	25%	19%
	<b>Three or more</b>	3%	13%	6%	6%
<b>Base</b>	<b>Men</b>	321	198	94	613
	<b>Women</b>	431	239	117	787

*Health and Wellbeing Survey 1997*

**Table 6.6 Respondents showing various risk factors and combinations of risk factors.**

		Age group						
		16-44	Bases	45 +	Bases	All ages	Base= 100%	
Men	Smoker	37%	942	33%	858	35%	1803	
	Smoker + Hypertensive	4%	326	9%	311	6%	637	
	Smoker + Hypertensive + Cholesterol (6.5 mmol/l +)	0.3%	326	1%	311	0.4%	637	
	Smoker + Obese	4%	326	6%	311	5%	637	
	Smoker + Obese + Cholesterol (6.5 mmol/l+)	0.4%	326	0.3%	311	0.3%	637	
	Drink over 21 units	24%	942	11%	858	18%	1803	
	Drink over 21 units + Hypertensive	0.6%	326	2%	311	1%	637	
	Drink over 21 units + Hypertensive + Cholesterol (6.5 mmol/l +)		326	1%	311	0.3%	637	
	Drink over 21 units + Obese	2%	326	12%	311	2%	637	
	Drink over 21 units + Obese + Cholesterol (6.5 mmol/l +)	0.2%	326	1%	311	1%	637	
	Smoker + Drink over 21 units	13%	942	6%	858	10%	1803	
	Women	Smoker	36%	1298	22%	1166	30%	2466
		Smoker + Hypertensive	5%	434	10%	374	7%	808
	Smoker + Hypertensive + Cholesterol (6.5 mmol/l +)	1%	434	5%	374	2%	808	
	Smoker + Obese	3%	434	6%	374	4%	808	
	Smoker + Obese + Cholesterol (6.5 mmol/l+)	0.3%	434	4%	374	2%	808	
	Drink over 14 units	11%	1298	3%	1166	7%	2466	
	Drink over 14 units + Hypertensive	1%	434	2%	374	1%	808	
	Drink over 14 units + Hypertensive + Cholesterol (6.5 mmol/l +)		434	1%	374	1%	808	
	Drink over 14 units + Obese	2%	434	2%	374	2%	808	
	Drink over 14 units + Obese + Cholesterol (6.5 mmol/l +)		434	2%	374	1%	808	
	Smoker + Drink over 14 units	7%	1298	1%	1166	4%	2466	

*Health and Wellbeing Survey 1997*

**Table 6.7 Number of risk factors by employment status**

		Employment status	
		Employed	Unemployed/Economically inactive
<b>Men</b>	<b>Two</b>	<b>22%</b>	<b>23%</b>
	<b>Three or more</b>	<b>3%</b>	<b>5%</b>
<b>Women</b>	<b>Two</b>	<b>17%</b>	<b>22%</b>
	<b>Three or more</b>	<b>4%</b>	<b>9%</b>
<b>Base</b>	<b>Men</b>	<b>392</b>	<b>221</b>
	<b>Women</b>	<b>403</b>	<b>385</b>

Health and Wellbeing Survey 1997

**Table 6.8 Number of risk factors by religion**

		Religion	
		Catholic	Protestant
<b>Men</b>	<b>Two</b>	<b>20%</b>	<b>23%</b>
	<b>Three or more</b>	<b>4%</b>	<b>4%</b>
<b>Women</b>	<b>Two</b>	<b>20%</b>	<b>19%</b>
	<b>Three or more</b>	<b>6%</b>	<b>7%</b>
<b>Base</b>	<b>Men</b>	<b>218</b>	<b>390</b>
	<b>Women</b>	<b>316</b>	<b>464</b>

Health and Wellbeing Survey 1997

**Table 6.9 Number of risk factors by Health and Social Services Board area**

		Health Board area			
		NHSSB	SHSSB	EHSSB	WHSSB
<b>Men</b>	<b>Two</b>	<b>23%</b>	<b>18%</b>	<b>26%</b>	<b>19%</b>
	<b>Three or more</b>	<b>6%</b>	<b>4%</b>	<b>1%</b>	<b>7%</b>
<b>Women</b>	<b>Two</b>	<b>18%</b>	<b>21%</b>	<b>22%</b>	<b>13%</b>
	<b>Three or more</b>	<b>7%</b>	<b>8%</b>	<b>4%</b>	<b>8%</b>
<b>Base</b>	<b>Men</b>	<b>158</b>	<b>114</b>	<b>237</b>	<b>104</b>
	<b>Women</b>	<b>199</b>	<b>146</b>	<b>318</b>	<b>124</b>

Health and Wellbeing Survey 1997

**Table 6.10 Number of risk factors by socio-economic group**

		<b>Socio-economic group</b>	
		<b>Non-manual</b>	<b>Manual</b>
<b>Men</b>	<b>Two</b>	<b>22%</b>	<b>23%</b>
	<b>Three or more</b>	<b>3%</b>	<b>5%</b>
<b>Women</b>	<b>Two</b>	<b>16%</b>	<b>25%</b>
	<b>Three or more</b>	<b>3%</b>	<b>10%</b>
<b>Base</b>	<b>Men</b>	232	350
	<b>Women</b>	387	334

*Health and Wellbeing Survey 1997*

**Table 6.11 Risk factors of respondents who were suffering from a long-standing illness or cardiovascular disease.**

		<b>All ages</b>			
		<b>Long-standing illness</b>	<b>Ill in last 2 weeks</b>	<b>CVD, Angina, Heart Attack or Stroke</b>	<b>Base = 100%</b>
<b>Men</b>	<b>All</b>	37%	15%	11%	1803
	<b>Smokers</b>	37%	16%	9%	627
	<b>Drinking above sensible limits</b>	26%	11%	4%	321
	<b>Hypertensive</b>	55%	22%	24%	120
	<b>High cholesterol 6.5+</b>	39%	17%	17%	98
	<b>Obese, BMI over 30</b>	43%	20%	11%	103
<b>Women</b>	<b>All</b>	40%	17%	8%	2466
	<b>Smokers</b>	39%	17%	6%	731
	<b>Drinking above sensible limits</b>	32%	10%	1%	175
	<b>Hypertensive</b>	57%	18%	15%	192
	<b>High cholesterol 6.5+</b>	57%	23%	10%	152
	<b>Obese, BMI over 30</b>	47%	15%	8%	152

*Health and Wellbeing Survey 1997*

**Table 6.12 Risk factors by cardiovascular disease**

		<b>CVD</b>	<b>Bases</b>
<b>Men</b>	<b>None</b>	7%	228
	<b>One</b>	8%	223
	<b>Two or more</b>	14%	162
<b>Women</b>	<b>None</b>	4%	292
	<b>One</b>	4%	295
	<b>Two or more</b>	10%	201

*Health and Wellbeing Survey 1997*

# **Appendix 1 - Methodology**

## **Appendix 1 – Methodology**

### **1 The Sample**

A stratified random sample of 3520 addresses was selected from the Valuation and Land Agency list of private addresses in Northern Ireland. Prior to selection, the list of addresses was stratified by Health and Social Services Board area and an equal number of addresses were selected from each area to facilitate analysis at HSS Board area level. Tables A.1 to A.5b are a breakdown of the main features of the sample and the subsequent responses.

### **2 Survey Design**

The survey was carried out between the end of January 1997 and the beginning of July 1997. It comprised two parts; the first part was an interview and the second was a physical appraisal by a nurse. Interviews were sought with each adult aged 16 or over in a household. One adult from each household was randomly selected for the physical examination. If an interview was obtained from the selected respondent they were then asked for their agreement to take part in the physical appraisal.

The main areas covered by the interview section included self-assessment of general health, symptoms of specific health conditions, measures of health risk such as smoking and drinking, measures of social well being such as stress-related life events and perceived social support, problems of family life and parenting, use of health and social services and some household and classificatory variables such as age, sex, marital status and occupation. The survey also collected data to enable the calculation of GHQ12 and SF36 scores, which provide an assessment of mental health, social support, anxiety and depression.

The physical measures included, recording the names of all prescribed medication that the respondent was taking, measuring height, waist, hip, weight and blood pressure. A blood sample was also taken to measure the level of cholesterol (non-fasting). The Clinical Biochemistry Laboratory at the Royal Victoria Hospital carried out analysis of cholesterol levels.

### **3 Survey Response rates**

Tables A.1 - A.4 showed the breakdown of the survey response rates.

### **4 Representativeness of the Sample**

To assess how accurately the achieved sample reflected the adult population of Northern Ireland, the sample was compared with the 1996 midyear estimates of the population. The age distribution of females in the sample matched that of the population quite closely, most differences being within the range of sampling error. However, the age distribution of males differed slightly from that of the population with fewer males in the younger age groups and more in the oldest age group (Table A.5a). The gender distribution of the sample also differed slightly from that of the midyear estimates of the population (Table A. 5b).

## 5 Survey results

In October 1997 each HSS Board was provided with ‘top-line’ results for their own area and in November 1997 with a validated database. The data from each HSS Board area was then weighted to provide data at the Northern Ireland level.

This report is the first in a series, presenting the findings from the Northern Ireland data such as general health assessment, health risk factors, and physical measurements.

## 6 Religion

Care must be taken when analysing the survey findings by religion. Historically, there are a number of environmental factors widely held to relate to the Northern Ireland religious divide that in turn have an affect on health. Religious affiliation has been linked to disparities in deprivation indicators such as poor housing, low socio-economic group, long-term unemployment and lack of educational attainment, all factors that have been linked to health differentials. Thus, the relationship between religion and socio-economic group may show disparities that are subsequently reflected as health differentials between the two religions. As Table A.6 shows, 53% of Protestants interviewed were in employment compared to 47% of Catholics, also, 3% of Protestants indicated that they were unemployed compared to 6% of Catholics. Another example of this link was that 50% of Protestants were in the non-manual socio-economic groups compared to 45% of Catholics (Table A.7), and that 19% of Protestants were in Housing Executive properties as opposed to 25% of Catholics, while 24% of Catholics own their own homes outright compared to 33% of Protestants (Table A.8).

## 7 Sampling Error

No sample is likely to reflect precisely the characteristics of the population it is drawn from because of both sampling and non-sampling errors. However, the amount of error due to the sampling process can be estimated. For a simple random sample design, in which every member of the sampled population has an equal and independent chance of inclusion in the sample, the sampling error of any percentage,  $p$ , can be calculated by the formula:

$$\text{s.e.}(p) = \sqrt{p*(100 - p) / n}$$

where  $n$  is the number of respondents on which the percentage is based. The sample for the Health and Social Wellbeing Survey was drawn as a simple random sample, and therefore, this formula can be used to calculate the sampling error of any percentage estimate chosen from the survey.

A confidence interval for the population percentage can be calculated by the formula

$$95 \% \text{ confidence interval} = p \pm (1.96 * \text{s.e.}(p)).$$

If 100 similar, independent samples were chosen from the same population, 95 of them would be expected to yield an estimate for the percentage,  $p$ , within this confidence interval.

The absence of design effects in the survey, and therefore of the need to calculate complex standard errors, means that standard statistical tests of significance (which assume random sampling) could be applied directly to the data. Table A.9 provides examples of the sampling errors and confidence intervals for typical percentage estimates from the Health and Social

Wellbeing Survey based on the sample size achieved. These can be used as a rough guide when interpreting the results of the survey.

A percentage estimate of 10% (or 90%), which is based on all respondents to the survey, has a standard error of 0.46 and a 95% confidence interval of +/-0.90%. A percentage estimate of 50% has a standard error of 0.77 and a 95% confidence interval of +/- 1.51%. Sampling errors for proportions based on subgroups within the sample (e.g. smokers) were larger than they would be if the questions were asked of everyone.

## **8 Weighting**

Two weightings were needed for the purpose of analysis.

### ***Northern Ireland Weights***

Selecting equal samples from each of the four HSS Board areas meant that overall the survey would not accurately reflect the Northern Ireland population. This was because the Northern Ireland population was not equally dispersed over the four HSS Board areas and that probability of selection for the survey was therefore dependent on the population size of the particular HSS Board area. In other words individuals living in a HSS Board area with a large population had a lower chance of being included in the sample than individuals from a smaller HSS Board area.

Before analysis of the data at the Northern Ireland level, the data from each HSS Board area was weighted in relation to the population size. This weighting process adjusted the results to those that would have been achieved from a random sample of Northern Ireland addresses.

*(Tables A10)*

### ***Physical Appraisal Weights***

Only one adult was selected to take part in the Physical Appraisal of each selected address. This means that the probability of selection for the survey is inversely related to the size of the household. Therefore individuals living in large households have a lower chance of being included in the sample than individuals in small households.

Before analysis of the physical measurements, the data are weighted in relation to the number of eligible adults at the address derived from details of the household structure recorded by interviewers. This weighting process adjusts the results to those that would have been achieved if the sample had been drawn as a random sample of the whole of Northern Ireland, or of adults rather than addresses.

*(Table A.11)*

To demonstrate the effects of weighting on the responses given by the selected respondents, the question - "Which of the following statements best describes the way you feel about the political situation in Northern Ireland at present?" - was analysed unweighted, and weighted for Northern Ireland figures and for physical measures.

*(Tables A.12-A.14)*

# Appendices Tables

**Table A.1 Responses from all households**

Addresses issued	3520	
Ineligible	286	
<b>Effective Sample</b>	<b>3234</b>	
		<b>Response rate</b>
<b>Complete</b>	<b>2435</b>	<b>75%</b> (one or more persons interviewed)
<b>Refusal</b>	<b>635</b>	<b>20%</b>
<b>Non-contact</b>	<b>164</b>	<b>5%</b>
<b>Physical Measures</b>	<b>1713</b>	<b>53%</b> (selected respondent completed interview and physical measures)

*Health and Social Wellbeing Survey 1997*

**Table A.2 Individual response in co-operating households**

	No. of individuals	Response
Total eligible individuals	5097	
Full personal response	4237	83%
Proxy interview	451	9%
Refusal/non contact	409	8%

*Health and Social Wellbeing Survey 1997*

**Table A.3 Response to physical measures in co-operating households (one person per household was randomly selected to take part in the physical measures)**

	No. of individuals	Response
Eligible individuals	2435	
Selected respondent agreed to interview	2184	90%
Respondent agreed to physical measures	1938	80%
Nurse obtained physical measures	1713	70%
<b>Nurse response rate</b>		<b>88%</b>

*Health and Social Wellbeing Survey 1997*

**Table A.4 Interviewed households and individuals by Health and Social Services Board area**

	Households	%	Individuals	%
NHSSB	596	24.5	1099	23.4
SHSSB	625	25.7	1223	26.1
EHSSB	604	24.8	1139	24.3
WHSSB	610	25.1	1227	26.2
<b>Total</b>	<b>2435</b>		<b>4688</b>	

*Health and Social Wellbeing Survey 1997*

**Table A.5a Representativeness of the sample**

		Midyear estimate of population	Individual interviews	Physical measures
		%	%	%
<b>Males</b>	<b>Age</b>			
	16-24	19	17	13
	25-34	21	18	19
	35-44	18	18	19
	45-54	16	17	17
	55-64	12	12	13
	65+	14	18	17
<b>Females</b>	<b>Age</b>			
	16-24	17	16	17
	25-34	20	19	19
	35-44	17	18	18
	45-54	15	15	16
	55-64	12	11	12
	65+	20	21	17

*Health and Social Wellbeing Survey 1997*

**Table A.5b Representativeness of the sample**

		Midyear estimate of population	Individual interviews	Physical measures
		%	%	%
<b>Males</b>		48	45	43
<b>Females</b>		52	55	57

*Health and Social Wellbeing Survey 1997*

**Table A.6 Economic activity status of respondents by their religion**

		Religion			Total
		Catholic	Protestant	Other	
<b>Economic Activity</b>	<b>Employed</b>	47%	53%	55%	50%
	<b>Unemployed</b>	6%	3%	0%	4%
	<b>Inactive</b>	47%	44%	46%	45%
<b>Bases</b>		1633	2584	11	4228

*Health and Social Wellbeing Survey 1997*

**Table A.7 The socio-economic divide of respondents by their religion**

	Religion			Total
	Catholic	Protestant	Other	
Non-manual	45%	50%	22%	48%
Manual	55%	50%	78%	52%
<b>Bases</b>	1469	2433	9	3911

*Health and Social Wellbeing Survey 1997*

**Table A.8 Housing tenure of respondents by their religion**

Type of tenure	Religion			Total
	Catholic	Protestant	Other	
Owned outright	24%	33%	18%	30%
Being bought with mortgage/loan	42%	41%	55%	42%
Rented from NI Housing Executive	25%	19%	0%	21%
Rented from the Housing Association	1%	2%	18%	1%
Rented privately	7%	4%	9%	6%
Rented from employer	0%	0%	0%	0%
Rent free	1%	1%	0%	1%
<b>Bases</b>	1632	2583	11	4226

*Health and Social Wellbeing Survey 1997*

**Table A.9 Sampling Errors**

	(%) (P)	Standard Error of (P) (%)	95% Confidence interval +/-
<b>Sex n = 4236</b>			
Male	42	0.76	1.49
Female	58	0.76	1.49
<b>Religion n = 4202</b>			
Catholic	43	0.76	1.5
Protestant	56.8	0.76	1.5
<b>Attitudinal n = 4163</b>			
Weigh a little more than you should	36.3	0.75	1.46
Weigh just about the right amount	7.3	0.4	0.79
<b>Smokers n = 1316</b>			
Smoke regularly	55.5	1.37	2.69
Smoke occasionally	21.4	1.13	2.22

*Health and Social Wellbeing Survey 1997*

**Table A.10 Weighting of the sample by Health and Social Services Board area**

	Weight	Number	%	Scaled Weight
NHSSB	1	1085	25	1.08
SHSSB	2	755	18	0.67
EHSSB	3	1791	42	1.7
WHSSB	4	638	15	0.6

*Health and Social Wellbeing Survey 1997*

**Table A .11 Weighting of the sample for physical measures**

Health and Social Services Board area	Adults in Household	Weight	Number	%	Scaled Weight
<b>NHSSB</b>	1	1	142	8.5	0.51
	2	2	230	13.7	1.02
	3	3	60	3.6	1.53
	4	4	25	1.5	2.04
	5	5	5	0.3	2.55
	6	6	1	0.1	3.06
<b>SHSSB</b>	1	7	82	4.9	0.32
	2	8	138	8.2	0.65
	3	9	45	2.7	0.97
	4	10	13	0.8	1.29
	5	11	14	0.8	1.61
	6	12	3	0.2	1.94
<b>EHSSB</b>	1	13	199	11.9	0.93
	2	14	284	16.9	1.85
	3	15	97	5.8	2.78
	4	16	32	1.9	3.71
	5	17	20	1.2	4.63
	6	18	2	0.1	5.56
<b>WHSSB</b>	1	19	78	4.6	0.26
	2	20	134	8	0.53
	3	21	37	2.2	0.79
	4	22	23	1.4	1.05
	5	23	10	0.6	1.32
	6	24	4	0.2	1.58

Health and Social Wellbeing Survey 1997

**Table A.12 Feelings about political situation in Northern Ireland**

*Unweighted*

*All Persons Aged Sixteen and Over*

	Total
<i>Base=100%</i>	4224
It does not really worry me	26.8
I am a bit worried about it	45.8
I worry about it quite a lot	18.3
I am very worried about it	9.1

Health and Social Wellbeing Survey 1997

**Table A13 Feelings about political situation in Northern Ireland**

*Weighted (individuals)*

*All Persons Aged Sixteen and Over*

	Total
<i>Base=100%</i>	4257
It does not really worry me	25.7
I am a bit worried about it	45.8
I worry about it quite a lot	19.2
I am very worried about it	9.3

Health and Social Wellbeing Survey 1997

**Table A14 Feelings about political situation in Northern Ireland**

***Weighted (physical measures)***

***All Persons Aged Sixteen and Over***

	<b>Total</b>
<b><i>Base=100%</i></b>	<b><i>1702</i></b>
<b><i>It does not really worry me</i></b>	<b><i>23.7</i></b>
<b><i>I am a bit worried about it</i></b>	<b><i>45.9</i></b>
<b><i>I worry about it quite a lot</i></b>	<b><i>21.4</i></b>
<b><i>I am very worried about it</i></b>	<b><i>9.1</i></b>

*Health and Social Wellbeing Survey 1997*