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A Study of Adolescent Health:
Change over Time and Place

By

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Submitted to the Department of Public Health, Faculty of Medicine
The University of Glasgow, in fulfilment of the requirement for the
award of the Degree of Doctor of Philosophy (Ph.D.)

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To my mother, for her unfailing love, nurture, and confidence in me.

To my wonderful wife, Azar, who has always been a full partner of my life, and our children Goya and Poya who have helped me revisit adolescence and see its wonders and challenges with new eyes.

And to the memory of Ahmad, my father and Rahyab, my father-in-law.

DECLARATION

This thesis is submitted in fulfilment of the requirements for the degree of Doctor of Philosophy (Ph.D.) at the University of Glasgow, Faculty of Medicine, Department of Public Health. Unless stated otherwise, the work is that of the author.

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ABSTRACT

The tradition of public health is fundamentally epidemiological and clinical, often being problem-oriented, rather than need or development-oriented. Most public health initiatives usually start with problems rather than with assessment of needs, often looking at the past, rather than the future. Thus, aspects of health in adolescence of interest to public health often related to morbidity; for example, accidents, sexually transmitted disease, substance abuse, or other problems such as teenage pregnancy. The health of adolescents has been the subject of very little research, with only a few studies investigating the health and health needs of young people in terms of socio-economic factors and different residential localities. The available material is severely limited, notable deficiencies being the impact of area of residence on health and how area of residence has an influence on future life chances. This is an important omission as attitudes about health-related services for adolescents may significantly influence the extent to which young people with specific needs or problems receive appropriate help for their difficulties. The way forward in nurturing the well-being of adolescents is not to focus on problems but on the potential for healthy development and physical, mental and social growth.

This study of Adolescent Health was carried out to investigate differences on a range of health measures among adolescents aged 15 living in two contrasting urban localities, conceptualised both as a proxy for social context and socio-economic

status. The two localities were in the city of Glasgow - the third largest city in the UK and first in Scotland - and they differed in socio-residential characteristics, one having better than average and one having worse than average socio-economic characteristics. The study also examined whether the health status and concerns of current Glaswegian adolescents differed from their counterparts who had been surveyed nine years earlier. These data, obtained in a survey conducted in 1995, were compared with data collected in 1987 from the West of Scotland Twenty-07 Study on a sample of 15 years olds residing in these same localities. An additional aim of this study was to explore the health status and the health needs of adolescents from the point of view of professionals who work with adolescents in the context of different socio-economic locations of work. The locations of work were operationalized as working in the middle class (socio-economically advantaged) locality, and working in the deprived (socio-economically disadvantaged) locality.

This study was jointly supported by the Department of Public Health and the MRC Medical Sociology Unit.

Data were collected on a range of health indicators and the young people's views about their general health, health concerns, and area of residence by means of a self-administered questionnaire. The design of the professionals' survey also involved a self-completion questionnaire.

The overall conclusions which emerged from the study findings can be summarised as follows:

(1) Adolescents are typically judged on the assumption of youthful healthiness. Contrary to this popular supposition, there is evidence suggesting that, overall, the picture is not commensurate with the assumption. The study findings show about one in six of young people reporting a long-standing illness, disability or infirmity, around a quarter of boys and a half of girls symptoms of psychological morbidity, and around a half assessing their health as only 'fairly or not good'.

(2) Using a variety of indicators, there is little or no evidence of differences in either physical health or psychological well-being of adolescents residing in markedly contrasting areas of residence.

(3) The study has highlighted the fact that in many aspects of adolescents' health concerns, perceptions of their area of residence, and aspirations, the differences between the contrasting localities are relatively large despite little or no evidence of differences in either their physical or mental health status.

(4) In general, while the evidence suggests that the physical health of young people has shown some relative improvement, the level of their psychological well-being has declined remarkably, a pattern which holds in both localities. It is possible this is

in part related to differences in life events experienced, particularly those involving violent attacks. Adolescents who had experienced negative life events related to their family or friends (such as conflicts, serious illness or injury) were more likely to be psychologically distressed. Thus, these can be considered as predictors of adolescent malaise. The study findings also indicated that girls reported far more emotional problems than boys.

(5) Adolescents in 1995 more often perceived themselves as remaining in the parental home rather than leaving and establishing the independence of adulthood compared to their counterparts in 1987.

(6) Location of work is a strong differentiator of health care and educational professionals' assessments of adolescents' health status and health needs.

(7) Comparison between professionals and young people showed that adolescents' perceptions of the health and health concerns were similar to those of professionals in their localities. This pattern was also found between young people and professionals' assessments of youth-related amenities and services in each locality.

Adolescents' health promotion should be seen as *facilitating* physical, social and emotional well-being and enhancing quality of life. Community-wide participation is

needed to improve health care for adolescents, in particular those interventions concerned with mental health.

There is a need for closer interaction between mental health professionals and other agencies in the planning and provision of services to young people in general, and to young females in particular.

As in every section of the population, adolescents should have a *voice* concerning the delivery of care for them, and the *opportunity* to set their own health and well-being agenda. There is a need to consider the rights of young people to access health-promoting environments, opportunities and resources.

INTRODUCTION TO THE STUDY

The adolescent population has many issues to deal with during a time of psychosocial and physiological change and vulnerability. Adolescence is a time when young people are no longer children, but not yet adults; it is a time when they experience new ideas, new relationships, and new activities. With adolescence comes increasing concerns about schoolwork, making friends, sex, discrimination, violence, abuse, sadness, and perhaps most important of all, concerns about the future. At this stage of their lives, they are struggling for their independence, and seeking to “be somebody”.

Often society pays little attention to adolescents until they cross a ‘pathological’ line into crime, teenage pregnancy, psychiatric distress, and other juvenile problems. It is then that professionals initiate attempts to fix or control the problems. Unfortunately, however, it is the solution to *problems* which attracts attention, and not the *needs* to be met. There is only a scanty literature portraying positive images about adolescents.

Adolescence is a period of key developmental significance for health, but there is insufficient data on the health of adolescents, not only in the UK, but elsewhere. The few available studies on young people’s health have been mainly concerned with behaviours, and sometimes illness, with little or no emphasis on their health needs, concerns, and socio-economic background.

The overall aim of this study of adolescent health (hereafter referred to as the Adolescents' Health Study) was to investigate the health status and health needs of adolescents both from their own point of view and from the perspective of the professionals who work with them in the context of contrasting socio-economic areas of residence. Two localities, one socially advantaged and one socially deprived, were selected for comparison. There are therefore two components to the study: the views and perceptions of adolescents themselves, and the views of professionals about young people's health status and needs according to locality in which they work. The present study has also examined the pattern of changes in the health and well-being of young people that occurred during the time period 1987-1995 using a wide range of indices. It is hoped that the information will be of practical value to those with responsibility for health policy and planning, and will stimulate the exploration of ways in which young people may be used as a resource for the promotion of health and well-being.

This thesis consists of three parts (eight chapters).

Part one (chapter one) is a review of the previous literature and is discussed under four headings: definitions of adolescence; adolescence and health; the link between socio-economic circumstances and adolescents' health; and health and social policy for adolescents.

Part two, which consists of three chapters, begins with identification of the research questions and a statement of the study aims and objectives (chapter two). This part also contains a description of the background to the study and refers to an earlier

study - the West of Scotland Twenty-07 Study (Macintyre et al. 1989) - which provided the comparison data from 1987. The socio-demographic characteristics of the study catchment areas are then described in chapter three. Chapter four describes the methods used in both the adolescents' survey and the professionals' survey focusing on the procedures (the setting, and the selection of subjects), the sampling frame, response rates, characteristics of the sample, questionnaire and schedule construction, and methods of analysis of data.

Part three refers to the findings and the discussion of results, methodological issues, conclusion and recommendations. The presentation of data is divided into three chapters reflecting the different issues the Adolescents' Health Study addressed. The first (chapter five) reports the adolescents' health issues in 1995, and their opinions about their area of residence. General aspects of adolescents' health and well-being and health concerns are examined, with reference to area of residence in particular. Chapter six considers aspects of young people's health and health concerns that have changed over the nine year period in each of two contrasting localities. Chapter seven looks at views about young people's health related issues held by professionals in the (same) two localities. This chapter also compares the views of professionals and the views of the young people themselves.

The final chapter begins with a consideration of some methodological problems and a discussion of the study results. This is followed by the overall conclusion based on the study findings, and the recommendations made for improvements in the health and well-being of young people.

PART ONE
LITERATURE REVIEW

CHAPTER ONE

INTRODUCTION AND LITERATURE REVIEW

Definitions of adolescence

Adolescence and health issues

The link between socioeconomic circumstances and adolescents' health

Health and social policy for adolescents

This review covers the public health, social science, developmental psychology, and psychiatric literature, focusing on a period of major social change occurring in the years 1980-1995. The review is focused on four main topics:

1. Definitions of adolescence
2. Adolescence and health issues
3. The link between socioeconomic circumstances and adolescents' health
4. Health and social policy for adolescents

1. Definitions of adolescence

1.1. Introduction

Depending on the purpose at hand, definitions of “adolescents”, “young people” or “youth” vary as to the exact age range encompassed and the physiological,

psychological and sociological dimensions that characterise adolescence, a period during which major biological, psychological, and social changes take place. In practice, these terms are very often used interchangeably.

At its simplest, the term “adolescent” could be used to define a boy or girl in the period between being a child and being an adult. It is proposed by WHO (1986) that the term “young people” should refer, in general, to the age range 10-24 years. However, the concept of “young people” varies according to cultural and legislative factors such as compulsory age of schooling, accepted age of marriage, child labour legislation, and so on. Thus, it varies greatly from culture to culture as far as the attainment of adult independence is concerned. There is, however, one unvarying factor: though no longer a child, the adolescent is not yet considered by any society to be fully adult. While the onset of adolescence is usually associated with the commencement of puberty and the appearance of secondary sex characteristics, the end of adolescence is less clearly defined. However, the main characteristic of adolescence must be borne in mind, namely, that it is a period of gradual transition from childhood to adulthood, and it is characterised (a) by efforts to achieve goals related to the expectations of the mainstream culture and (b) by spurts of physical, mental, emotional, and social development.

There are four approaches to the study of adolescence, each of which reflects a different emphasis on biological, psychological and sociological factors.

1.2. An approach based on developmental processes

According to this approach, adolescence is a distinct and significant developmental period in the life course. As Eisen (1984) has argued, its characteristic essentially depends on the way in which biological, cognitive, psychological, and social growth together fashion the maturational patterns of this age group. While this perspective on adolescent development acknowledges individual, cultural, and socio-economic differences, its central proposition stresses universal features of adolescence as evidenced by striking commonalities unrelated to genetic, racial, and national differences.

Within this approach, the universal aspects of adolescence are largely determined by developmental processes (WHO, 1975). These include the following:

1. The individual's progression from the initial appearance of the secondary sex characteristics to sexual maturity (satisfactory adjustment).
2. The development of the individual's psychological processes and patterns of identification from those of a child to those of an adult.
3. The transition from a state of total socio-economic dependence to one of relative independence.

1.3. An approach based on age groupings

WHO earlier considered 10-19 years as the period of adolescence, an age range which generally encompasses the time from the onset of puberty to the legal age of majority, a definition useful for health planning (WHO 1975). Later, for the

purposes of International Youth Year (IYY), the United Nations defined “youth” as encompassing the age range 15-24 years. A pragmatic approach is to merge the two age ranges into the all encompassing group of 10-24 years. WHO did not acknowledge the discrepancies between chronological age and biologic and psychological stages of development, nor the wide variations due to personal, cultural, and environmental factors.

1.4. An approach based on behaviours, activities, and responsibilities

Adolescents characteristically show rapidly changing behaviour as well as inconsistencies in biological status, psychological readiness, and social aptitude. Bennett (1985) stressed that all of these characteristics contribute to the uniqueness of adolescence and make it qualitatively different from all other developmental stages in the life cycle. Adaptation to outwardly directed tasks and activities, such as working and establishing a family (or other grouping), becomes the priority. The chronological age at which young people are able or expected to assume these more adult-oriented characteristics, however, is significantly influenced by their social, political, economic, and cultural circumstances.

1.5. An approach based on the achievement of independence

From this point of view, adolescence is seen as the stage in life during which there is transition from dependent childhood to independent adulthood. As Jones and Wallace (1992) have noted, however, there are enormous problems associated with

the term 'adolescence', some of which refer to physical development, some to social and economic development and some to legal status. They make the point that in contemporary society youth can be seen as the period during which the transition to citizenship, that is, to full participation in society, occurs. They argue that while rights are gradually acquired during youth, access to these rights, including full participation in society, is still determined by the social structures of inequality such as social class, gender, race, disability and so on. Full participation (rights and access to them) in society is, as Marshall (1950, quoted in Jones and Wallace 1992) indicated, dependent on personal resources and position in the social structure; and thus, following Lister (1990), also depends on the achievement of economic independence. Economic independence is a necessary condition for full participation in society. Full economic independence in youth is achieved through the structures of the labour market and the welfare state. Based on this sociological approach, youth is defined as a period during which full citizenship rights and responsibilities are accrued.

One could, therefore, conclude that the bridge between childhood and adulthood which is characteristic of each of the different points of view outlined above has become increasingly prolonged. Adolescents of today have to be more patient to become adults by comparison with the experiences of an older generation. Consequently, contemporary society perhaps should be more patient with today's adolescents and their difficulties, problems, and delinquencies, and pay more

attention to their specific needs. As West (1994) has argued, while the transition to adulthood may never have been easy, for many of today's young people, the future appears as one of limited opportunities: inadequate training, low paid jobs or no jobs, enforced dependency on parents and even homelessness.

2. Adolescence and health issues

2.1. Introduction

Relatively little attention has been given to the health of adolescents, principally because the mortality rate is lower in this population group than in early childhood, and because of an assumption of youthful healthiness. It is, however, widely acknowledged that if the aim is not only a reduction of mortality but the improvement of health and the quality of life in general, then health conditions throughout the whole cycle of reproduction, growth, and development, including adolescence, deserve due consideration (WHO, 1977). Health is multi-dimensional and difficult to define; as Woodroffe et al. (1993) have noted the absence of health is easier to measure than its presence.

Health is defined in the Constitution of the World Health Organisation as "a state of complete physical, mental and social well-being" (WHO, 1984 b). Health is not merely the absence of illness or disease. In accepting the ambitious goal of health for all by the year 2000, the member states of WHO raised important questions as to how this might be achieved. They have also emphasised the need to develop indicators to

evaluate the progress made (Deliege, 1983). One consequence of this is a necessary expansion of the concept of health. Dr H Mahler, the previous Director-General of WHO, has suggested that health should be considered “in the broadest context of its contribution to, and promotion by, social and economic development, so that people will be able to lead socially and economically satisfying lives” (Mahler, 1981). Thus, health may be seen as a state of dynamic equilibrium between an organism and its environment. Health is both a consequence of an individual’s life-style and a factor in determining it but it cannot be isolated from other aspects of life. Health is an experience of well-being that is very much dependent on the social, economic, political, and cultural conditions in which people live. As Eisen (1983) has noted, at the most basic level, it is closely dependent on the availability of adequate nutrition, clean water, sanitation, shelter, and employment. Health is also linked to the availability of education, transport, recreation, and welfare services. In addition, at a more philosophical level, Manoharan (1982) pointed out that there are important political and spiritual dimensions of health. Powerlessness can be viewed as a basic cause of ill-health, in that it makes individuals and communities more vulnerable, and less able to command the resources and services needed to protect their health. A sense of helplessness may lead to passivity, inertia, and despair.

Traditionally, epidemiologists have measured people’s health by concentrating on how sick they are and at what rate they die and have not looked at how healthy people are. As Goldberg and Dab (1987) have noted, the measurement of a phenomenon as complex as health status necessitates a number of specific stages,

mainly the elaboration of an operational definition of health, the choice of elementary phenomena capable of reflecting health status, the determination of the information to be collected, and the choice of a method of combining the separate elements. As is clear from the classical definition adopted by the WHO, and indeed has been suggested by a number of other definitions, health is not merely the absence of disease. Only recently, however, have attempts been made to measure the “positive” aspects of health, this “something more” than the absence of disease. Some workers have made a clean break with the concept of disease and attempted to measure a state of *global health*. The fundamental basis of this line of research is the existence in the individuals making up a population of a continuum of states of health ranging from perfect health to death (Reed 1969, Chiang and Cohen 1973). However, as Macintyre (1994) has argued, the overall level of health in a population, and the social distribution of health within a population, are both products of interactions between different elements, from the most social to the most biological.

When defining levels of health, account is taken not only of the consequences of ill health (i.e. the “extended” morbidity) but also - and this is the characteristic feature of the new approach - of phenomena which reflect “positive” health (i.e. capacity, potential, performance, etc.). This approach is clearly influenced by the definition of health as a global phenomenon (Goldberg and Dab 1987). Multidimensional health is more than just the sum of its parts and it is not enough to just measure its parts. Health is a multiple and variable concept which can be studied by widely different

approaches but it is neither easy nor are there readily available, reliable, and valid measures.

Adolescents represent a large proportion of the population and have the potential for considerable morbidity later on because of high health damaging behaviour e.g. smoking. Compared to children but not to adults, they are also more vulnerable to the negative effects of stressful life events (Brown and Lawton 1986, Norris et al. 1992, Williamson et al. 1995), and as a result, have the potential for psycho-social morbidity. Although adolescents are traditionally considered to be relatively healthy, making few demands on medical resources and showing little interest in their own health (Frogal 1976), adolescence is widely recognised as a period of key developmental significance with special relevance for health. Jessor (1984) has argued that adolescence is a period of particularly high risk for compromising health through the adoption of unhealthy activities, and may have long-term implications and consequences for health. There are two important reasons why adolescence is a pivotal time for health-related learning and socialisation: Firstly, adolescence is a period in which a variety of health-related behaviours such as smoking are initially learned and tried out and, secondly, many of the psycho-social attributes (e.g. peer relationships, values) which influence and regulate health behaviours are acquired and consolidated during adolescence.

Indeed, it has been suggested that throughout this period adolescents experiment with a wide range of behaviours and lifestyle patterns as part of the natural process of becoming independent of parents, developing a sense of autonomy and acquiring

some of the skills necessary for functioning effectively in the adult world (Rossow and Rise, 1993). This process of transition from dependent childhood to independent adulthood and seeking to 'be somebody' may constitute a period of stress and high vulnerability to psycho-social demands. It is widely acknowledged that teenagers are concerned about the image they present to other people, particularly their peers (Taylor 1991, Hebdige 1979). For example, it has been suggested that smoking may be used by some as a form of self-expression or symbol of their own 'style' or youth sub-culture to which they belong (Nash 1987, West and Macintyre 1990). The onset of adolescence is a critical period of biological and psychological change for the individual. For many, it involves a drastic change in social environment as well. These years are highly formative for behaviour patterns and activities relevant to health.

By some criteria, adolescents appear relatively healthy. Adolescents fare well if views of health are limited to physical illness. However, if the parameters of the concept of 'health' are expanded to include psychological and other dimensions of health such as health concerns, significant unmet health needs emerge for this age group of population. Furthermore, a broader definition of health suggests the possibility of a more elaborate and possibly different set of causes of ill-health.

Aspects of health of relevance to young people can now be considered in more detail. Topics have been selected for their public health importance and trends over time

comprising mortality; chronic and disabling conditions; overweight and obesity; mental health and social well-being; health and health-related issues of concern to young people, worries and aspirations, and health-related behaviours and lifestyle.

2.2. Mortality

Mortality, although only one small component of health, is the most commonly used index of ill-health, and data on death are mostly reliably recorded through the system of death registration. There is a long tradition of research on the health of communities and nations that is based on analysis of mortality statistics. Thus, while this approach has its limitations (rate of mortality does not measure quality of life) it has nevertheless proved very fruitful, since it is normally regarded as a good indicator of the overall health of a population.

The mortality rates for young people are low compared with those for infants and adults. In the UK, less than 0.1% of the population under 20 years of age die per year. Around 58% of all deaths under 20 years happen in infancy (Woodroffe et al. 1993). Over recent decades, there have been significant changes in mortality patterns among adolescents, including a decline in deaths from infectious diseases and an increase in accidental deaths. In the U.K., 99.2% of babies surviving the first year of life face a decreasing risk of death until traffic accidents take an increasing toll from age 15 onwards (Woodroffe et al. 1993).

In developed countries, accidents, suicides, and other external causes now constitute the major causes of death in adolescence. While the proportion varies from country

to country, overall these causes are responsible for approximately half of all deaths. From U.K. statistics in 1985, among young people (age 10-24), for instance, accidents, suicides, and all other external causes of death accounted for 57% of total deaths in England and Wales, 70% in Northern Ireland, and 66% in Scotland (WHO, 1986).

In 1990, injuries made up 60% of all deaths at age 15-19 in the UK, with cancer being the second main cause of death. At least 4% of deaths in the 15-19 age group are from drug abuse and 80% of fatal injuries are accidental. The results suggest that up to two children a week die in the U.K. as a result of deliberate injury or child abuse (OPCS, RG Scotland, and RG N Ireland 1990). In 1992, in Scotland from a total of 536 deaths among persons aged 10-24 years around one-third were reported to result from accidents in the home or transport accidents (Registrar General Scotland 1992). Information on suicides as a cause of death among this specific group is not available.

In infancy and the late teenage years, overall mortality in boys is higher than in girls, possibly reflecting greater vulnerability to a range of conditions, and especially a greater propensity to suffer accidental injuries (Woodroffe et al. 1993). Thus, while mortality is similar for girls and boys aged 1-14, at 15-19 the rates are 0.3 for young women and 0.7 for young men (CSO AAS).

At all ages, boys have a higher mortality from injuries than girls, a difference which increases with age such that by 15-19 years the rate for young men is three-and-a-half times that for young women (OPCS GHS 1991-92).

2.3. Chronic and disabling conditions

The process of adolescence is far from being the same for the young person with a chronic illness or disability as it is for his or her healthy peers. Many young people have been disabled from birth or childhood. However, serious conditions and injuries can also be acquired during adolescence. Chronic and disabling conditions in adolescence can be categorised as: chronic disease (e.g. respiratory disease, epilepsy, asthma, diabetes, juvenile rheumatoid arthritis, cardiovascular disorders), physical handicaps (e.g. visual, hearing, or speech defects, spina bifida/ other genetic disorders, facial deformity, traumatic lesions, marked obesity), and intellectual handicaps (e.g. learning disorders, mental retardation). Trauma due to accidents in connection with traffic, work, sport, or physical assault is the most common cause of disability acquired in adolescence and may result in amputation or spinal or brain injury. The importance of accidents as a cause of injury in adolescence has already been emphasised.

There is some evidence to suggest an increase in the overall level of chronic illness, to which the improved survival of children with previously life-threatening conditions has contributed (Woodroffe et al. 1993). In the U.K., chronic illness in the under-16s, including respiratory disease and diabetes, has increased over the past 20 years. According to the General Household Surveys, the prevalence of chronic illness in age 5-15 years more than doubled between 1972 and 1991 (OPCS GHS 1991-92).

In 1991, around 15% of children and adolescents age 5-15 years had a longstanding illness and around 5% an illness which limited activities. It has been estimated that at least 3% of children and young people suffer from a permanent disability. The most commonly reported condition was respiratory illness, usually asthma; 78 per 1000 children - half of those with longstanding illness - had a respiratory condition. Skin complaints (eczema) and ear complaints were also frequently mentioned (OPCS GHS 1991-92). Among 16-19 years olds in 1991, a fifth reported that they had a longstanding illness. In different British or Scottish national studies, rates of longstanding, and limiting longstanding illness at age 15 ranged from 13-23% and 5-11% respectively (West et al. 1994). In 1991 in Great Britain, the prevalence of chronic illness was more commonly reported in boys than in girls (OPCS GHS 1991-92).

2.4. Overweight and obesity

Being overweight contributes to illness in childhood and increases the risk of disease in later life. A trend in the number of schoolchildren who are too heavy for their height has yet to be discerned, but the proportion of obese/ overweight young adults appears to have increased (Woodroffe et al. 1993). The dietary and nutritional survey of British adults aged 16-24 years showed 18% of young men and 17% of young women were overweight and 3% and 6% were obese respectively in 1986-7 (Gregory et al. 1990).

Findings from the study of the Heights and Weights of Adults in Great Britain showed that at age 16 mean Body Mass Index was 20.9 for males and 21.7 for females in 1980 (Knight 1984). A rather similar pattern of mean BMI in a study in the West of Scotland was apparent among mid adolescents age 15 in 1987 in Scotland : 20.3 for males and 21.1 for females (Green et al. 1989, West et al. 1994).

2.5. Mental health and social well-being

As Fombonne (1995) has noted, feelings of sadness, unhappiness and misery are experienced by almost everyone; they are part of the human condition. Dysphoric mood may be a normal, healthy reaction to stressful events and in those cases it is an aspect of the mechanisms for coping in the face of adversity. In other cases, sadness reaches extremes of intensity or duration, or possesses deviant features, that significantly alter psychological functioning; in those circumstances, it is not an aspect of coping, but on the contrary impairs the individual's ability to adapt to the demands of normal life and to promote personal growth and achievement.

While emotional difficulties can, of course, be experienced at any time of life, adolescents are subject to special stresses arising from the rapid changes that accompany their transition from childhood to adulthood. As Brown and Lawton (1986) have noted, adolescence is quite often a period of considerable personal adjustment and stress. In addition, as a result of the changing nature of many societies today, increasing external stresses are brought to bear on young people. These stresses, and the ways in which young people cope with them, need to be

understood for at least two major reasons: while the experience of stress can be a natural part of maturation, it can, if not appropriately dealt with, lead to emotional and physical disorders with serious consequences for both individuals and families; at the same time, adolescence provides an opportunity for helping young people to learn how to cope and thus achieve a healthy future both for themselves and their future families.

Psychological disturbance in young people ranges from minor transient emotional problems (usually reactive to an acute discernible stressful experience) to serious psychiatric disorder (WHO, 1980).

2.5.1. Minor transient emotional problems: Several measures, especially self-report measures, have been specifically designed for the assessment of depressive phenomena, anxiety, and other emotional problems and are available for children and adolescents. One of these, the General Health Questionnaire (GHQ) (Goldberg 1978), has been quite widely used as a measure of minor psychological morbidity. The GHQ consists of a series of statements about aspects of well-being (e.g. worries, tension, concentration difficulties or sleep loss), to which young people indicate by one of four responses the extent to which each symptom has been present or absent over the 'past few weeks'. A score beyond a certain value designates 'caseness', a level of psychological morbidity of potential clinical significance. Using this measure, about 11% of 15 year old males and 18% of females in the West of Scotland Twenty-07 study were judged 'cases' (Green et al. 1989), and 16% (boys) and 28% (girls) of 15-16 year olds in the Young People's Life and Leisure study of

1989-91 (Glendinning A 1994). Fichter et al (1988) reported that male adolescents had lower scores than female adolescents on the GHQ 28-item scale.

2.5.2. Serious psychiatric disorder: In western countries, the prevalence of significant psychiatric disorders in adolescents is believed to be between 12% and 15%, but is probably closer to 20% in urban areas (Bennett, 1985). Approximately 50% of young people with these disorders have already shown such disorder in childhood. In the absence of appropriate treatment, there is a high likelihood of continuity with adult psychiatric disorder. In the U.K., mental health problems in children and adolescents are common, and the OPCS Disability Survey suggests that behaviour problems are the most common cause of functional disability at all ages under 15. Depression and anxiety states are found as common psychiatric disorders among adolescents aged 15 years (Graham 1993), and in England in 1989-90, there were 176 hospital admissions for mental illness per 100,000 aged 15-19 (DH HPSSS 1992).

Suicide statistics and findings from clinical and community studies of depressive conditions show that the incidence of depressive phenomena increases sharply during adolescence. Estimates of the prevalence of depression in child and adolescent psychiatric referrals range from 5% to 55% with an average estimate of 40% across studies (Angold 1988 b, Kolvin et al. 1991, Petersen et al. 1992). On the basis of psychiatric interviews, the Isle of Wight study found a threefold increase in depressive feelings (feelings of sadness, unhappiness, helplessness, hopelessness

etc.) between age 10-11 (13%) and age 14-15 (40%) (Rutter 1986). Over the same four-year period of adolescent development there was more than a tenfold increase in the prevalence of depressive disorders (irritability, loss of energy, loss of weight, sleep difficulties, suicidal ideas etc.) with a much greater increase among females than among males, so that by the age of 14-15 there was a striking female preponderance (Rutter et al. 1976). Compared to adults, adolescent rates of depressive symptoms have been found to be higher in several studies (Allgood-Merten et al. 1990, Radloff 1991).

With few exceptions (Rutter and Smith 1995), there are no available data on changes over time in rates of depressed mood or depressive syndromes among adolescents. Klerman (1988) and Klerman and Weissman (1989), for example, have provided evidence to support the hypothesis of a recent increase in the rates of depressive disorders among young people.

Most of the community surveys have failed to detect any consistent association of depressive disorders among young people with variables such as IQ, physical health, socioeconomic status, ethnicity, and, to a lesser extent with school performance. However, parental psychopathology, adverse psychosocial, and familial circumstances, stressful life events, and gender do appear to be associated with depression among young people, a finding that derives from both community and clinical samples (Berney et al. 1991, Fleming and Offord 1990, Goodyer 1990, Puckering 1989).

Despite the importance of stress processes in community psychology, it is still viewed primarily as an individual-level phenomenon, little research being conducted on the dynamics of stress in a social system such as the family, friends, and school and their effect on the adolescents' emotional well-being. The results of an Australian study of adolescents' mental-health problems indicated that approximately 10% of children and adolescents experienced mental health problems, although only a small proportion received specialised help (Fotheringham, and Sawyer 1995). The investigators found that adolescents primarily discussed their problems with other family members or friends. The results also suggest a preference for information about mental health problems from education programmes in schools or on television. Another study of psychological distress among Canadian adolescents showed that the nature and quality of family life strongly affects adolescent mental health (D'Arcy and Siddique 1984). D'Arcy and Siddique (1984) also found that adolescents' positive evaluation of their school atmosphere and peer group life and an internal locus of control orientation also positively influenced their psychological well-being. Wolman et al. (1994) found that family connectedness is of fundamental importance for adolescents' emotional health. Avison and McAlpine (1992) also supported this conclusion that parent-child relationships have important effects on the development of psychosocial resources of adolescents which, in turn, influence levels of depressive symptoms.

Attempts to explore the association of environmental factors with mood disorder in adolescents have shown that feelings about school and home were significant

predictors of psychological distress and mood disorder in both sexes, but feelings about school were much less positive than feelings about home (Meijer 1989). Rubenstein et al (1992) found that among boys the effects of high stress were buffered by positive peer relationships, and among girls by cohesive family relationships. However, it has been argued that the individual life events reported by males and females in many respects simply reflect gender stereotyped pathways through adolescence (Sweeting and West 1994).

There is some evidence that secondary school is a time of stress for most adolescents (Lee et al. 1989, Meijer 1989, Cairns et al. 1991). A number of studies of adolescents suggest that poor physical and mental health are associated with low school achievement (Mechanic and Hansell 1987). Wolman et al. (1994) reported that adolescents with chronic conditions had lower emotional well-being scores, worried more about school and about future work.

Cairns et al (1991) found that GHQ scores for those at school (age 16) were positively related to examination results. Eighteen months later, such differences had disappeared among those young people in full-time employment. Similarly, the group who remained in full-time education also showed a significant decline in GHQ scores. They concluded that this could be a reflection of high anxiety levels at age 16 due to approaching examinations. However, this study was limited to those who were employed and did not include those who were unemployed at the time. It has been shown that there is a strong association between poor mental health and both

the experience and expectations of unemployment among older adolescents (West and Sweeting 1996).

Another study on the interrelations between social integration, happiness and health in 11, 13, and 15 year old schoolchildren in 9 European countries (as a part of the WHO Cross-National survey on health behaviour in school children) showed that adolescents who were socially well integrated (as measured by number of persons whom they could talk easily about their problems, and friendships) reported significantly better health than those who were not (Eder 1990). The study also showed that the indices of 'integration' and of 'health' were higher for boys than for girls, in almost all countries and in almost all age groups.

The effects of life events on the emotional well-being of adolescents

The assessment of stressful life events during adolescence is important to research in respect of their etiological significance for both physical and mental illness. The period of adolescence includes a range of normative life events (e.g. transitions within schools, educational failure), and experiences which Leffert and Petersen (1995) suggest may be stressful as a result of the challenge they present or the adaptations they require. In addition, adolescents are by no means exempt from the range of non-normative negative life events (e.g. parental divorce and remarriage, victimisation) and experiences that increase the risk of psychiatric disorders both in the short and longer term (Goodyer 1990, Rutter and Sandberg 1992, Sandberg et al. 1993).

In recent years, a number of self-report inventories of life events for adolescents have been developed. There is evidence that adolescents are vulnerable to the negative effects of stressful life events (Williamson et al 1995, Norris et al 1992, Williams and Uchiyama 1989, Brown and Lowton 1986). Williamson et al (1995) reported that depressed adolescents experienced significantly more stressful life events during the previous year than did 'normal' controls.

Events such as 'breaking up of a relationship' or 'unemployment in a family member' have been found to be associated with elevated levels of depressed mood among adolescents (Adams and Adams 1991). Beside the impact of major, discrete events, attention has been focused on the important role of daily chronic stresses and psychological dysfunction (Compas and Wagner 1991). Compas et al. (1989) found that daily hassles were predictive of subsequent adolescent emotional distress over a one-year interval.

Stressful events predict psychological distress, and especially depression among adolescents. This vulnerability appears to increase with age and is higher in girls. Secular changes in patterns of adolescent life suggest that both major negative events (family breakdown) and chronic stressors (increased educational demands) may have become more frequent, and emotional and social support rarer (Fombonne 1995).

McGee and Stanton (1992) examined sources of distress experienced by 15-year-old adolescents in a large sample in the general population. They identified four types of stressful life circumstances relating to problems of self-image and independence, academic and physical competence, parental conflict, and moving residence and

schools. Girls reported higher levels of distress for the first three types of circumstance. Reports of distress were associated with poor family support, maternal depression and parental separation. The results of a British study suggest that adolescents who experienced a higher incidence of life events also demonstrated greater stress and anxiety/ depression/ hostility (Norris et al 1992). Adams and Adams (1991) reported that the specific life events of 'unemployment of a family member', 'starting at a new school', and 'breaking up with a boy/girlfriend', were associated with higher levels of depression. McGee et al. (1991) found that those adolescents who experienced more frequent changes of residence were at risk for mental health problems.

As Thomson and Vaux (1986) have pointed out, distress in some family members was significantly associated with stressors experienced by other family members. An American study of divorce, family conflict, and adolescents' well-being suggested that higher levels of family conflict were associated with increases in adolescents' depressed mood, anxiety, and physical symptoms over time. In contrast, neither recent divorce nor earlier divorce was associated with longitudinal changes in any health outcomes. Also, adolescents living in intact families with high conflict had significantly poorer well-being than those living in families of divorce with low conflict. Finally, the longitudinal effects of divorce and family conflict did not differ by age and sex (Mechanic and Hansell 1987).

Recent studies have confirmed the clinical impression that a relationship exists between functional somatic complaints and negative life events in adolescents.

Robinson et al (1988) found that young patients with functional somatic complaints (chest pain, recurrent abdominal pain, limb pain, and hyperventilation syndrome) reported significantly more negative life events, lower self-esteem, more psychophysiologic symptoms and a lower self-evaluation than did young patients coming for physical examination or routine health maintenance. They argued that functional somatic complaints in adolescents may be associated with poor psychosocial adjustment and reaction to negative life events. In Finland, the role of family, friends and confidants in mediating the impact of adverse life events on psychosomatic symptoms in mid-adolescence was studied by Arø et al (1989). The results suggested that those adolescents who had experienced adverse life events and a poor relationship with one or both parents had the highest levels of symptoms. A lack of friends was also associated with psychosomatic symptoms, especially among those who had experienced adverse life events. They concluded that adolescents who lack parental or peer support are at risk of psychosomatic symptoms in general, and especially in the face of stressful life events.

An American study of sex differences and adolescent depression showed that females reported more depressive symptoms, self-consciousness, stressful recent events, and negative body image and self-esteem (Allgood-Merten et al 1990). Wagner and Compas (1990) found that female adolescents reported more overall negative events, and interpersonal stresses than males.

2.6. Health and health-related issues of concern to young people, worries and aspirations

There is a striking lack of information about how young people themselves view health and health care, and health-related issues of concern to them. Research of this kind is quite recent, and although similar information from different countries is not yet available, the results of these few investigations of adolescents' perception of health issues are interesting, since they took place in different settings and covered different socio-economic groups.

One of the earliest attempts to document the views of young people in regard to health matters was the classic study by Brunswick and Jonsephson on the health of adolescents in Harlem, New York, USA (1972), in which 12-15 year-olds cited drug abuse, cigarette smoking, drinking, and insanitary living conditions (in that order) as the most important and most threatening health problems confronting them and their contemporaries. By contrast, a Swiss study of 930 adolescents between the ages of 16 and 19 years (Michaud and Martin, 1983) reported that over 50% of the girls and 30% of the boys noted tension and stress as being a major personal concern, whereas drug and alcohol problems were mentioned by fewer than 5% of both sexes. Most studies, however, reveal a high level of concordance about personal concerns among young people, despite differences in settings and socio-economic groups (Parcel et al. 1977, Weston et al. 1981). While their concerns embrace a wide spectrum of sociomedical and medical problems, there is invariably a strong psychosocial and/ or behavioural component. In an Australian study (Weston et al. 1981), adolescents

identified “depression, getting along with parents and siblings, nervousness, making friends, acne, obesity and development into an adult” as important issues requiring attention. Findings from the ‘West of Scotland Twenty-07 study: Health in the Community’ indicated that “being unemployed, and doing well at school” were mentioned by more than one-third of young people (age 15) as things they worried a lot about when thinking of the next five years (Green et al. 1989).

Concerns about unemployment are also found in other studies. For example, a British longitudinal study of the hopes and worries of adolescents (Gillies 1989) found that more than half of the teenagers spontaneously expressed hopes for and worries about employment and unemployment. Analysis also showed that the proportion of pupils worrying about unemployment, own mortality, lack of money and AIDS increased significantly with age while worries about employment and nuclear war appeared to characterise the whole of adolescence. Worries about exam failure, childbirth and unhappy marriage were mentioned significantly more frequently by girls than boys.

The Health Related Behaviour (HReIB) survey of pupils in England and Scotland reported similar findings: among 15-16 year olds the ‘Top5’ problems causing most concern for boys were “career, unemployment, how you look, HIV/AIDS, and money” and for girls “how you look, career, family, HIV/AIDS, and unemployment”, (Balding 1995).

2.7. Health behaviours and lifestyle

This is a modern construct and a product of epidemiological and health research, the key feature of which is the consequences of certain behaviours for health. Based on epidemiological studies, and supplemented with other evidence, a group of behaviours known to predict disease, injury, death (such as smoking, alcohol and drug use, and early sexual involvement etc.) and to some extent also of positive aspects of health (such as physical activity, healthy diet, etc.) have been identified. As Aarø et al. (1995) have argued, it is generally agreed among experts that a specific set of behaviours are related to health. 'Health behaviour' is gradually becoming a concept even in the everyday language of lay people.

Since young people's health-related behaviour and lifestyle are recognised as important factors associated with both their short and long term health and well-being, this section reviews the issues in order to illustrate the extent of such experiences. The topics covered, which may have a positive or negative impact on health (health enhancing or health compromising behaviours), are smoking, alcohol consumption, drug-taking, and dietary habits and exercise.

Behaviour is difficult to measure and reliance is usually placed on individuals' reports. This may result in an underestimation of their prevalence, particularly in relation to health comprising behaviours since many of these, such as drug-taking, are sensitive.

In part, the willingness of adolescents to engage in risk-taking behaviours is normative though, as Baumrind (1987) has noted, because risk-taking is common in

youth related culture, it does not excuse those behaviours, nor reduce the danger they may present. McNeely (1986) found that willingness to take risks diminishes across the adolescent years; risk taking appears related to general behavioural maturity.

2.7.1. Smoking: The harmful effects of active smoking are undisputed. Smoking during adolescence has an immediate effect on health, increasing respiratory disease and reducing physical fitness. It also has long-term effects on adult health with most adult smokers starting smoking as adolescents. Children begin experimenting with smoking between the ages of 9 and 11 (Dobbs and Marsh 1983) and regular smoking starts around age 12-13 (Charlton et al. 1990). The relation between cigarette smoking and hygiene practices (e.g. bathing/ showering, washing hands after visiting the lavatory) or dietary habits (e.g. meal skipping and nutrients missing from the diet) of young people are also noted (for example, Bull 1985, Balding and Macgregor 1987, Macgregor and Balding 1987). For all these reasons, smoking among young people is widely recognised as a major health problem (UICC 1989).

In Scotland, the Health Behaviours of Scottish Schoolchildren survey in 1990 showed that by the age of 15 over half of all young people said they had tried smoking (Currie and Todd 1990). In 1994, in England and Scotland (Greater Glasgow), a quarter of 15-16 year old boys and 28.3% of girls were smokers (those recording that they smoked at least one cigarette during the last 7 days) (Balding 1995). The results of a survey of health related behaviour and attitudes among secondary schoolchildren in Glasgow at about the same time revealed that among 15-

16 year olds 16% of boys and 20% of girls described themselves as regular smokers (Tannahill 1995). From the evidence of most studies of smoking among young people in the UK, it is apparent that girls are more likely to smoke than boys (for example West 1993, Teijlingen and Friend 1993, and Balding 1995).

In Britain, as in several other industrialised countries, there has been increasing concern about recent trends in smoking among teenagers which, in contrast to adults, have shown little decline in prevalence over the last few years. Under the Protection of Children (Tobacco) Act 1986, it is illegal to sell tobacco to anyone below the age of 16. Despite this, only 15% of children were refused cigarettes the last time they tried to buy them, and approximately 17 million cigarettes a week are consumed by children aged 11-15 in England, and 1.5 million in Scotland (Lader and Matheson 1991).

Between 1986 and 1992 there was no change in the prevalence of regular smokers among secondary school pupils in England (11-15 years) which remained at 10%, while the prevalence of occasional smokers increased from 5 to 7% (Thomas et al. 1993). Similarly in Scotland over this period, the prevalence of regular and occasional smokers among 12-15 year olds increased from 17 to 18% (Allbutt et al. 1995).

A wide range of factors, from personal and individual to social and environmental, have been identified as predictors of smoking uptake and maintenance among young people (Goddard 1990, Amos 1992, Conrad et al. 1992). For example, it is known that young people's attitudes and beliefs about smoking are important, and that these

in turn are influenced by wider social factors such as the attitudes of their family, teachers and friends, education on smoking, and media images of smoking including those of advertising and sponsorship (Goddard 1990, Smith 1991, Lader and Matheson 1991, Allbutt et al. 1995).

A study of the images of smoking among young people in Scotland found cigarette smoking to be predominantly a social and group activity. It was also a behaviour about which young people often held ambivalent and contradictory attitudes, e.g. expressing both positive and negative images irrespective of whether or not they smoked; for many smokers, smoking was part of their social and cultural worlds, e.g. a part of their group activities, or the focus of specific concerns such as weight loss (Allbutt et al. 1995). It is widely acknowledged that teenagers are concerned about the image they present to other people (Taylor 1991, Hebdige 1979).

2.7.2. Alcohol consumption: Alcohol use among adolescents, although in many respects a normative aspect of adolescent social behaviour, can be another major social and public health issue in contemporary societies.

Perry et al. (1993) noted that the health consequences of alcohol use are evident during adolescence. In particular, motor vehicle crashes kill more teenagers than any other single cause of death and the majority of these crashes involve alcohol (Moskowitz 1983). In Great Britain in 1989, about one tenth of 16-19 year old drivers (motorcycles, scooters, cars and other vehicles) killed on the roads had an excess of alcohol in their blood (more than 80 mg per 100 ml blood) (Department of

Transport 1991). In addition to the increased morbidity and mortality associated with alcohol use by adolescents (Perry et al. 1993), developmental tasks such as cognitive maturation, moral development, social competencies and school achievement also appear to be altered, delayed or harmed by precocious or excessive alcohol use (Jessor and Jessor 1977, Semlitz and Gold 1986). Thus, alcohol use among adolescents is not simply both a prevalent and normative behaviour, it is also a high-risk behaviour with health consequences. These consequences are most tragically seen in premature mortality, but are also evident in social and psychological domains as well (Kelder and Perry 1992).

In 1994, in England and Scotland, among 15-16 year olds 61% of boys and 56% of girls were drinkers, with an average weekly intake of almost 12 units among boys and 8 units among girls. Even 11-12 year old 'drinkers' (32% of boys and 23% of girls) were consuming between 4 and 5 units (Balding 1995). Balding found that among young people, home was the most frequently-recorded place for drinking alcohol, although a friend's or relation's home also becomes important by aged 14-15. In some 40% of 15-16 year olds parents did not always know that their children were drinking at home. In Glasgow, among 15-16 year old 'drinkers' 13% of boys and 8% of girls were consuming more than 14 units of alcohol per week, bought mainly from off-licences. In addition, two thirds of those who drank at home did so with their parents' knowledge (Tannahill 1995).

2.7.3. Drug-taking: It appears that many young people are currently using drugs, and at a very young age. Adolescents often turn to drugs as short-cut answers to their problems, endangering their physical and psychological health but leaving their problems unsolved (Papalia and Olds 1993).

The abuse of drugs can also be a major factor in the incidence of accidents, mental illness, suicide, and violent crimes among adolescents. For example, in the UK, deaths among children and teenagers from volatile substance abuse have risen steeply in the last decade (Woodroffe et al. 1993).

In a survey of 15 year olds in England and Wales, 15% of girls and 18% of boys said they had been offered at least one of a list of drugs including LSD, ecstasy, heroin, cocaine or crack, while 19% of girls and 20% of boys had been offered cannabis, amphetamines or tranquillisers (HEA 1992). At about the same time, in 1990, in a survey of Welsh 15-16 year olds, it was found that 21% had some experience of listed drugs (e.g. cannabis, glue or solvents, magic mushrooms) while 11% had used at least one in the last month. There was no difference between boys and girls (Smith and Nutbeam 1992). In a later study, Balding (1995) found cannabis to be the most widely-experienced drug by young people aged 15-16 year olds (33% of boys and 27% of girls), while just 27% of boys and 34% of girls rated cannabis as an 'always unsafe' drug. He also found that knowledge of drug-users increased with age, and by age 13-14 most of the young people thought they knew at least one person who used drugs (Balding 1995).

Tannahill (1995) reported that among Glaswegian fourth year pupils (15-16 year olds) in 1994, 60% had been offered drugs and almost half of those surveyed had tried them. Eight years earlier in 1987, the picture was totally different for young people of the same age in two localities in Glasgow when only around 13% of those surveyed had tried at least one of the listed drugs (Green et al. 1989). There is no doubt that the proportion of young people using drugs has increased substantially over the last decade.

2.7.4. Diet and Exercise: The importance of diet and physical activity for the maintenance of good health in adolescents is recognised by public health. Physiologically, diet and physical activity in large part determine the energy balance in the body and thus influence growth and body composition. Proper diet and physical activity may be especially important during adolescence, when rapid growth and development create an increased need for many nutrients, and when excessive accumulation of fat may contribute to health problems and psychosocial difficulties for years to come. Dietary and physical activity practices that both promote health during adolescence and assist in the prevention of specific diseases in later life can be identified (Sallis 1993). Furthermore, as Sallis has suggested, if adolescents are to be encouraged to say “no” to so many health-damaging behaviours, it is important to emphasise a positive approach to the development of health-promoting dietary and physical activity practices. However, it seems that health compromising behaviours are more encouraged by the social environment than health enhancing behaviours.

Recommended dietary and physical activity practices can have health benefits for adolescents in that they help normalize body weight and body composition (Epstein 1986). Physical activity can also promote positive mental health (Brown and Siegel 1988, Stephens 1988, Gruber 1986).

Physical activity typically plays a prominent part in comprehensive health promotion programmes such as the WHO's Health for all programme (WHO 1985), and the English Health of the Nation initiative (Department of Health 1991).

With respect to adolescents, exercise and physical activity may occupy an especially important place in the life of many young people, both inside and outside school. However, there is some evidence that physical education (PE) in schools has declined since 1985 as a direct result of changes in the educational system (Secondary Heads Association 1990). The importance of physical activity outside school is also clear since this activity would be largely voluntary and particularly important when young people leave school and have to take responsibility for their own physical exercise. A survey of 11-16 year olds in Wales in 1988 found that 40% of boys and 17% of girls had four or more hours per week of physical activity outside of school (defined as 'games or sport that make you out of breath') (Nutbeam 1989). In Scotland, in 1990, almost half of 11-15 year olds reported exercising 4-7 times a week although one in four exercised only once a week or less frequently. Among 15 year olds, around 20% exercised 4-9 times a week (Currie and Todd 1990).

A number of studies have drawn attention to large gender differences in physical exercise. For example, a survey of 16-24 year olds in England in 1990 found that 30% of young men participated in vigorous exercise on 12 or more (20 minute) occasions in the last four weeks, compared to only 9% of young women (Sports Council and Health Education Authority 1992). Similarly, among younger age groups (11-16) boys have been found to be almost twice as active as girls (Nutbeam 1989, Currie and Todd 1990, Riddoch et al. 1991).

Since adolescence is a period of rapid physical growth and development, good nutrition is of particular importance; however young people often adopt eating patterns that may be inadequate for meeting their energy and nutrient requirements. Missing meals, snacking on nutritionally poor processed foods, and following weight control diets are all features of the adolescent lifestyle (Currie and Todd 1990). An adequate and balanced diet is essential for adolescent's health. In addition, dietary habits established in this period of life tend to influence behaviour in adult life. Trends towards healthier eating habits, including less saturated fat and sugar, are reflected in a reduction over the last decade of average dietary energy intakes in most age groups (Ministry of Agriculture, Fisheries and Food 1990). However, fatty and sweet foods, such as fizzy drinks, sweets, chocolates, crisps and chips, still make up a large part of the diet of school-age children (Department of Health 1989, Nutbeam 1989, Anderson et al. 1993, Currie and Todd 1990, Balding 1995). In particular, there is evidence that snacks are an important part of the everyday eating habits of adolescents. The Scottish survey of 11, 13- and 15-year-old schoolchildren in 1990

found that in general snack foods such as crisps and sweets were a more common part of adolescents' daily diets than was fresh fruit, with girls being more likely to eat fresh fruit and raw vegetables on a daily basis, and boys to consume chips, sausages, sweets, sugar-containing fizzy drinks and full fat milk (Currie and Todd 1990). In the West of Scotland Twenty-07 study of 15 year olds in the Central Clydeside Conurbation in 1987, crisps, biscuits, sweets or chocolate, and fresh fruit (in summer) were the most commonly reported snack items (over 40% eating these every day), and over half reported drinking soft drinks daily while fruit juice was drunk much less frequently (18%) (Anderson et al. 1993).

The availability of school meals, and possibly their nutritional value, has declined over the last decade (Woodroffe et al. 1993). The Education Act of 1980 abolished nutritional standards which had been in force in various forms since 1955. The Act also ended the universal availability of school meals at fixed prices and restricted free meals to children of parents receiving particular state benefits (Berger 1990). As a result, many schoolchildren are eating unhealthy 'snack' foods for what is often the main meal of the day (National Dairy Council 1982, Food Commission 1991). This is especially so in lower income families.

Market research shows that snack consumption increased in teenagers by 15% between 1978 and 1987 (Taylor-Nelson Food and Drink 1987). As Anderson et al. (1993) have noted, high-sugar, high-fat, finger foods and sweetened drinks may be more easily available, and considerably cheaper than more 'wholesome' foods. There is evidence that the type of diet recommended by health educators is more

expensive than one higher in fats and sugars, and may be less easily available in deprived areas (Hanes and MacDonald 1988, Health Education Authority 1989, Lang 1992, and Sooman et al. 1993). In Scotland and other parts of the U.K. healthier foods tended to be less readily available in local shops, presenting another obstacle to healthy eating for low-income families unlikely to own a car (National Children's Home 1991). Similar findings are reported by Sooman et al. (1993) in the Central Clydeside Conurbation, who also suggests that other factors such as taste, belief, knowledge, gender, and cultural and sub-cultural influences should be considered.

3. The link between socio-economic circumstances and adolescents' health

It is important to recognise that in addition to biological factors every health problem has a social component. It is difficult to conceive of any health-related problem that has no connection with the social, cultural, technological, economic, political, legal, and health and welfare systems of the society in which it occurs. It has long been recognised that the socio-economic environment exerts a powerful influence on both individual's and community health.

In Britain, there has been a long history of interest in the relationship between people's environment, especially the social class structure, and health (Macintyre

1997). This interest was given considerable impetus with the publication of the Black Report (Black 1980), the authors of which stressed the importance of material circumstances. The Black Report demonstrated that some of the poorest sections of the adult population had experienced little or no improvement in expectation of life despite a widely held assumption that the health of British people was improving and that inequalities in health were being reduced. The report also emphasised that such health inequalities existed in spite of forty years of the National Health Service. In addition, they identified different explanations for these inequalities. Evidence presented by the Report indicated that the predominant or governing explanations for inequalities in health lay in the material circumstances and conditions of people's lives summarised by the concept of material deprivation (Townsend et al., 1988). Macintyre (1986), following Black, in her review of the literature suggested that there are three main explanations as to why health inequalities exist, namely (a) artefact: inequalities exist purely because of differences in measurement and methodology, (b) social selection: less healthy people tend to have poorer levels of education, be under- or unemployed and fall down the social scale or gravitate to areas of urban deprivation, and (c) social-structural: social and health inequalities begin at birth and are reinforced by the socio-economic and cultural environment of the home, school and locality.

Since the publication of the Black Report, a considerable body of research has accumulated which address both the extent and nature of health inequalities and their explanations. The major developments are as follows:

First, far from health inequalities declining the evidence suggests that they are actually increasing. This applies both to mortality (Blane et al. 1994) and also to morbidity (Blaxter 1989).

Second, health inequalities have been observed on a range of health measures, not just mortality. Strong evidence exists to show that social inequalities in health exist on several dimensions of health in the adult population e.g. chronic illness, mental health, and self-perceived general health (see for example Blaxter 1989). However, as Macintyre (1997) has noted, measures of health *status* (a relatively long-term property of the individual) tend to show more marked social differentials than measures of health *state* (relatively short-term properties of the individual such as current symptoms).

Third, the earlier criticism that health inequalities might be an artefact of the occupational based class measures has not been sustained. Gradients have been observed with respect to income, housing tenure, and of particular relevance here, area of residence (see for example Townsed et al. 1988).

Fourth, recent research has suggested the importance of psychosocial aspects of health inequalities as well as material ones, and emphasised that health inequalities are not just about absolute levels of poverty but about relative levels, e.g. the position which people occupy in a social hierarchy. As Mustard (1996) has argued, within affluent developed societies there is substantial variation in health when measured against social and economic factors. The higher people are on the socio-economic gradient, the better their health (Wilkinson 1992, 1994). Wilkinson (1997) has

argued that socio-economic gradients in health are simultaneously an association with social position and with different material circumstances, both of which have implications for health. He identified two kinds of effects of psychosocial circumstances including *direct* (e.g. bad housing, poor diets, inadequate heating) and *indirect* (e.g. increased exposure to behavioural risks resulting from psychosocial stress, including any stress related smoking, drinking, eating “for comfort”, etc.). Most of the direct effects are likely to centre on the physiological effects of chronic mental and emotional stress.

Fifth, a focus on the life course perspective has emerged, in which ill health is seen as an accumulation of disadvantage from birth through adolescence to old age, with individuals having different social capital which gives them different life chances (e.g. education, amenities, health services) with associated health risks.

A sixth focus of interest has developed around the concept of area of residence. One major way this has been conceptualised is simply as a proxy for social class. An alternative approach, which combines both material and psychosocial dimensions of health inequalities, is to see area as a social context. By this is meant a range of influences such as different exposures to risk (e.g. pollution, housing, hazards), facilities which may directly (e.g. health services) or indirectly impact (e.g. local amenities etc.) on health, and different opportunity structures (e.g. education, labour market, unemployment).

At its simplest, the term “area of residence” or “locality” can be used to define a part or division of the city/ town with a particular characteristic (e.g. physio-socio-

economic environment such as deprivation, crowding, provision of services, facilities, and amenities). The manner in which area of residence might influence its inhabitants life in general, and their health in particular, however is not clear. Assessing such an influence is neither easy, nor are there readily available, reliable, and valid measures of assessment.

Most of the reports focusing on inequality in health (For example Townsend and Davidson 1982, Townsend et al. 1988) did not examine in detail the potential for local authorities to reduce inequalities in health and other aspects of people's life, possibly because, as Betts (1993) has argued, any attempt to draw attention to inequalities in health in local or regional populations is bound to raise difficult political issues of government planning of the investment of resources and the conditions and way of life of people. Using area of residence as a indicator for sociophysical environment sets out a strategy that local authorities might adopt in order to (1) maintain health and (2) reduce local inequalities in health of the community.

Inequalities in health between small areas and the role local authorities and providers can play in health of local population in general, and in health and well-being of young people in particular, have been the subject of very little research, with only a few studies investigating the issue. Typically, area of residence is used as a proxy for individual or household socio-economic deprivation, and is not treated as the socio-physical environment and related to opportunity structures and resources for promoting the community's health or meeting the residents' health needs.

In the population as a whole, there is evidence that inequalities in health exist between inner city and suburban *areas* (Townsend and Davidson 1982, Townsend et al. 1984, Arber 1987, Townsend et al. 1988). Indeed, it has been suggested that these inequalities in health between people from different areas and different social groups are increasing (Davey Smith et al. 1990) The reasons for this health divide are not clear but there appears to be a direct link with social deprivation.

However, the extent, patterning and causes of such health inequalities are still not well understood and much of the debate is based on earlier or later life rather than adolescence.

Health inequalities and adolescence

The link between socio-economic status and adolescent health is difficult to establish because of significant limitations in existing data sets. Sawhill (1989) argued that the problem of identifying associations between adolescent health and health related activities and several socio-economic variables is further complicated by the need to distinguish between the transient poor and a group in long-term poverty. However, researchers can infer a young person's socio-economic status from parental occupation or education and other indicators such as housing tenancy and amenities, family income and employment status, family structure, family car ownership, and even newspaper readership. Additionally, research on life events may illuminate the

link between socio-economic status and health. Inevitably, there are limitations to any single socio-economic measure. An alternative classification using 'area of residence' to represent a combination of socio-economic circumstances can also be used. Its utility in measuring geographical inequality, and its socio-economic causes, is enhanced by its ability to characterise small areas. For example, in Scotland postcode sectors are classified into seven categories based on overcrowding, male unemployment, low social class and not having a car, category 1 being the most affluent and category 7 the most deprived (Carstairs and Morris 1991).

A family's socio-economic status will largely determine its material environment: the adolescents of the poor are the most likely to live in inadequate housing (e.g. dampness, noise from neighbours and traffic outside), and areas with physical, psychological, and social hazards in the environment such as busy traffic, violence and vandalism, and fear of crime; lack of facilities such as entertainment and sports provision and outdoor recreational areas.

In common with people of all ages, young people find their life experience shaped by the society and environment in which they live. Their development, patterns of everyday life, aspirations, opportunities, and health are all affected by the nature of their society (WHO 1986). Young people living in areas lacking necessary services such as quality housing are particular at risk. Often these young people and their families are caught in a cycle of intergenerational poverty.

Against this background, the evidence relating to social class patterning of health in adolescents can now be considered in more detail. Topics have been selected for

their public health importance and are divided into mortality, chronic illness, self-rated health, and mental health.

WHO (1986) acknowledged that socio-economic disadvantages, malnutrition, unemployment and underemployment; migration from rural to urban areas, unwanted pregnancy, hazardous childbirth, induced abortion, and sexually transmitted diseases, tobacco, alcohol and drug abuse, accidents and risk-taking behaviour, emotional problems and suicide, physical and mental handicap, and occupationally related injuries and ill-health are all among the special problems that affect young people to different degrees. In general, like other population groups, adolescents' health and health-related problems are rooted in the social, economic, and political realities of the world in which they live.

Despite this, the evidence about health inequalities in adolescence is equivocal. West (1988, 1990, 1991) has drawn attention to the lack of class differences in a number of aspects of health in adolescence. He later made the point even more forcefully in a major review of the literature on young people's health which focused on seven dimensions of health (mortality, chronic illness, specific conditions, self-rated health, symptoms of acute illness, accidents and injuries, and mental health). He argued that the overall picture is consistent with his earlier conclusion of relative equality of health in youth with one major exception, severe chronic illness, which particularly on the evidence of the 1991 British Census is class differentiated from infancy (West 1997). Many other studies report similar findings (for example

Kandel and Davies 1982, Macintyre and West 1989 and 1991, Rahkonen 1992, Glendinning et al. 1992, Ford et al. 1994, Currie et al. 1994, and Rahkonen et al. 1995) which point to the relative absence of a class gradient for most measures of health among adolescents.

The major indicator of health used in the health inequalities debate is mortality, an indicator of limited use in relation to youth. With respect to this measure, there is some evidence that in early youth little or no class differentiation in mortality exists (OPCS 1986, Vågerö and Östberg 1989, Elmen and Sundh 1994, and Blane et al. 1994). However, as some commentators (West et al. 1990, Blane et al. 1994) have concluded, mortality and especially 'medical mortality' is not a good measure of health in youth.

Another measure which has been widely used in the debate is chronic illness, usually defined by reference to the British GHS measure of 'longstanding illness, disability or infirmity' and its supplementary measure relating to restricting activities (OPCS). In the GHS, information about chronic illness is derived from a proxy report (usually parents) in children and young people up to the age of 16, thereafter being self-reported. Following on from an analysis conducted by West (1988) relating to 12-19 year olds in the 1980 GHS, a number of other investigators have examined the relationship between social class and chronic illness in youth. The findings of all of

these studies have shown little or no class differentiation (Foster et al 1990, West et al. 1990 , Rahkonen 1992, Glendinning et al. 1992, Hendry et al. 1993).

Another more general indicator of health, quite widely used in the health inequalities debate, is *self-rated health*. In the standard GHS version, which is asked only of individuals aged 16 or more, this refers to health over the previous 12 months using the response categories ‘good’, ‘fairly good’ and ‘not good’. In West’s (1988) analysis of 1980 GHS data, no significant differences were found in the proportion rating their health ‘not good’ by social class though there was slightly more indication of a trend when the category ‘good’ was contrasted with the other two combined. This pattern has been found in most, but not all, studies (West et al. 1990, Glendinning et al. 1992, Rahkonen 1992, Rahkonen et al. 1995).

In respect of childhood and youth, the significance of *mental health* is especially important both in relation to the development of identity and subsequent success or failure in the labour market and other adult roles (West 1996). Investigation of mental health in children and young people is, however, beset with difficulties, among which are the selection of appropriate instruments to identify psychopathology, the problem of classifying symptoms, and the definition of a ‘case’ (Rutter and Smith 1995, Graham 1986, and Angold 1988 b). Most of the research on mental health, which is of relevance to health inequalities, has focused on ‘emotional disorders’ such as depression or anxiety rather than the so-called ‘conduct disorders’

which are defined by reference to antisocial behaviour such as delinquency. With respect to adolescents' mental health problems, using the GHQ, the evidence suggests little variation in 'caseness' by social class of background (Mann et al. 1983, Glendinning et al. 1992, Ford et al. 1994). Using other measures such as the Hospital Anxiety Depression Scale (HADS) (Zigmond and Snaith 1983), a similar pattern is found (West 1997).

With respect to more specific diagnoses like depression, Gore et al. (1992) found that among the high school-aged population, girls from low education backgrounds and children in single-parent families had the highest level of depressive symptoms. They also found that adolescents from low socioeconomic status backgrounds were more vulnerable to a wide range of stresses and support deficits. However, there is some evidence from other studies to suggest no differences between social classes in the rates of malaise symptoms, or symptoms of depression among adolescents (Currie et al. in prep, Kandel and Davies 1982). It certainly seems that in relation to general measures of psychological well-being the situation in youth is characterised by remarkably little class differentiation. While there is some suggestion from the *life event* literature of a relationship between specific events and adolescents' mental health which suggests a role for deprivation (e.g. parental unemployment, parental illness), research which has directly addressed the social patterning of life events has found remarkably little evidence of class variation (see for example Sweeting and West 1994).

In conclusion, there does not seem to be much evidence of health inequalities in young people. Using a variety of health indicators such as mortality, chronic illness, self-rated health, and general mental health, there is evidence to suggest that the overall pattern in youth is one of relative equality of health in adolescents. In view of the evidence relating to health inequalities in earlier childhood as well as adulthood this is a surprising finding which merits further investigation. In any case, the conclusion that might be drawn depends on the definition of *health*.

However, although there is no direct evidence, in the light of evidence of widening health inequalities generally, it may be that this impacted on young people so that class differentials in health may have more recently emerged. Furthermore, it is also the case that even if there are no inequalities observable in youth, they evidently re-emerge in adulthood, although how that might happen is unclear. In particular, it is unclear what the role of locality might be and how the various components such as housing, health services, and opportunity structures, might make a difference to the health profiles in young people from different areas.

4. Health and social policy for adolescents

Typically, the emphasis in research has been on young people as a problem for social order, and many sociological investigations have reflected this, focusing on evaluations of government initiatives designed to keep young people out of trouble

rather than investigations into the problems of young people, and the ways in which they may learn to cope with the changing circumstances of their social lives as they become older. As Jones and Wallace (1992) have noted, policy-related evaluation research into the effectiveness of schooling, training programmes, careers service, leisure and so on, has dominated the sociology of youth, and has reinforced a focus on the functioning of formal and state-established institutions such as training schemes, drawing attention away from the more private world and more informal relationships of family life. The life experiences of young people are shaped by the society in which they live. Their development, status, problems of everyday life, aspirations, opportunities, and health are all affected by the nature of their society. There is, therefore, a social component in all health problems, whether related to their origins, social reactions to them, or the capacity to implement solutions (Macintyre, 1984).

Compared with other age groups, adolescents receive little medical or psychological attention (Daniel, 1970). Certain adult attitudes, including medical conservatism and general resistance to change, represent a potent and continuing obstacle to care. By virtue of limited training and exposure, there is a relative lack of recognition by the medical and allied professions of the special needs of young people, a widespread but misguided belief that they are “a fit and healthy group”, and a tendency to view them as difficult and noncompliant people to deal with. In most countries there have been neither the means nor the incentive to challenge this situation (Bennett, 1982).

The healthy development of young people can perhaps best be promoted through community-generated and community-based youth centres that employ a holistic approach to the needs of the young rather than treating each need in isolation. Such an approach works best with young people and makes it possible to facilitate his or her development. The participation of young people in planning and providing services is an important factor. The young users of multiservice centres usually see themselves as members of a club where services are available, rather than as traditional clinic patients. Easy access, a flexible structure, a relaxed friendly atmosphere, and the opportunity to be involved in a variety of activities contribute to this impression. A high level of commitment, flexibility, and the ability to take risks are among the qualities required by those working in these centres.

The sensitisation of health workers to the special needs of young people is particularly important. Their ability to listen to and respect the feelings of young people, to involve them in decision-making, to share information, and to transfer skills is essential to the success of the approach to health care, and training in the necessary techniques should be provided. In 1985, in preparation for International Youth Year (IYY), the World Health Organization (WHO) gave special consideration to the steps, strategies and priorities for future activities relevant to adolescents and youth. As WHO (1986) emphasised, young people of today are capable of assuming responsibility for, and are ready for active participation in their own health care. To promote the health of young people, it is necessary to assess their needs and the resources available to meet them, and also to identify the factors

that deter them from using existing services. Appropriate research is essential in order to facilitate, monitor, and evaluate this process. Surveys should be undertaken to question young people about their views on health needs, health services, health education, and the ways in which they get and use information on the processes and needs of adolescence. As Kalnins et al. (1992) have noted, a sound youth strategy should insist on the participation of the young at all levels of decision-making, particularly in matters of education, employment, health and recreation. If such participation is to be genuine, young people will have to be involved in defining problems, setting priorities, managing programmes, and evaluating progress.

Experience over the past two decades, particularly in the Americas, has provided important insights into successful approaches to health care for young people (Vicunna, 1979. Millar, 1975). The increasing complexity of society, the growing awareness of the needs of young people, and the inadequacy of existing services in providing for adolescents have led to the development of “innovative services” within the community (Jeanneret, 1985). Those most in need are generally least able to make use of any service, and in some places efforts to reach out to this traditionally underutilizing segment of the population has become a priority.

In the U.K., the prevention of ill health and the promotion of good health are key features of the Government’s health policy (Clark and Rifkind 1989). Among adolescents, Lifeskills approaches have already been used extensively in Social Influence programmes to prevent smoking. These programmes generally include several of the following components: the health consequences and social

consequences of smoking; critical awareness of the social influences from peers and the media to smoke; and the development of skills to resist pressures to smoke (Botvin et al. 1980, Botvin 1982, Botvin et al. 1993). On the other hand, the Royal College of Physicians has called on the Government to use the two most effective means it has to reduce smoking among young people - banning tobacco advertising and raising the price of cigarettes (RCP 1992). Government funding of anti-smoking education through the Health Education Authority (HEA) is dwarfed by the amount spent by the tobacco industry on advertising. The estimate for the industry is £100 million a year, £87 million on advertising and the remainder on sponsorship (ASH 1992). In contrast, the HEA has £5.5 million to spend on campaigns against smoking, of which £2 million is specifically for programmes directed to teenagers (Woodroffe et al. 1993).

The adaptation of community and national resources for the promotion and maintenance of young people's health should be a matter of public policy, which, in turn is a reflection of public awareness and priorities.

The contemporary view of what is needed is based on two complementary concepts. First, given that many of the health issues faced by young people are derived from or strongly influenced by social, economic, cultural, and behavioural factors, a purely medical approach, whether in the form of facilities or the attitudes of the providers of care, is likely to be inadequate or perceived as irrelevant by young people. Second, the active participation by young people in their own health care, particularly at the primary level, provides significant gains both for the individuals involved and the

community at large (Eisen, 1983. Eisen, 1984). The guiding principle underlying these two concepts is that a comprehensive and integrated approach, involving the whole of the young person's life needs and circumstances, makes it possible to go beyond the more obvious problems, to deal with causes and circumstances, and to explore the special growth dimensions of youth as well.

5. Summary

Over the last two decades of major social and economic change, while mortality had declined and the physical health (with the exception of chronic illness) of young people has shown some improvement, their psychological well-being has deteriorated.

In spite of the fact that young people are targets of massive health education initiatives, it is also apparent that there has been an increase in health compromising behaviours such as smoking, drinking, and use of drugs and a corresponding decrease in health promoting behaviours such as physical activities and healthier eating habits. Such experiences and behaviours could be associated with a deterioration in both physical and mental health.

Within the population as a whole such changes may be one explanation of the apparent widening of health inequalities. Surprisingly perhaps, the research findings on class differences in health in youth have revealed little or no evidence of health inequalities though they too may have changed over time. In any event, such

differences do emerge over the youth-adult transition. Thus social class remains important in determining differential risk, for example in relation to the likelihood of unemployment. Therefore, health promotion for less advantaged adolescents has to take a longer time perspective than simply focusing on the present.

There are many gaps in knowledge about different dimensions of adolescents' health in general, particularly the way patterns change over time, therefore, it is important to collect information for continued monitoring of adolescents' health and the factors influencing their health. There is a need to assess young people's beliefs about the ways they can improve their health, and to inform those who can influence young people's health and well-being in the community such as policy-makers and education and health care professionals.

The participation of young people in health promotion is a new area, in which it is necessary from the outset to explore innovations, monitor changes, and evaluate services through research. There is a need for more work in this area and for professional engagement at a political level.

PART TWO

**THE RESEARCH QUESTIONS & AIMS AND
OBJECTIVES, BACKGROUND TO THE STUDY,
AND METHODS**

CHAPTER TWO

THE RESEARCH QUESTIONS & AIMS AND OBJECTIVES

1. The research questions

Based on previous experience in research and work with young people as a social worker and health educator, and after meetings with different experts and professionals in this field, and following a review of literature and a secondary analysis of the original Twenty-07 study (15 year olds cohort) findings, the investigator identified the following research questions about adolescents' health and health-related issues:

- (a)** What is the health status of mid adolescents and what are their health concerns, perceptions of their area of residence, and aspirations?
- (b)** Do adolescents who live in socio-economically disadvantaged areas differ from adolescents in more advantaged areas in these respects?
- (c)** Do mid adolescents' health status and concerns differ from those of their counterparts surveyed nine years earlier in the same area (Glasgow)?
- (d)** Do professionals who work with adolescents (directly or indirectly) in socio-economically disadvantaged areas have different views about the health status and health needs of young people compared to those working in more advantaged areas?

(e) Do professionals' opinions about different aspects of the health of young people living in a geographical area differ from the views of adolescents themselves who are living in the same geographical area?

2. Geographical area as a key unit of analysis

In the light of the literature review on inequalities and health, it is evident that there are two different ways of conceptualising area of residence as a unit of analysis in relation to health. The first involves a conceptualisation of area as a proxy for socio-economic status. The second involves a conceptualisation of area as social context within which a range influences may directly or indirectly impact on health. These include, for example, the physical environment, availability and access to facilities or services and opportunity structures.

In this study, both conceptualisations of area of residence are used; the first to provide a connection with the literature on health inequalities and specifically to test the hypothesis that the situation in youth is characterised by relative equality; the second to explore the way various features of locality (as a place to live) may be related to different aspects of young people's health and well-being, concerns, perceptions, and aspirations. In particular, the study focuses on the role that the social and physical environment and opportunity structures in specified geographical areas play in influencing adolescents' health and well-being.

3. The study aims and objectives

The overall aim of the Adolescents' Health Study was to determine the health status and health needs of adolescents, particularly from a public health point of view, and to ascertain the extent to which this had changed over the last decade.

Given that the study tackles a relatively under researched area, it is expected that the information will be of practical value to those responsible for planning young people's health and well-being.

The specific aims of this project are:

1. To examine the associations between young people's health status and needs and two residential locations with differing socio-economic status, in 15 year old adolescents.
2. To examine the pattern of changes that occurred over a 9 year period in a range of health indicators between these 15 year olds and a sample previously surveyed in 1987 as part of Locality Sample of the West of Scotland Twenty-07 Study.
3. To ascertain professionals' views about adolescents' health status and needs according to the locality in which they work, and to contrast these with adolescent perceptions.

Objectives : The objectives of the Adolescents' Health Study were to:

(a) Identify 15 year old participants' socio-demographic characteristics, including gender, type of area of residence, family structure, number of siblings, number in household, and family car ownership.

(b) Identify 15 year olds' health status and perceptions of their health, social environment, and personal concerns including:

- self-reported height and weight, chronic illness, general health, health problems, perceived vulnerability, psychological well-being or malaise, happiness with life in general, and health knowledge.

- life events, aspirations for the year after leaving school, plans for further or higher education, the kind of job they would eventually like to do, guidance about jobs, and ideal age to leave home.

- opinions about area of residence comprising: the overall health of young people, the major health problems for young people, the quality of health services, the quality and importance of amenities or facilities, awareness about young people's initiatives and the Glasgow Healthy City Project (GHCP), and happiness with the local area.

(c) Identify professionals' occupation, geographical area of work, and experience in those areas.

(d) Identify perceptions of adolescent concerns and health status held by those professionals working in the same areas in which the 15 year olds reside including: major health-related problems, accessibility to health services, socio-economic factors with negative influence on young people's health, vulnerable client groups in the community, the overall health of young people, actions for improving health, the quality and importance of services, awareness about young people's health promotion initiatives and GHCP, and young people's participation in decisions concerning their health care delivery.

CHAPTER THREE

BACKGROUND TO THE STUDY

This project makes four kinds of *comparison*: firstly, between the 15 year old locality samples of the Twenty-07 study conducted in 1987 and a sample of 15 year olds surveyed in 1995 (A Study of Adolescent Health: change over time and place) in the same localities to examine *changes over time* in health and health related measures; secondly, between respondents in the two areas in 1995 in order to assess *the role of deprivation* (e.g. facilities, opportunity structures) in relation to young people's health problems and needs; and finally (1) between two professional groups of health workers and educational workers (who work in the two areas) in order to identify their opinions about different aspects of young people's health and (2) between the views of professionals and those of young people living in the areas, in 1995. This chapter therefore describes the background to the study. It includes a description of the West of Scotland Twenty-07 Study: Health in the Community and the socio-demographic characteristics of the study areas.

1. The West of Scotland Twenty-07 Study: Health in the Community

In order to examine trends in health status among young people in mid adolescence in Glasgow between 1987 and 1995, the present study uses material derived from a

cohort of 15 year olds in the “West of Scotland Twenty-07 Study: Health in the Community” who were resident in two contrasting localities in 1987.

The Twenty-07 Study is longitudinal in design and aims to explore the processes by which social patterning in health occurs by reference to key parameters like social class, age, gender, and area of residence (Macintyre et al. 1989). The study is being conducted in the Central Clydeside Conurbation (CCC), a heterogeneous urban area around Glasgow with a population of 1.7 million and SMR (relative to Scotland as a whole) of 109 in 1981.

The study focuses on three age groups (15, 35 and 55 year olds at the baseline survey in 1987) who are being contacted at regular intervals over a twenty year period until 2007 (Macintyre et al. 1989). A two-stage stratified clustered random sample, based on postcode sectors in the CCC as primary sampling units, was adopted with the aim of achieving about 1,000 respondents in each cohort. This is called the ‘Regional Sample’. In addition, in two localities in Glasgow nearly all individuals in the relevant age groups were approached for inclusion in the study, these being known as the ‘Locality Samples’. The sampling frame used for both the Regional and Locality samples was Strathclyde Regional Council’s ‘Voluntary Population Survey’ (VPS), an enhanced electoral register.

The areas selected for the Twenty-07 Study ‘Locality Samples’ were located in the north-west and south-west of Glasgow. The north-west locality has a predominantly

middle class population and has better than average health, while the south-west locality is predominantly working class and has worse than average health (MacIver 1988). A youth cohort was included in the Twenty-07 study to investigate processes occurring over the course of the youth-adult transition such as entry into the labour market and leaving the parental home (West and Sweeting 1991). Accordingly, the target sample for the baseline survey in 1987 was defined as young people aged 15, specifically those born between 1.3.1971 and 29.2.1972, an age range designed to identify young people in the final year (S4) of statutory education. At 1.3.1987, almost all of them (97%) were in S4 (Green et al. 1989). Each participant was interviewed twice. The first interview collected a wide range of data about the informant's social circumstances, school attendance, relationships with family and friends, affiliations to youth cultures, and health-related behaviours. The second interview was conducted by a nurse and focused upon self-assessed or self-reported physical and mental health in addition to taking measurements of physical functioning and development. In addition, the young person was given one self-completion questionnaire about diet, worries, and opinions, and another one including a measure of psychological well-being (the General Health Questionnaire [Goldberg 1978]) and a life event checklist. A face-to-face interview was also conducted, at the same time as the young people's interview, with one or both parents of the young person to collect information about the socio-economic background of the household, health history of the young person, and health behaviours of the parents.

2. Socio-demographic characteristics of the Adolescents' Health study catchment areas

2.1. General perspective

The study selected two socially contrasting localities in Glasgow City (the third largest city in the UK, and first in Scotland), the location of which is shown in Figure 1.

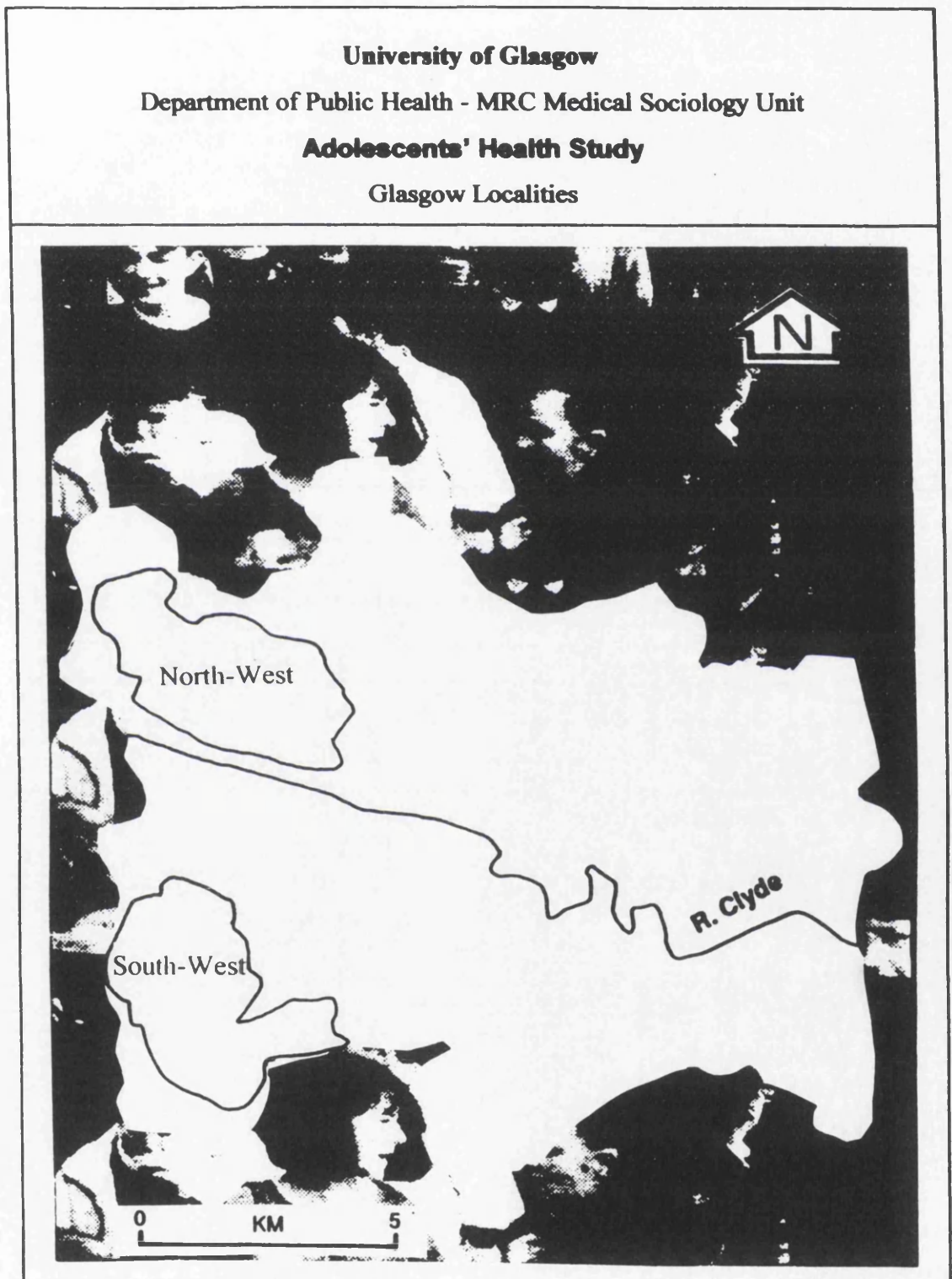
The *north-west locality* (NW) (middle class area) is an inner city area in the north-west of the city, has better than average health and is relatively socially advantaged in terms of the built environment, local amenities and population characteristics. It includes the West End and Garscadden neighbourhoods.

In 1991, single parent families accounted for 9% percent of all households, and the housing stock was a mix of owner occupier and local authority ownership in a ratio of 3:1 (Registrar General Scotland 1992, Strathclyde Regional Council 1991).

The *south-west locality* (SW) (working class area) is also an inner city area in the south-west of the city, has worse than average health and is relatively socially disadvantaged. It includes Greater Pollok.

In 1991, 28% of the households were single parent families, the regional mean being 14%, the housing stock being almost exclusively owned by the local authority (Registrar General Scotland 1992, Strathclyde Regional Council 1991).

Figure 1. The study catchment areas



The localities also vary in their aggregate levels of deprivation as measured by the Carstairs Score which is derived from census data on overcrowded homes, male unemployment, households with no car, and social classes IV and V. The Carstairs Score classifies every postcode sector in Scotland into septiles, with DEPCAT 1 being the most affluent and DEPCAT 7 the most deprived (Carstairs and Morris, 1991). 100% of the SW contains postcode sectors with scores 6-7 compared with 11% in the NW (McLoone, 1994).

2.2. Health features

The two localities exhibit different patterns of health. For example, in respect of all-cause SMRs for all ages for 1987-9 (Standardised to Greater Glasgow Health Board = 100), the NW were lower than the average (77 for males and 90 for females) while those for the SW were higher (104 for males and 107 for females). The mortality differences between the socioeconomically better-than-average locality, the NW, and the socioeconomically worse-than-average locality, the SW, are largely as predicted. The magnitude of difference between them varies according to the age band used, but in general people in the SW appear likely to die younger than those in the NW (GGHB 1991). Findings of the Twenty-07 study (Locality Samples) confirmed the existence of social inequalities in health for the majority of health measures such as mental health and chronic illness for both sexes in later life but not in adolescence (West et al. 1990). Using a variety of indicators from subjective assessment to objective measures at age 15, there was little evidence that health was systematically

class differentiated. The only measure to show class gradients among adolescents for both sexes was height (West et al. 1990 , West 1991, Ford et al. 1994, West 1997).

2.3. Services, and facilities

The two localities were principally identified to focus on the social and physical features of their respective environments which might be related to opportunities for or boundaries to healthy lives for the resident population. There is less local provision of services in the SW compared to the NW, residents in the latter having more choice in terms of numbers of health care facilities (GPs, Dental Practitioners, Opticians, Pharmacies, etc.), healthy recreation, transport services, and shopping facilities (MacIver, and Finlay 1990, Macintyre et al. 1991). In 1992, food cost more in the SW than the NW, a price disincentive which applied to both a 'less healthy' basket of foodstuffs and a 'healthy' basket (Sooman and Taggart 1992).

As part of the West of Scotland Twenty-07 Study: Health in the Community, a sample of local *adults*, were asked a number of questions about how they felt about their local area. The results consistently indicated more problems for adult residents in the SW than those in the NW. As Sooman and Macintyre (1995) have noted, whether or not these perceptions were 'objectively' true, this suggests a degree of pessimism about the local area which is more marked in the poorer area and which may contribute to low morale and poor mental health and community self-esteem. This information tends to suggest that whatever one's personal characteristics, the

opportunity structures in the poorer area are less conducive to health or health promoting activities than in the better off area.

In respect of *young people*, however, the situation appears to be different. In general, there is less evidence of differences in perceptions of services and a large measure of agreement in the priority accorded to services and facilities (Green et al. 1989). In both areas (NW and SW), young people were more satisfied with public transport, and health services compared with other services. They were less satisfied with the availability of jobs when leaving school, places for young people to meet, entertainment facilities, help/advice for young people, and places for young people to live when leaving home. These findings suggest that the needs and interests of young people extend beyond the boundaries of the immediate locality.

2.4. Changes in relevant socio-environmental features in the localities over time

Any observed change in young people's health and well-being might be seen as a reflection of their physical, emotional and social environment, and/ or access to resources and opportunities. Therefore, in order to examine changes over time in adolescents' health and their opinions about their environment and the quality of amenities or services relevant to them, it is important to know what objective changes have occurred over this same period in their socio-economic environment. It is also of course, important to document young people's perceptions of change since this may or may not correspond to actual changes in amenities, facilities and services.

Unfortunately, there are severe limitations in the availability of information relating to changes of this sort, very little data being available apart from population statistics and some statements by relevant authorities and experts about such changes.

Table 3.1. illustrates changes in certain relevant socio-economic features in the localities between 1981 and 1991.

Table 3.1. Changes in relevant socio-economic features in the localities over time*

Features	North-West Locality		South-West Locality	
	81	91	81	91
Population** (thousands)	75.5	72	53	41
% change between 1981-91	- 4.7		- 22.6	
% of unemployed males	12	15	26	29
% of the population with access to a car	50	56	29	37
% in households with social class 4 or 5 head of household	18	15	37	28
% of overcrowding ***	21	7	49	16
% of population living in deprived areas ****	12	11	100	100

* Based on data provided by the Census Branch of the General Register Office for Scotland 1981-1991 (Carstairs and Morris 1991, McLoone 1994).

** The population of Greater Glasgow decreased between 1981 and 1991 from 986818 to 894332 (-9%)

*** The proportion of all persons living in private households with a density of more than one person per room.

**** Postcode sectors with scores 6-7

In parallel with the reduction in the population of Greater Glasgow between 1981 and 1991, the population in both localities decreased over this time, and especially in the more socioeconomically disadvantaged area. It is possible, however, that some of this apparent reduction could be a result of the underestimation of households (and people) in consequence of poll tax evasion, a practice more likely to affect the SW than NW. Again, reflecting societal trends, unemployment rates among males increased in both localities over time. The proportion of the population with access to a car, however, increased, a trend that might be explained in terms of the need to access better amenities and facilities such as schooling, shopping, and recreation, or simply that there are cheaper cars on the market. Overall, between 1981-1991 no change occurred in the localities (particularly in the SW) in their aggregate levels of deprivation as measured by the Carstairs and Morris Score.

It is difficult to assess the impact of those specific changes in people's environments over the decade 1987-95, particularly as they affect young people. Apart from population statistics there are few sources of data on the issue. However, there have been several changes which are either the direct result of policies to improve health or which might be expected to have that consequence. First, the impact of Housing Association/ City of Glasgow - Housing Department/ Scottish Home schemes to improve the quality of housing, particularly in respect of the reduction of dampness, has been quite considerable, a development that is especially associated with the peripheral housing schemes including the SW locality. Secondly, there have been

changes in the provision of sports and recreational facilities, notably the opening of a new sports centre in the heart of the NW locality. Thirdly, changes in shopping facilities have also occurred in both localities (including the opening of new shopping centres). With respect to schooling, in the SW since 1987 one of the secondary schools had been closed, and had been merged into the remaining schools in the locality.

It is widely believed that the socio-physical environment makes a substantial contribution to young people's health. At the local level, the availability of sports facilities and healthy recreation, for example, is seen as a basic element of good health and one important feature of area of residence. Reflecting this philosophy, the development of sporting opportunities on a city-wide basis has been instituted by Glasgow City Council over recent years with all secondary schools within Glasgow being offered the opportunity to extend their after-school sporting provision (Danny Clarke, Youth Sport Development Officer - personal communication).

Unemployment could also be considered as another issue with a negative influence on local residents' health and well-being in general, and on young people's mental health in particular (West and Sweeting 1996). In those areas with a high level of unemployment, young people may expect to become unemployed, and it seems that such worries could involve a negative influence on their psychological well-being, while, overall there is little or no evidence of a reduction in both localities levels of

deprivation (DEPCAT), in contrast, unemployment rates increased, though this remained higher in the SW than NW.

Improving the health of adolescents requires a better understanding of the factors that influence their health and well-being, and their access to and use of healthy recreation, amenities and health care. Inquiry into adolescents' perceptions of their area of residence are important, especially when considering young people's health and welfare services because they experience more mental health problems and psychosocial malaise than other groups of population. It is against this background that this study set out to investigate the health status and health needs of adolescents in Glasgow, with the hope that the findings might contribute to a better understanding of ways to promote the health and well-being of young people in Scotland, and elsewhere.

CHAPTER FOUR**METHODS: PROCEDURES, STUDY SAMPLES, MATERIALS &
MEASURES, AND ANALYSIS OF DATA****1. PUPILS SURVEY****Procedures****Materials and Measures****Analysis of data****2. PROFESSIONALS SURVEY****Procedures****Materials and Measures****Analysis of data****1. Introduction**

The baseline survey of the Twenty-07 Study 15 year old cohort was conducted in 1987. The areas selected for the Twenty-07 Study (locality samples) were located in the north-west and south-west of Glasgow. The Adolescents' Health Study, again with a population of fifteen year olds, was carried out in 1995 in the same two areas using similar instruments. This allowed examination of trends in the occurrence of health-related measures among young people in mid adolescence in Glasgow between 1987 and 1995. Such repeated surveys are relatively uncommon.

The Adolescents' Health Study involved three main phases:

Phase One involved a preliminary review, and analysis of the Twenty-07 Study findings in order to provide descriptive data relating to young people's health status, perceptions of their health, their personal concerns in general, and their associations with area of residence and differing socio-economic circumstances. This preliminary review was the basis for the design of the Adolescents' Health Study.

Phase Two was a pilot study which involved the use of a range of self-administered questionnaires with secondary four (S4) pupils in a school.

Phase Three consisted of the main data collection and included surveys of both school pupils and professionals.

This chapter describes the methods used in the present study. First, an overview of the samples is provided, including a description of how the samples were generated and the socio-demographic characteristics of the subjects. This is followed by a description of the materials and measures used in the study of pupils and professionals. Finally the methods of data analysis are described.

There were two components to the study: the views and perceptions of adolescents themselves, and the views of professionals about young people's health. Therefore, in this chapter, the methods of the pupils survey and the professionals survey are described separately.

2. Pupils survey

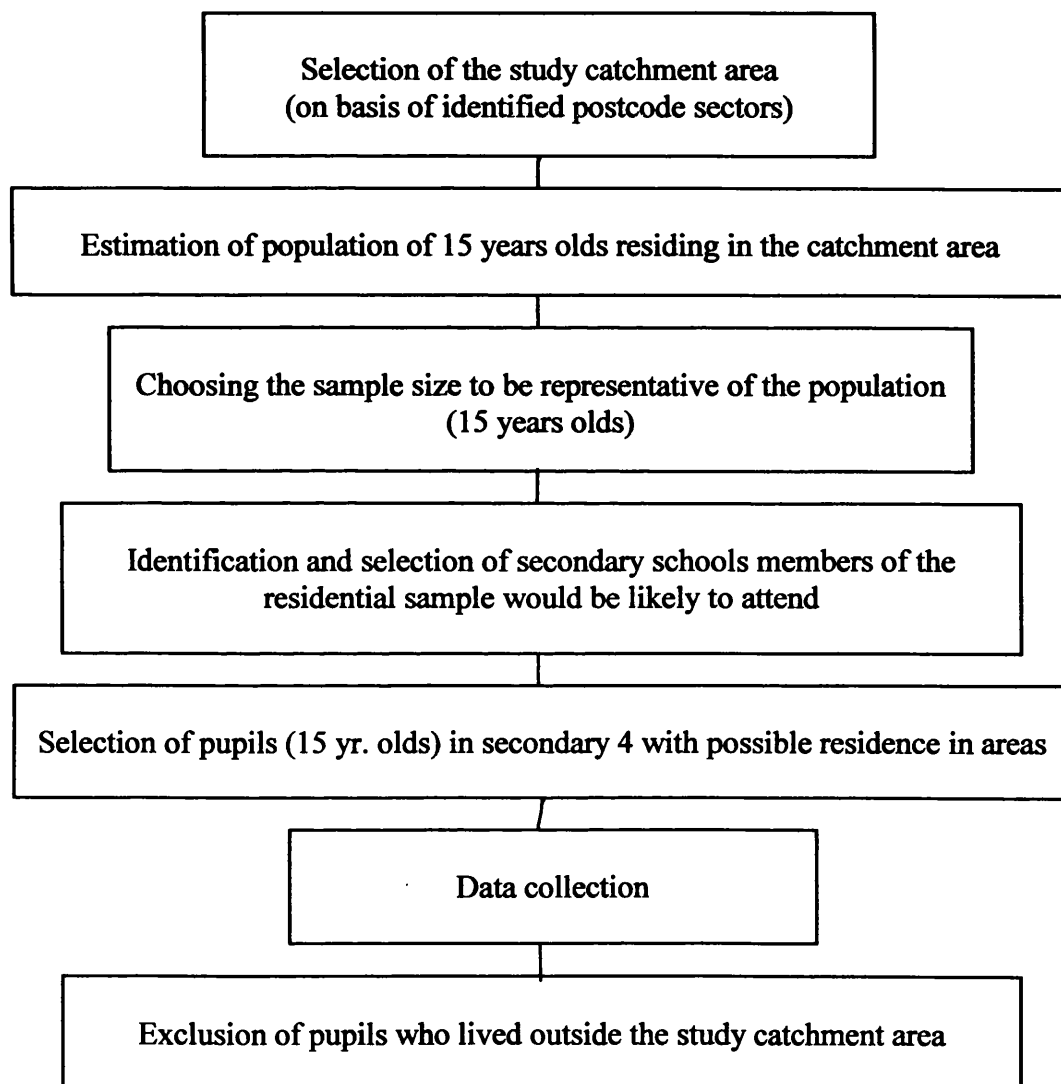
The design of this cross-sectional study involved a self-completion questionnaire administered to 15 year old pupils in nine Glasgow secondary schools.

2.1. Procedures

2.1.1. Sample design: In order to examine the pattern of change occurring over the last decade in different aspects of adolescents' health and concerns, it was necessary to generate a sample which as far as possible approximated to that of the Twenty-07 study, i.e. the same age and residing in the same areas. There were, however, two main reasons why the project could not exactly replicate the previous survey's sampling design. Firstly, Strathclyde Regional Council's 'Voluntary Population Survey' which was used as a sampling frame for Twenty-07 study, was not available at the time and alternative sampling frames had to be found. Secondly, an alternative residential based sample, such as that based on the Community Health Index (CHI), would have necessitated contacting young people (and parents) first at home and seeking permission for participation. Not only would this have been costly, but response rates might have been low. An alternative strategy, using schools as both a sampling frame and the source of data collection was therefore considered. In order to match the Twenty-07 study design, however, this immediately ran up against the problem that school catchment areas are not coterminous with residential areas.

Therefore, the sampling of pupils involved the following stages outlined in below Figure 2.:

Figure 2. Sample Design



- (a)** The study residential area was identified on the basis of the same postcode sectors used to design the NW and SW areas in the Twenty-07 study. These postcodes did not change over time.
- (b)** On the basis of population data for the 15-19 age group resident in the GGHB areas (1991 Census and GGHB trends for 1991-2007), and assuming an equal distribution of young people of each age within the 15-19 age range, it was estimated that there were around 1000 fifteen year olds (640 in NW and 360 in the SW) living in the study area at the time.
- (c)** The key consideration for the sample design was to identify a sample which was fully representative of the population and which provided adequate numbers to make comparisons both between localities and over time. Power calculations indicated that a one in three sample - about 330 fifteen year olds would be adequate to demonstrate a 10% difference in outcome variables both between the localities and over time.
- (d)** Through secondary analysis of the original Twenty-07 study (15 year old cohort) data, it was possible to identify the schools attended by the young people in 1987. Between them, the 'Locality Sample' members attended less than 30 schools. Analysis indicated that the great majority attended 10 main schools (78% of the NW sample and 84% of SW sample). With roughly equal proportions attending each of them, it was therefore decided to sample from these ten schools (6 in the NW and 4 in the SW locality), with equal sampling fractions.

In the NW, all the above mentioned (six) secondary schools serving the locality were still functioning. In the SW, one of the schools had been closed in the period and had been merged into the three remaining secondary schools (two schools located in the centre of the locality and one on the margin). Each of these three schools was selected, making nine in all.

(e) In discussion with headteachers it became apparent that it would be difficult to survey the whole of a (S4) year group. A compromise was reached in which a one in two sample was acceptable to the schools and was judged adequate to detect reasonably large differences over time and between localities. On the basis of (1) evidence relating to increasing placing request (pupils going to schools outside their area of residence have increased), and (2) information about the S4 Rolls in these schools in 1995 (1015 pupils) it was estimated that a 1 in 2 sample from the designated schools would be likely to achieve a 1 in 3 sample of young people actually residing in the two areas.

(f) To ensure the achievement of a sample of around 50% of the S4 Roll in each selected school, two or three classes in each school were randomly selected to represent the different ability levels of the total year group.

(g) The final stage depended on information about residence based on young people's reports of postcode sector. Following data collection, therefore, it was possible to exclude all those who did not reside in the specified postcode sectors.

The resulting sample was about 2 in 3 of the all pupils who participated, and about one third of the total population of 15 year olds resident in the localities.

2.1.2. Permission and Access: In this study, schools provided both the sampling frame and the setting for data collection. The survey's procedures and research strategy were first discussed with the regional education authority (Strathclyde Regional Council, Department of Education), and after the relevant 'Application and Standard Form Contract' had been completed, approval of the project was granted, although it was headteachers who had the final say as to whether their schools should become involved in the research project. In the event, all schools participated. Additionally, it was up to individual headteachers to decide whether or not it was necessary for parental approval to be obtained in order for pupils to participate. Therefore, through direct approaches to schools, the survey's content and research strategy was discussed with headteachers, and in all selected mixed-sex state schools (one of them was grant-aided), co-operation was successfully gained. Because the questionnaires were anonymous, headteachers decided it was not necessary to obtain parental approval. This had two major advantages for the study: it saved time, and maximised the participation of eligible pupils. In recompense for their help, a report was provided for each school, a service warmly welcomed, as it was judged helpful for the design of their personal and social development curricula and any health education programmes at the school.

2.1.3. Data collection: The data collection was carried out over a two month period (May-June 1995 when S4' examinations were finished) in the selected schools. The questionnaires were hand delivered by the investigator to key persons (school

headteacher or his/ her representative). Questionnaires were then issued to all members of selected S4 groups by the investigator and/ or relevant teachers in their classes, or at assemblies, with the investigator and/ or relevant teachers (member of school senior management team/ guidance team) overseeing the exercise in the school. The teachers who supervised the half-an-hour-long period allocated to the completion of the questionnaires were briefed by the investigator beforehand. In each school, to minimise any possible contamination between pupils, all completed the questionnaire at the same time. Overall, the quality of the data was very good, with very few spoiled questionnaires (2 questionnaires) and the great majority of pupils completing all the questions in the allotted time (less than 5% of pupils ran out of time).

2.1.4. Characteristics of the sample: Table 4.1. illustrates the pupil's sample and shows that a total of 305 subjects completed a questionnaire in six schools from the north-west and 143 in the three schools in the south-west locality.

Table 4.1. Pupils sample

Locality	Approximate population of 15 year olds (1995)	Secondary schools in locality	No. of selected classes	Total possible	Achieved sample (residents)
N-W	640	6	14	305	185
S-W	360	3	7	143	101
Total	1000	9	21	448	286

Because the catchment area for these schools was not coterminous with the residential areas included in the NW and SW localities, pupils who lived outside the specified postcode sectors were excluded from all analyses comparing the two areas and changes over time. The final subjects were 286 pupils, 185 in the NW and 101 in the SW. These comprised 149 boys and 137 girls.

2.1.5. Response rate: The response rates were 90.8% in the NW and 85.1% in the SW. Generally, each S4 class consisted of around 24 pupils. Approximately 3 absent pupils per class were recorded (9.2 % in the NW and 14.9 % in the SW), a rate the headteachers did not think was unusual. They also felt that absentees would not be radically different from those subjects who were included in the study.

2.1.6. Demographic details of the pupils (n=286): The demographic details of pupils by area of residence (NW/SW) are shown in Table 4.2.

2.1.6.1 Gender

The study sample is representative of the sex ratio of the population of all 15 year olds consisting overall of 52.% boys and 48% girls (General Register Office for Scotland 1995). However, a slight gender imbalance was found within each area, particularly in the SW sample (57.8% males and 42.2% females in the NW, and 41.6% males and 58.4% females in the SW locality).

Table 4.2. Socio-demographic details of the pupils sample (by locality)

	NW (n=185) No. (%)	SW (n=101) No. (%)
Gender		
male	107 (57.8)	42 (41.6)
female	78 (42.2)	59 (58.4)
Type of area of residence		
affluent	20 (10.8)	0 (0.0)
middle	161 (87.0)	0 (0.0)
deprived	4 (2.2)	101 (100.0)
Family structure		
intact	146 (78.9)	53 (52.5)
single parent	28 (15.1)	36 (35.6)
other	11 (6.0)	12 (11.9)
Number of household		
2-3	44 (23.9)	37 (36.6)
4-5	128 (69.6)	49 (48.5)
6 or more	12 (6.5)	15 (14.9)
Number of siblings		
0	16 (8.6)	10 (9.9)
1	86 (46.5)	27 (26.7)
2	55 (29.7)	26 (25.7)
3 or more	28 (15.2)	38 (37.7)
Reported family car ownership		
yes	143 (77.7)	53 (53.0)
Length of residence at current address		
less than 4 yrs	31 (17.2)	24 (24.7)
4-10 yrs	50 (27.8)	33 (34.0)
10 yrs or more	99 (55.0)	40 (41.2)

2.1.6.2. Type of area of residence

Overall, the type of area of residence (based on the Carstairs and Morris DEPCAT scores for 1991- McLoone, 1994) in the study sample can be classified as follows: 7% affluent (depcat 1 and 2), 51% middle (depcat 3, 4, and 5), and 42.% deprived (depcat 6 and 7). However, when examined in relation to the localities, 100% of the south-west sample compared with 2.2% of the north-west sample were living in the

deprived areas, a finding which dramatically highlights their socio-economic differences.

2.1.6.3. Family structure

In the SW area young people were more likely to live with single parents (35.6 %), compared with 15.1 % in the NW, confirming the association between greater deprivation and single parent households (Sweeting and West, 1995).

2.1.6.4. Number of siblings

The average number of brother(s) or sister(s) reported by the respondents is higher in the SW (2.2) compared to the NW (1.6).

2.1.6.5. Number in household

There is no significant difference between the average household size reported by respondents in the NW (4.06) compared to the sample in the SW (4.05). This similarity is accounted for both by the greater proportion of single parent households and lower family size in the SW compared to the NW.

2.1.6.6. Reported family car ownership

Those young people resident in the more deprived locality (SW) were significantly ($p < 0.001$) less likely to have a car in the household (47.0 %), than their counterparts in the NW (22.3%).

2.1.6.7. Length of residence at current address

In the NW, 17.2 % of the pupils reported living less than 4 years at their current address, 27.8 % between 4 to 10 years, and the rest (55.0 %) more than 10 years, compared with 24.7%, 34.0%, and 41.2% respectively in the SW. The difference between the areas is not statistically significant.

2.2. Material and measures

The questionnaire consisted of an amalgamation of questions, scales and adaptations of scales known to the investigator from knowledge of the literature, the preliminary study, and the planning of this particular project.

The overall approach was to use anonymous questionnaires in order to maximise privacy and confidentiality, a procedure regarded as necessary in this kind of investigation.

2.2.1. Validity and reliability of the questionnaire : In order to examine trends in the occurrence of health-related measures among young people between 1987 and 1995, it was necessary to use similar instruments. Thus, the pupils' questionnaire was closely based on the Twenty-07 Study 15 year old cohort questionnaire which had already been used successfully.

Validity: In consideration of validity (the adequacy with which the method of measurement does its job.(Abramson 1990)), the questionnaires used in the Twenty-07 study refer to a huge range of issues, some of which are measured using standard instruments, some of which are more exploratory. In the present study, choice of instruments was in large part made on the basis of well established questions on scales with high validity. For example, some like the question on long-standing illness have been applied routinely in national surveys; others such as GHQ have been validated on young people (Banks 1983, Politi et al. 1994). Similarly, the life events inventory was generated from an established list for adolescents based on well used adult scales (Sweeing and West 1994). For other measures such as perception of area, no such evidence of validity is available (published or unpublished). However, in terms of content and face validity, these items appear robust.

Part of the pupils' questionnaire and the whole of the professionals' questionnaire were used to assess respondent's *views* and *opinions*, the items (that were identified from a review of the literature) being commented on by the relevant authorities and professionals in this field for content reliability, though standardised scales were employed in most closed questions (e.g. Faces Scale - Andrews and Withey 1976).

Reliability: Similar considerations applied to the issue of the reliability (refers to the stability or consistency of information) of the instruments. Although, there were no measures of internal reliability or test-retest, great reliance was placed on the results of the Twenty-07 study analyses which in general showed considerable consistency

between measures. For example, the relationship between unemployment and poor mental health has been shown to hold with the GHQ, HADS (Zigmond and Snaith 1983) and a malaise symptom checklist (West and Sweeting 1996).

In order to know how young people would respond to this self-completion questionnaire, it was first piloted.

2.2.2. Pilot study: The pupils questionnaire was based on the Twenty-07 Study 15 year old cohort questionnaire. However, there were three reasons to pilot it: first, in the previous survey participants were interviewed (in addition, they were given two self-completion questionnaires), so it was necessary to know how young people would respond to this self-completion questionnaire; second, as it was a school based survey, it was important to know how headteachers would assess the questionnaire content, and finally, how much time it took to complete.

Thirty four pupil questionnaires were administered for the purposes of the pilot study with S4 pupils from a school outside the study areas. Participants were asked to give their opinions on the questions.

The assistant director of the Department of Education at Strathclyde Regional Council, and headteachers in all the selected schools reviewed the items of the pupils' questionnaire for content suitability.

The questionnaire had been successfully piloted and found to be interesting for participants. There were no spoiled questionnaires and the great majority of pupils completed all the questions in the allotted time.

On average, the questionnaire took 30 minutes to complete. The changes were minimal, including:

1. Some open questions about the number of siblings and number of siblings who were staying elsewhere were changed to closed questions.
2. A closed question relating to self-assessed school work on a 5 point scale ranging from 'one of the best' to 'near the bottom' was changed to a scale ranging from 'a lot above average' to 'a lot below average'.
3. A closed question about health education at school covering specific topics was changed from 'yes, no, I don't know' to 'yes, no'.
4. A closed question about the ranking of important influences on people's health was changed to allow 'equal rankings'.

Appropriate modifications were made for the main phase of data collection. Following the pilot study, the final questionnaire consisted of eight sections (open and closed questions).

2.2.3. Variables:

2.2.3.1. Outcome variables

The study included a range of outcome measures comprising: health indicators, health knowledge, school life, life events, concerns and aspirations; and opinions about the area of residence.

2.2.3.2. Explanatory variables

Area of residence was operationalized as two variables: 'living in the north-west locality' and 'living in the south-west locality'. In addition, to identify their socio-economic background except area of residence five variables: gender, family composition, number of siblings, number in household (computed on relevant information about family), and family car ownership were included.

2.2.4. The pupils questionnaire: The main objective of the questionnaire was to identify 15 year old's health status, perceptions of their health, their social environment, and their personal concerns. In addition, some questions were included to identify the subjects' socio-economic background (Appendix 1).

The questionnaire was based on that of the Twenty-07 Study 15 year old cohort. This means that comparable data exist to address one of the Adolescents' Health Study aims: to examine differences on a range of health indicators between these 15 year olds and the Twenty-07 sample surveyed in 1987 (in this chapter, those questions included in the present study which were the same as those in the Twenty-07 study are specified by a 2007 abbreviation).

It is important to acknowledge that the methodologies adopted by the Twenty-07 Study (home interview and self-completion questionnaire) and the Adolescents' Health Study (self-completion questionnaire) were different. In evaluating changes over time it will be necessary to consider whether or not these methodological differences alter the picture.

Additionally, the questionnaire sought participants' attitudes to a number of aspects of young people's health in the area of their residence.

The questionnaire included eight sections:

Section one Socio-economic background and Demographic Information

The questionnaire consisted of eight questions relating to (a) postcode sector of residence, in order to exclude those not resident in the NW and SW (b) length of residence at current address (c) family car ownership, and (d) parent's highest educational qualification.

In the present study, the area of residence was employed as a major axis of comparison rather than other measures of social class such as the occupation of the head of household.

Standard demographic information was gathered about the pupils, including age, gender, family composition, number of siblings, and number of siblings who had left home.

Section two Health Indicators

Eight health indicators were used in this study. These measures reflect the following dimensions of health:

Height/ weight/ BMI

In the absence of physical measures self-reported height and weight were used.

1) Self-reported height. Pupils were asked to report their height in either feet and inches or metres and centimetres.

2) Self-reported weight. Pupils were also asked to report their weight in either stones and pounds or kilograms.

Based on self-reported height and weight, body mass index (BMI) was calculated as weight (kgs)/height (m)². The Royal College of Physicians' classification of BMI above 25.1 for males and 23.9 for females (RCP 1983) are used to define overweight and obesity.

Health status

This consisted of subjective reports of chronic illness, self-rated health, self-reported health problems, and perceived vulnerability.

3) Self-reported chronic illness and health history. The presence of longstanding illness was assessed by the question used in the British General Household Survey (GHS) (OPCS). Pupils were asked the standard question relating to whether or not they suffered from 'any longstanding illness, disability or infirmity' (defined as anything that had troubled them over a long period of time or that was likely to affect them over a period of time) and, if so, what was/were the matter with them and whether it limited their activities in any way. Three measures were therefore

produced; any longstanding illness, specific chronic illness/disability, and limiting longstanding illness. (2007)

4) Self-reported general health. One measure of general self-perceived health was used. It asked for an assessment of the respondent's health over the last 12 months, using the fixed-choice categories 'good, fairly good, and not good'. This categorisation was taken from the GHS. (2007)

5) Self-reported health problems. Pupils were asked if they had experienced health problems and if so, what was/ were the biggest problem(s). Several problems could be recorded.

6) Perceived vulnerability. A question was asked to determine the perceived vulnerability of pupils to becoming ill, the responses being more likely, about as likely, and less likely than other people their age. (2007)

Mental health

7) Psychological well-being or malaise. This was assessed using the 12 item version of the General Health Questionnaire (Goldberg 1978). This consists of a series of statements about aspects of well-being (e.g. depression, tension, or worries), to which respondents indicate by one of four responses the extent to which each

symptom has been present or absent in the past few weeks. This is a well known screening device used to detect psychiatric morbidity in community settings. It has been extensively used in research and has been validated on young people by Banks (1983) and Politi et al. (1994). It was therefore thought to be an appropriate choice of instrument for this study. A binary scoring method (range 0-12) was used, which permits the identification of caseness. A cut-off point of 2/3 has been used (Banks 1983, and Politi et al. 1994). (2007 self-completion questionnaire)

8) Happiness with life in general. Pupils were asked to rate themselves using the 'Faces Scale' (Andrews and Withey, 1976), a seven point scale with one being happiest and seven being unhappiest.

Section three Health Knowledge

1) Health education at school. Pupils were asked about whether they had any lessons covering smoking, alcohol, diet, personal hygiene, contraception, drugs, child care, STD, or exercise topics in their present school. (2007)

2) The assessment of important influences on people's health. Pupils were asked to rank 6 items reflecting possible influences on people's health which were: the constitution they were born with, the environment, habits (like smoking), looking after themselves, health services, and luck. These were ranked on a 6 point scale,

varying from 1 (most important) to 6 (least important) with equal rankings permitted. (2007). This was not absolutely equivalent to the measure used in the Twenty-07 study where equal ranking were discouraged by the use of cards.

3) Improvement of health. Pupils were asked an open-ended question about what were the most important things they could do to improve their health. Allowance was made to record several answers.

Section four School Life

Two questions were used in this study with regard to school life:

1) School ability. With regard to schoolwork, pupils were asked to rate themselves compared to other pupils on a 5 point scale varying from a lot above average to a lot below average.

2) School usefulness. Pupils were also asked the extent to which they thought school had been useful for: doing the job/ career they wanted to, applying for a job, informing them about youth training schemes, coping with adult life, how to behave, how to manage money, becoming a parent, and how to look after their health, on a 4 point scale varying from very useful to not at all useful. (2007)

Section five Life Events

A life events checklist, which was used previously in the Twenty-07 Study (1987), was adapted by the investigator for use on this sample (four questions relating to

pregnancy and abortion being omitted from the checklist, in order to respect sensitivities, particularly in Roman Catholic schools). The 31 items mainly cover common events a pupil may encounter in life. Pupils were asked to think back over the last 12 months and recall whether or not each incident had happened to them. (2007 self-completion questionnaire)

Section six Concerns, and Aspirations

Five measures of concerns and aspirations regarding young people's plans for the future were used in this study. These enabled the researcher to compile a reasonably accurate picture of young people's (met and unmet) needs.

1) Aspirations for next year. Pupils were first asked an open-ended question about what they would really like to be doing in a year's time which was then followed by a second question which asked what they thought they probably would be doing a year later. The second question involved a choice from seven possible options: 'staying on at school', 'going to college', 'to Youth Training', 'have a job', 'be unemployed', 'depends on exams', or 'something else' (specify). (2007)

2) Plans for further or higher education. A simple question was asked to determine pupil plans in this respect. Pupils were asked whether or not they had any plans to go on to further or higher education, and if so, what type of higher or further education they were hoping to go to, including university or polytechnic, teacher training college, technical college, college of commerce, secretarial college, college

of art/ music or drama, nursing college, PE college, or something else (specify).
(2007)

3) Job. Pupils were asked what kind of job they would eventually like to do using an open-ended question format. (2007)

Pupils were also asked:

4) Guidance about job. Pupils were also asked to say whether they ever had any careers advice or advice/ guidance about jobs in school, outside school, or family/ friends? If they had, there followed a question asking about the most useful source of advice, the options being in school (teacher and careers officer), outside school (family, friends, Careers Service, and employment agency). Space was provided to name an 'other' if they wished. (2007)

5) Ideal age to leave home. They were also asked what age they thought they would ideally like to leave home. (2007)

Section seven Opinions about Area of Residence

Information was gathered about pupils' opinions and awareness of young people's health-related problems and needs in their area of residence. They were asked:

1) The health of young people. To rate the overall health of young people in their area of residence compared to the rest of the city on a 5 point scale varying from much better to much worse.

2) The major health problems for young people. To rank 6 major health problems for young people in their area of residence, from a list comprising: accidents, smoking, drug abuse, alcohol, depression, and sexually transmitted disease, on a 3 point scale varying from little importance to high importance. Space was provided to name an 'other' problem if they wished.

3) The quality of health services. Their opinion about the quality of 4 health services: GPs, dental health, drug advice, and mental health in the area of residence compared to the rest of the city on a 3 point scale varying from better to worse. Space was provided to name an 'other' if they wished.

4) Quality of amenities or facilities. To rate the quality of ten amenities, facilities, and services of relevance to young people on a 5 point scale varying from very good to very bad. These were as follows: places to meet, sports facilities, availability of jobs (part-time while still at school, and jobs when leaving school), public transport, opportunities for further education or training, places to live when leaving home, help or advice, health services (on the whole), and entertainment facilities in the area of residence. They were also asked to rate on a 4 point scale (varying from very

important to not important) how important these things were to them personally.

(2007)

5) Awareness about young people's initiatives. To identify their awareness of any young people's health promotion initiatives or health-related projects in their area of residence? If they did know of something, they were then asked to indicate what kind of initiatives, projects, or activities they were, and also whether they had participated in those?

6) Awareness of the Glasgow Healthy City Project. A simple question was also asked to determine whether or not pupils were aware of the project, an international health programme set up in 1986, and based on the WHO's wider "Health for All" programme. If they had, there followed a question about the source of that awareness.

7) Happiness with the local area. Pupils were asked to rate their happiness with the local area as a place in which to live on 5 point scale varying from very happy to very unhappy.

Section eight Pupil's general statement about life and health

Finally, at the end of the questionnaire, pupils were asked to state anything else they wanted to say about their life and health.

2.3. Analysis of data

For the purpose of comparing health-related measures between 15 years olds in Glasgow between 1987 and 1995, a secondary analysis of data from the earlier Twenty-07 baseline survey was carried out (the basic information from which is available in Green, Macintyre, and West (1989)). To examine the pattern of the changes that occurred over nine years, differences between the two surveys were tested for statistical significance, using the chi-square statistic.

For the purpose of examining the associations between each of the outcome variables and residential locations with differing socio-economic status in mid adolescence, differences between localities were tested for statistical significance, again using the chi-square statistic.

The slight *gender imbalance* (around 15%) (Table 4.1.) found within each area (in the NW more males than females, in the SW more females than males) reflects a similar ratio found in the earlier study (1987). Clearly, this could contaminate overall comparisons between the localities either by masking differences or exaggerating them. The significance of this has been overcome by systematically examining relationships between variables within each gender, any differences by gender being reported in the text (for example psychological well-being or malaise).

3. Professionals survey

An additional aim of the Adolescents' Health Study was to explore health status, health-related issues, and the health needs of adolescents from the point of view of professionals who work with young people in the context of different socio-economic locations of work, and to contrast these with adolescent perceptions. The design of this study involved a self-completion questionnaire survey of professionals, specifically health care and education professionals in Glasgow. The questionnaire took about 10 minutes to complete.

3.1. Procedures

3.1.1 The setting: Two different methods of data collection were used in the survey of professional's views, the postal questionnaire method for health care professionals, and hand delivered questionnaire for education professionals.

In the case of health care professionals, the names and addresses of GP's, District Nurses, and Health Visitors were chosen from the database of Greater Glasgow Health Board. During a five month period, the questionnaires were delivered by the investigator to the Consultant in Public Health Medicine at Greater Glasgow Health Board, who had responsibility for organising and contacting health care professionals in the study areas. The questionnaires were then mailed to all selected health care professionals who were asked to return the completed questionnaire in the stamped

addressed envelope provided. A reminder letter and a duplicate copy of the questionnaire was sent out two months later.

In the case of education professionals, the headteacher or his/ her representative undertook responsibility for organising and contacting members of staff in the school. The questionnaires were given to the school's senior management team (including head teacher, deputy head, and assistant head), guidance team, and other members of the academic staff or school based professionals (including the physical education teacher, personal and social development teacher, learning support teacher, religious education teacher; and school chaplain, school doctor, school nurse, and careers officer attached to the school). The reminder was not appropriate for education professionals since they were reminded verbally by the investigator or headteachers at the time of data collection at the schools.

3.1.2 The Selection of Subjects: The study background, aims and methodology of this study were discussed with relevant authorities and their agreement to co-operate and support the project obtained. In the case of educational professionals a key person, either the headteacher or his/ her representative, was identified as responsible for organising the distribution of questionnaires to members of staff in school. In the case of health care professionals, the consultant in public health medicine at Greater Glasgow Health Board was identified as responsible for approaching health care professionals in the two localities.

3.2. Sample

The study was limited to health care and education professionals who were working in the north-west and south-west of Glasgow.

3.2.1. Response rate: The overall response rate for the whole professionals survey was 45% (89 out of 197) with that for education professionals being 60% (63 out of 105), and that for health care professionals 28% (26 out of 92). The response rate was higher in the south-west than north-west with health care professionals in particular (35%) responding at a higher rate. The response of health care professionals was improved (from 20% to 28%) by sending a reminder letter about two months later.

Eight questionnaires were returned uncompleted by health care professionals. These were from respondents who noted that they had no contact with adolescents, and did not know about adolescent's health status in the area. This could be the case with other non-respondents, and suggests that lack of awareness about adolescents' health issues may be one factor affecting non-response in this study, not just lack of time or interest.

3.2.2. Demographic details of the professionals (n=89):

The demographic details of professionals are shown in Table 4.3.

3.2.2.1. Occupation, and experience in the area

As can be seen, just under three-quarters of participants (63 out of 89) were education professionals. The average length of experience in the locality was 8.1

years, with no significant difference between education and health care professionals. However, when occupation and experience in the locality were considered together, differences between the localities emerged. Health care professionals in the south-west were more likely than their counterparts in the north-west to have longer experience of the locality (10.1 years compared with 3.3 years) whilst educational professionals had the same length of experience in both localities.

Table 4.3. Demographic details of the professionals

	No. (%)	Area of Work	
		NW No. (%)	SW No. (%)
Profession :			
Education	63 (70.8)	40 (81.6)	23 (57.5)
Health Care	26 (29.2)	9 (18.4)	17 (42.5)
Total	89 (100.0)	49 (100.0)	40 (100.0)
Experience in the area :			
less than 1 year	4 (4.9)	3 (6.5)	1 (2.8)
1-4 yrs	26 (31.7)	15 (32.6)	11 (30.6)
5-8 yrs	16 (19.5)	10 (21.7)	6 (16.7)
9-15 yrs	24 (29.3)	12 (26.1)	12 (33.3)
16 or more yrs	12 (14.6)	6 (13.0)	6 (16.7)
missing	6 (6.7)	3 (6.1)	3 (7.5)
mean (yrs) :			
Education	8.3	8.2	8.4
Health Care	7.6	3.3	10.1
Total Sample	8.1	7.3	9.1

3.3. Materials and measures

The study aimed to collect comparable material from professionals and young people by using similar questions, particularly in respect of professional's views about

young people's major health-related needs and problems in the two localities. In other parts of both questionnaires (professionals, and young people), issues of specific concern to professionals and young people were addressed.

The relevant authorities at Strathclyde Regional Council's Department of Education, and Greater Glasgow Health Board reviewed the items of the professionals' questionnaire for content suitability. Additionally, the questionnaire was reviewed by headteachers.

3.3.1. Variables:

3.3.1.1 Outcome variables

In the professionals survey, the outcome measures comprised views about: young people's health status, accessibility to health services, major health-related problems, socioeconomic issues, and actions to improve young people's health; vulnerable groups; amenities/ facilities/ services for young people or initiatives; and young people's participation in decisions concerning their health care delivery. In addition, in the professionals survey some outcome measures were classified in a similar way to young people in order to make comparisons.

3.3.1.2. Explanatory variables

The area of work was employed as a major unit of analysis of the outcome measures used in the professionals survey. Area of work was operationalized as two variables: 'working in the north-west locality' and 'working in the south-west locality'.

In addition, occupation was included in the analyses because of its potential association with professionals' views about adolescent's health.

3.3.2. The professionals questionnaire: The purpose of the professionals questionnaire was to find out their views about adolescents' health in general and young people's participation in decisions concerning their health care delivery in particular (Appendix 2).

The questionnaire included six sections:

Section one Occupation, address of workplace, and experience in the area

Standard information was gathered about the professionals, including their occupation, type of work, and length of experience in the area. These questions allowed the researcher to make a judgement about the professionals' views about young people's issues in the locality.

Section two Vulnerable Groups

Professionals were asked to rank seven 'client' groups in the community in terms of their vulnerability to health problems using a 3 point scale indicating the extent of vulnerability, varying from low vulnerable to high vulnerable. These were: children, adolescents, the elderly, women, men, single parents, and people with disabilities. Space was provided to name an 'other' if they wished.

Section three Young People's Health Issues in the Localities

With reference to the area in which they worked, professionals were asked their opinion about young people's:

- 1) **health status**, and how this compared to the rest of the city on a 5 point scale varying from much better to much worse.
- 2) **accessibility to health services**, compared with those in the city as a whole on a 3 point scale varying from better to worse.
- 3) **major health-related problems**, on a 3 point scale varying from little importance to high importance. These were: accidents, smoking, drug abuse, alcohol problems, mental well-being, and sexually transmitted disease.
- 4) **Socio-economic issues**, on a 3 point scale varying from little negative influence to high negative influence. The items were: poor socio-economic circumstances, poor housing, unemployment, violence, alcohol, drugs, smoking, poor diet, stress, family breakdown, poor schooling or education, and poor sports or entertainment facilities.
- 5) **actions for improving health**, on a 3 point scale varying from little influence to high influence. The activities were: set-up self-help groups, seek more information

or education on health, change lifestyles, take more personal interest or responsibility, job creation schemes, demand political action, social change, and demand more resources.

Section four Amenities, Facilities, Services for Young People, and Initiatives

1) Quality and importance of services. Professionals were asked to rate the quality of ten amenities, facilities, and services of relevance to young people on a 5 point scale varying from very good to very bad. These were: places to meet, sports facilities, availability of jobs (part-time while still at school, and jobs when leaving school), public transport, opportunities for further education or training, places to live when leaving home, help or advice, health services (on the whole), and entertainment facilities. They also rated the importance of these things for young people on a 4 point scale varying from very important to not important.

2) Awareness about young people's health promotion initiatives. They were asked about their awareness of young people's health promotion initiatives or health-related projects in their area of work. If they were aware of any, they were then asked what initiatives, projects, or activities they were, and whether or not they had participated in them? If they had, they were asked about their role: in initiation, planning of priority activities, implementation of project activities, and monitoring or evaluation of projects activities?

3) Awareness about the Glasgow Healthy City Project. A simple question was asked to determine professionals' awareness of the project and what this meant to them.

Section five Young People's Participation

Since the assessment of professionals' views about young people's participation in decisions concerning their health care delivery was regarded as important, they were asked whether adolescents should be able to participate in decisions concerning their health care delivery and, if so, why.

Section six Professional's general statement about adolescent's health status and problems

Finally, in the last section of the questionnaire, professionals were asked if there was anything else they wanted to say about adolescent's health status and problems.

3.4. Analysis of data

With respect to the assessment of professionals' views about adolescents' health-related issues, the data analysis consisted of cross-tabulations by area of work and occupation.

With respect to comparing adolescent's perceptions of concerns and professional perceptions of adolescent concerns, those variables that could be compared between the samples were presented in percentages.

The study applied the chi-square test of significance where appropriate. Where the expected number in a cell was less than 5, Fisher's exact test has been used. The study followed a convention in referring to anything with a probability of less than 0.05 as 'significant'.

In tables, the column percentages may sum to 99 or 101 per cent because of rounding.

All data collected were coded and inputted onto the SPSS-PC Data Entry Package, with the data analysis carried out on the main SPSS-PC analysis package. In addition, to examine (1) the pattern of changes that occurred over nine years, and (2) whether professionals' opinion differ from adolescents, the chi square statistic was computed on Epi Info 6 (EPI6) statistics program.

PART THREE

**PRESENTATION AND DISCUSSION OF RESULTS,
CONCLUSION AND RECOMMENDATIONS**

CHAPTER FIVE**RESULTS OF PUPIL'S SURVEY**

- 1. General profile of young people's health in 1995**
- 2. Young people's opinions about area of residence**

The pupil's survey sought information on adolescents' health and health-related problems in relation to residential locations with differing socio-economic status. Consequently, pupils who were living outside the study catchment areas (the NW, and SW of Glasgow) were excluded.

In this chapter, the results relating to young people's health in general, and their opinions about different aspects of the health-related problems and needs of youth in their areas are presented.

1. General profile of young people's health in 1995

The main objective of the pupils questionnaire was to identify adolescents' health status, perceptions of their health, and their personal concerns. This chapter presents the data collected about these indicators separately by area. The data are organised into three sections:

1. General indicators of health.
2. General perception of improvement in health.

3. Concerns and aspirations.

1.1. General indicators of health

Table 5.1. refers to data on various dimensions of mid adolescents' physical and mental health. In the present study, four core health measures were used comprising: longstanding and limiting longstanding illness, self-reported health problems, self-rated (general) health, and psychological well-being or malaise measured in this study by the 12 item version of the GHQ, the identification of 'caseness' being a cut-off point of 3. In addition, three other health measures comprising: being overweight, perceived vulnerability to getting ill, and perceived happiness with life in general were used.

1.1.1. Self-reported chronic illness: Respondents were asked the standard GHS question relating to whether they suffered from any 'longstanding illness, disability or infirmity' and if so whether it limited their activities. The nature of the problem was also sought, a question which typically reflects physical rather than mental health.

The proportion of young people reporting a longstanding illness was surprisingly high in both areas, given the assumptions about the healthiness of adolescents. The figures show that in the NW about 15% and in the SW 19% of respondents reported a longstanding illness, disability or infirmity that had troubled them over a long period of time, and around one in twenty in the NW and one in ten in the SW

reported this as limiting their activities. There are no statistically significant differences between young people in the NW and the SW though the latter tend to have higher rates.

Table 5.1. General indicators of health

	NW % (n)	SW % (n)	p
% Reporting longstanding illness, disability or infirmity	15.1 (28)	18.8 (19)	0.42
% Reporting limiting longstanding illness	5.4 (10)	10.9 (11)	0.09
Kind of chronic illness			
Allergies (asthma, hayfever, eczema etc.)	4.3 (8)	6.9 (7)	0.34
Others	10.8 (20)	11.9 (12)	
% Reporting current health problems	20.5 (38)	21.8 (22)	0.80
% Reporting perceived vulnerability to getting ill as 'more likely'	3.3 (6)	8.9 (9)	0.04
Overweight (BMI males ≥ 25.1 , females ≥ 23.9)	M 6.3 (6)	10.5 (4)	0.56
	F 7.1 (5)	10.4 (5)	0.63
Psychological well-being or malaise (GHQ caseness - 12 Cut-off point of ≥ 3)	M 22.6 (24)	23.8 (10)	0.88
	F 50.0 (39)	54.2 (32)	0.62
% Reporting health as "not good" in the last year	8.2 (15)	10.9 (11)	0.44
% Rating of perceived happiness with life in general as 'strongly happy or happy'	82.1 (151)	80.2 (81)	0.70

Among the main chronic illnesses spontaneously reported at this age in both areas were allergies (about one in twenty) but other conditions such as migraine, weight problems, eating difficulties, ear/eye problems, and heart problems were also reported by about one in ten. In addition, it is important to note that some respondents reported more than one chronic illness.

1.1.2. Current health problems: The next dimension of health examined refers to current health problems rather than chronic conditions, although the distinction between the two is not always clear-cut. Respondents were asked whether or not they had a current health problem(s) and if so, what it (they) was (were) and which was the biggest problem. In both areas, around one-fifth identified a current health problem (longstanding or symptoms of acute illness). About one in twenty five of the sample had an acute problem involving the respiratory system (colds, flu, wheezy chest, throat infections etc.), sports injuries, headaches, sickness/ diarrhoea, fainting, and convulsions. There were no differences between respondents in the two areas. In addition, it is important to note that some respondents reported more than one problem.

1.1.3. Perceived vulnerability to getting ill: With regard to respondent's perceived vulnerability to getting ill, the percentage who felt they were 'more likely' to get ill was relatively low in both areas, with around 3% (in the NW) and 9% (in the SW).

However, respondents in the SW were significantly more likely to perceive themselves as vulnerable.

1.1.4. Overweight: Table 5.1. also shows the proportion overweight (based on reported height and weight) among respondents in each area for males and females separately. In the NW, around one in fifteen and in the SW one in ten of respondents of both sexes were identified as overweight.

There are no statistically significant differences between the NW and the SW.

1.1.5. Psychological well-being or malaise: The next dimension of health examined refers to psychological well-being or malaise. The findings show that rates of caseness for both sexes in both areas were remarkably high. Around a quarter of males and a half of females exhibited symptoms of psychological morbidity of potential clinical significance illustrating most vividly the size of the mental health problem in mid adolescence.

There are no significant differences between the two localities for either sex. By contrast, an expected gender difference is apparent with females having much higher rates than males (around twofold) in both areas.

1.1.6. Self-rated health: The pattern of self-rated health, using the percentage reporting their health 'not good' in the previous year, is also shown in Table 5.1. In both areas, around one in ten of respondents regarded their health as 'not good', while some a half rated their health as 'good', and 40% as only 'fairly good'. There

is no evidence of a difference between those who were living in the NW and their counterparts in the SW.

1.1.7. Happiness with life in general: Happiness was measured by an index that takes into account overall feelings of life satisfaction, using the seven point 'Faces scale'. A considerable proportion of subjects (around 80%) in both areas can be judged happy with life in general, scoring above the midpoint (1, 2, or 3) on the scale (Table 5.1.).

When the association between sex and self-rated happiness was examined, it was found that there was no significant relationship between them in either area, although girls rated their happiness slightly lower than boys.

1.2. General perception of improvement of health

General perception of improvement of health was measured through a simple question: What are the most important things you could do to improve your health? Several answers could be recorded which were classified into four general categories referring to: diet, exercise, fun and relaxation, and no smoking/drinking/drugs (see Box 1 for more details).

Table 5.2. refers to data on the most important things respondents said they could do to improve their health.

Box 5.1. Most important things to do to improve health - details

Diet	eat healthily, balanced diet, change diet, eat healthy foods, eat more healthily, watch what to eat, better diet, eat less sweets, go on to diet, eat right food, cut down on food intake, eat more fruits, drink more water , more vitamins, and take iron tablets regularly
Exercise	more exercise, exercise regularly, try to keep fit, fitness, and play sports
Fun , Relaxation, Sleeping	go out, go on holiday, go out with friends, go to the country , relax, not to worry, forget about exams, sleep more, catch up with sleep, and get more sleep
No Smoking / Drinking / Drugs	not smoking, stop smoking, stay stop smoking , stop drinking, don't take alcohol, don't drink, no drugs, and stop using drugs
Other	be healthy, keep clean, keep healthy, regular check up (doctor), do something for problem to solve, stick to medication, and take medicine

A positive finding was that the vast majority (around three-quarters) of both sexes in each area thought that 'exercise', and 'diet' were most important. By contrast, the proportion of young people who mentioned 'fun, and relaxation', and 'no smoking, drinking, and drugs' was surprisingly low, although, interestingly the latter was more often mentioned by girls (31%) compared to boys (16%).

When the association between area of residence and young people's views was examined, it was found that respondents living in the NW were more likely to rate 'fun, and relaxation' as a positive way to improve health than their counterparts in the SW (31.7% versus 7.0%). With respect to 'no smoking/ drinking/ drugs', the

opposite was the case, higher rates being found in the SW compared with the NW (37.2% versus 16.8%).

Table 5.2. Improvement of health

	Gender		p	Area of Residence		p
	%			%		
	(n)			(n)		
	Male	Female		NW	SW	
Diet	72.9 (86)	80.6 (104)	0.14	78.3 (126)	74.4 (64)	0.49
Exercise	83.9 (99)	80.6 (104)	0.51	81.4 (131)	83.7 (72)	0.64
Fun , Relaxation	22.0 (26)	24.0 (31)	0.71	31.7 (51)	7.0 (6)	< 0.001
No Smoking / Drinking / Drugs	16.2 (19)	31.0 (40)	< 0.01	16.8 (27)	37.2 (32)	< 0.001

1.3. Concerns, and aspirations

1.3.1. Aspirations for next year: When pupils were asked what they would ideally like to be doing in one years' time and then what they thought they probably would be doing (Table 5.3.), it was found that in the NW respondents were more likely to say they would prefer to stay on at school (around three-quarters) than their counterparts in the SW (around a half). By contrast, in the SW higher proportions expressed a preference for a job or college compared to those in the NW.

Table 5.3. Aspirations for next year

	NW		SW		p
	% (n)	% (n)	% (n)	% (n)	
Stay on at school	L ■ 73.0 (124)	P ■■ 79.6 (125)	L 48.5 (48)	P 58.6 (51)	p< 0.001
Go to college	6.5 (11)	10.2 (16)	17.2 (17)	19.5 (17)	
Have job	20.6** (35)	10.2 (16)	34.3* (34)	21.8 (19)	

■ Like to do

■■ Probably to do

chi-square (like to do/probably to do) in each locality sig at * p< 0.05

** p< 0.01

As would be expected, a higher proportion of pupils from both areas said they would ideally have a job than was actually thought likely (in the NW, 20.6% compared to 10.2%, and in the SW 34.3% compared to 21.8%).

1.3.2. School ability: At this stage of life (the final year of compulsory education) school ability and achievement affects young people's chances for their future (career). In this respect, pupils were asked to rate themselves with regard to schoolwork compared to other pupils.

Perhaps not surprisingly, respondents in the NW were more likely to rate themselves as above average than their counterparts in the SW, though there is considerable variation within each area (Table 5.4.).

Table 5.4. School ability

	NW % (n)	SW % (n)	p
% Rating themselves as: *			< 0.01
Above average	44.6 (81)	27.8 (27)	
About average	52.7 (96)	62.9 (61)	
Below average	2.7 (5)	9.3 (9)	

* with regard to school work:

above average (as a lot above average or a bit above average)

about average

below average (as a bit below average or a lot below average)

When the association between type of school and self-rated ability was examined, it was found that pupils studying at a grant aided school were more likely to rate themselves as above average than their counterparts in non-denominational, and Roman Catholic schools (55.8% versus 33.7% and 25.7% respectively).

1.3.3. Careers guidance: Pupils were asked 'have they ever had any careers advice or guidance about jobs'.

The majority of respondents in both areas had received guidance about future jobs in school (around 90%) or by their family/friends (around 80%)(Table 5.5.). However, when also asked 'which they thought were the most useful sources' around three-quarters of them said the most useful source was their family rather than teachers/career officers (around a half), or other sources.

Table 5.5. Careers guidance

	NW % (n)	SW % (n)
% Receiving careers advice or guidance about jobs		
In school	91.2 (166)	87.0 (87)
Outside school	23.0 (40)	15.5 (15)
Family or friends	79.4 (143)	80.8 (80)
% Assessment of most useful source of careers guidance		
In school:		
teacher	56.4 (93)	53.7 (51)
career officer	40.6 (67)	44.2 (42)
other (career exhibition, library)	3.0 (5)	2.1 (2)
Outside school:		
family	73.0 (116)	75.6 (65)
friends	20.1 (32)	19.8 (17)
careers service/employment agency	7.0 (11)	4.7 (4)

1.3.4. Job: Pupils were also asked what kind of job they would eventually like to do. These were categorised into three general 'classes' under the O.P.C.S. classification of occupations (Classification of Occupations-1980).

A strong association was found between the kind of job respondents would like to do and their sociodemographic background though again there is wide variation within localities (Table 5.6.).

Table 5.6. Job classification by socio-demographic background

	Job classification (social class)			p
	I	II	III (M/NM)	
	% (n)			
Locality:				
NW	37.1 (53)	25.9 (37)	37.1 (53)	< 0.001
SW	8.6 (8)	33.3 (31)	58.1 (54)	
Gender:				
Male	33.9 (40)	23.7 (28)	42.4 (50)	0.01
Female	17.8 (21)	33.9 (40)	48.3 (57)	

Pupils who were living in the NW locality were more likely to aspire to higher status jobs than their counterparts in the SW. For example, among young people in the NW over a third (37.1%) aspired to social class I jobs compared to 1 in 12 (8.6%) in the SW, a more than fourfold difference.

Interestingly, girls in both areas were less likely to indicate they would like the kind of job classified as class (I) than males (17.8% versus 33.9).

2. Young people's opinions about area of residence

The Pupil's Survey also sought details of young people's attitudes to a range of issues relating to their localities which may have a bearing on health. The data are presented separately by area.

The data are organised into four sections:

1. Opinions about young people's health (overall) in the localities.
2. Opinions about the quality and importance of amenities, facilities, and services in the localities.
3. Opinions about young people's health promotion initiatives and health-related projects or activities in the localities.
4. Happiness with the local area.

2.1. Opinion about young people's health in the localities

Respondents were asked to rate different aspects of young people's health and health related issues in the localities. The results are presented in Table 5.7.

2.1.1. The overall health of young people: When asked to compare the health of young people in their area with the rest of the city, about a half (49.7%) of respondents in the NW locality compared to only an eighth (13.0%) of their counterparts in SW expressed the view that the overall health of young people in their area was better or much better than the rest of the city (Table 5.7).

2.1.2. The major health problems for young people: When pupils were asked 'In your opinion, which are the major health problems for young people in your area?' a considerable proportion in both areas rated alcohol problems (63.6% in the NW and 68.3% in SW), smoking (59.0% and 64.4%), and drug abuse (58.8% and 72.0%) as

of high importance, though only the latter was statistically significant between the localities.

Table 5.7. Opinion about young people's health in the localities

	NW % (n)	SW % (n)
% Rating of the 'overall health of young people in the locality compared to the rest of the city' as much better or better	49.7 *** (92)	13.0 (13)
% Assessing of high importance health problems for young people in the area		
Accidents	13.4 (23)	8.2 (8)
Smoking	59.0 (105)	64.4 (65)
Drug abuse	58.8 * (104)	72.0 (72)
Alcohol problem	63.6 (112)	68.3 (69)
Depression	11.1 (19)	15.3 (15)
Sexual transmitted diseases	20.1 (34)	21.2 (21)
% Rating of 'health care services in local area as compared to the rest of the city' as better		
GP	26.8 (49)	17.8 (18)
Dental health	33.3 ** (60)	17.8 (18)
Drug advice	11.0 (20)	18.8 (19)
Mental health	16.9 * (30)	7.9 (8)
chi-square (NW/SW) sig at * p<0.05 ** p<0.01 *** p<0.001		

Around one-fifth of pupils in both areas said that sexually transmitted diseases were a very important health problems for youth in their locality. In addition, only a minority of respondents in both areas thought that accidents (13.4% and 8.2%), and depression (11.1% and 15.3%) were important health problems.

2.1.3. The quality of health services: Young people were also asked their opinion about the quality of four health services - GPs, dental health, drug advice, and mental health services - in their locality compared to the rest of the city.

Rather similar percentages in the NW (26.8) and SW (17.8) indicated that GPs were better in their area of residence than the rest of the city, and only a minority of respondents in the NW (11%) and SW (18.8%) thought the same about drug advice services, although neither of the differences between the localities was significant.

In respect of dental health and mental health services, however, there were differences between the two localities. In the NW, one third (33.3%) of respondents expressed the view that dental health services were better in their locality than other areas compared with less than a fifth (17.8%) in the SW (Table 5.7.). Corresponding figures for mental health services were 16.9% (NW) and 7.9% (SW).

2.2. Opinion about the quality and importance of amenities, facilities, and services in the localities

The quality and importance of amenities, facilities, and services of relevance to young people in their locality are described in Table 5.8.. The percentages recording amenities as 'very good' or 'good' and 'very important' are presented.

Overall, there was a large measure of satisfaction with 'public transport' (70.7% NW, 57.4% SW), 'opportunities for further education/training' (62.8% and 47.5%), and 'health services' (on the whole) (58.5% and 60.4%) in both areas.

Less satisfaction was reported with amenities such as 'places for young people to live when leaving home' (9.8% NW, 3.0% SW), 'places for young people to meet' (12.0% and 8.9%), 'availability of jobs when leaving school' (10.4% and 5.0%), and 'availability of part-time jobs while still at school' (18.0% and 9.9%).

As expected, satisfaction with 'availability of jobs when leaving school' is very low but is regarded as very important in both areas (79.3% in the NW and 89.1% in SW).

With respect to young people's satisfaction with amenities, facilities, and services of relevance to them, there is little evidence that satisfaction is differentiated by type of area.

However, area differences in the percentage rating amenities as good or very good were observed in respect of 'sports facilities' (56.0% in the NW and just 13.9% in SW), 'public transport' (70.7% in the NW and 57.4% in SW), and 'places for young people to live when leaving home' (9.8% and 3.0%).

Interestingly, in the NW young people were more likely to rate 'sports facilities' as very important to them than those in the SW (57.5% versus 45.5%). Conversely, SW respondents rated 'places for young people to live when leaving home' as more important than their counterparts in the NW (70.3% versus 45.0%). No other differences between the areas with respect to the quality and importance of other amenities, facilities, and services were statistically significant.

Table 5.8. Quality and importance of amenities, facilities, and services in the localities

Amenities, facilities, and services		NW	SW
		%	%
		(n)	(n)
Places for young people to meet	v.good or good	12.0 (22)	8.9 (9)
	very important	58.9 (106)	49.5 (50)
Sports facilities	v.good or good	56.0 ** (103)	13.9 (14)
	very important	57.5 * (103)	45.5 (46)
Availability of part-time jobs while still at school	v.good or good	18.0 (33)	9.9 (10)
	very important	45.5 * (81)	58.4 (59)
Public transport	v.good or good	70.7 * (130)	57.4 (58)
	very important	52.5 (94)	52.5 (53)
Availability of jobs when leaving school	v.good or good	10.4 (19)	5.0 (5)
	very important	79.3 (142)	89.1 (90)
Opportunities for further education/training	v.good or good	62.8 (115)	47.5 (48)
	very important	73.7 (132)	65.3 (66)
Places for young people to live when leaving home	v.good or good	9.8 * (18)	3.0 (3)
	very important	45.0 ** (81)	70.3 (71)
Help / advice for young people	v.good or good	22.0 (40)	22.8 (23)
	very important	55.8 (101)	66.3 (67)
Health services (clinics. doctors etc.)	v.good or good	58.5 (107)	60.4 (61)
	very important	69.4 (125)	78.2 (79)
Entertainment facilities	v.good or good	23.0 (42)	13.9 (14)
	very important	52.5 (94)	44.6 (45)

chi-square (NW/SW) Sig at * p<0.05 ** p<0.001

2.3. Young people's health promotion initiatives and health-related projects or activities in the localities

Pupils were also asked about their awareness of any young people's health promotion initiatives or health-related projects in their area of residence. Around one in ten young people in both areas (10.9% in the NW and 8.9% in SW) were aware of initiatives, projects, or activities (Table 5.9).

Table 5.9. Young people's health promotion initiatives and health related projects or activities in the localities

	NW % (n)	SW % (n)
Awareness about initiatives / projects / activities	10.9 (20)	8.9 (9)
Kind of initiatives / projects / activities : *		
Youth Centre / Sports Centre	73.6 (14)	66.7 (6)
Boys / Girls Brigade, Boy Scouts / Girl guides	0.0 (0)	11.1 (1)
Other Club / Society	26.4 (5)	22.2 (2)
Participation in initiatives / projects / activities	48.0 (8)	66.7 (6)
Awareness about Glasgow Healthy City Project	5.4 (10)	1.0 (1)

* % based on those with knowledge

Among those who knew of something, some two thirds (74% NW, 67% SW) identified it as youth or sports centre based and between a half (48% NW) and two thirds (66.7% SW) had actually participated in those activities.

Awareness of the Glasgow Healthy City Project among pupils was extremely low; just 5.4% in the NW and 1.0% in SW saying they knew of it , teachers being the main source of information.

2.4. Happiness with the local area

Table 5.10. shows respondents' happiness with the local area as a place in which to live. In the SW area, young people were less likely to be happy with their local area compared to their counterparts in the NW locality (50.6% versus 65.4%).

Table 5.10. Happiness with the local area

	NW % (n)	SW % (n)	p value
very / quite happy	65.4 (121)	50.6 (51)	0.02
neither happy nor unhappy	21.6 (40)	24.7 (25)	
very / quite unhappy	12.9 (24)	24.7 (25)	

3. Summary

Some of the above results are in keeping with findings which are well known from several studies of adolescents, and some are new. The main findings can be summarised as follows:

■ In the NW about 15% and in the SW 19% of 15 year olds reported a longstanding illness, disability or infirmity that had troubled them over a long period

of time, and around one in twenty in the NW and one in ten in the SW reported this as limiting their activities.

▣ In both areas, around one-fifth reported one or more current health problems (longstanding or symptoms of acute illness).

■ In the NW around one in fifteen and in the SW one in ten of mid adolescents in both sexes were identified as overweight.

▣ Young people in the SW were more likely to perceive themselves as vulnerable to getting ill than their counterparts in the NW.

■ In both areas, around a half of 15 year olds regarded their health as 'good'.

▣ Around quarter of boys and a half of girls exhibit symptoms of psychological morbidity.

■ In both areas around 80% of young people can be judged happy with life in general.

▣ Around three-quarters of both sexes in each area thought that 'exercise' and 'diet' were the most important things they could do to improve their health. Girls were more likely than boys to rate 'no smoking/ drinking/ drugs' as important compared to boys. Young people living in the NW were more likely to rate 'fun, and relaxation' as an improvement to health than their counterparts in the SW. With respect to 'no smoking/ drinking/ drugs', the opposite was the case.

■ In the NW, young people were more likely to prefer to stay on at school than their counterparts in the SW. By contrast, in the SW a higher proportion said they would prefer to have a job or go to college compared to those in the NW. A large

proportion of young people from both areas said they would prefer to have a job than was actually thought likely.

▣ With regard to schoolwork compared to other classmates, pupils living in the NW were more likely to rate themselves as above average than their counterparts in the SW.

■ The majority of young people in both areas had received guidance about jobs in school or by their family/ friends. Around three-quarters of them said the most useful source of careers advice was their family rather than teachers/ career officers or other sources.

▣ Young people living in the NW were more likely to aspire to higher status jobs than their counterparts in the SW. Girls were less likely to indicate they would like the kind of job classified as class (I) than boys.

■ About a half of the adolescents in the NW locality and around an eighth of their counterparts in the SW expressed the view that the overall health of young people in their area was better or much better than the rest of the city.

▣ In both areas, a considerable proportion of adolescents rated 'alcohol', 'smoking', and 'drug abuse' as very important health problems for young people in the locality.

■ Around a quarter of young people in the NW locality and less than a fifth of their counterparts in the SW indicated that 'GPs' were better in their area of residence than rest of the city, one-third (NW) and less than a fifth (SW) in the case of 'dental health services', 11% (NW) and 19% (SW) according to 'drug advice

services', and 17% (NW) and 8% (SW) in the case of 'mental health services' thought the same.

☒ In the NW young people were more likely to be satisfied with 'sports facilities' and to rate it as very important to them than those in SW.

■ Around one in ten young people in both areas were aware of youth health promotion initiatives, projects, or activities in their area of residence.

☒ In the NW locality, young people were more likely to be happy with their area of residence than their counterparts in the SW.

Considering the overall picture, it is apparent that the proportion of 'healthy' adolescents is lower than is typically assumed. In general, while young people of this age appear 'happy', this does not mean that they are 'healthy' as well. It is also the case that on several different health measures, there is little or no differences between the areas. Despite relatively large differences between the better-than-average and worse-than-average areas according to the perception of young people about services and facilities, it is apparent that young people's opinion about the major health problems in both areas were very similar.

There was also a large measure of satisfaction with 'public transport', 'opportunities for further education/ training', and 'health services on the whole' in both areas. Less satisfaction was reported with availability of amenities such as 'places for young people to live when leaving home/ to meet', 'jobs when leaving school', and 'part-time jobs while still at school'.

CHAPTER SIX

**COMPARING THE ADOLESCENTS' HEALTH STUDY FINDINGS WITH
THE TWENTY-07 STUDY FINDINGS**

- 1. General indicators of health**
- 2. Health knowledge**
- 3. School life**
- 4. Life events**
- 5. Concerns, and aspirations**
- 6. Quality of amenities or facilities**

For the purpose of assessing change in health status among 15 years olds in Glasgow between 1987 and 1995, the results from the Twenty-07 Study are compared with those from the present study within each of the two localities (the NW and SW of Glasgow). The data are presented in percentage form for each subgroup. To examine the pattern of changes that occurred over the nine years, differences between the two surveys (within each locality) were tested for statistical significance, using the chi square statistic.

The data are organised into six sections:

1. General indicators of health
2. Health Knowledge

3. School Life
4. Life Events
5. Concerns, and Aspirations
6. Quality of amenities or facilities

It should be remembered that because the Adolescents' Health Study (1995) was school based, pupils who were living outside the boundaries of the north-west and south-west localities were excluded. The comparisons are based on identical postcode sectors to the Twenty-07 Study (1987).

1. General indicators of health

Table 6.1. refers to the health status of respondents in the two surveys.

1.1. Longstanding illness

The findings show that the rate of longstanding illness among 15 year olds has declined between 1987 and 1995 in both areas; from 25.1% to 15.1% in the NW and 24.8% to 18.8% in the SW locality. In respect of the NW locality, but not the SW, the difference is statistically significant. Table 6.1. also shows that the rate of limiting longstanding illness in the NW has declined (from 10.2% in 1987 to 5.4% in 1995) though the difference was not statistically significant.

1.2. Perceived vulnerability to getting ill

When pupils were asked to determine their vulnerability to getting ill compared to others, in the SW an improvement was observed with a quarter (24.8%) stating they were 'less likely' to get ill compared with 37.6% of their counterparts in 1987.

Table 6.1. General indicators of health (1987-1995)

	NW		SW	
	%	(n)	%	(n)
	1987	1995	1987	1995
% Reporting long-standing illness	25.1 (59)	15.1* (28)	24.8 (80)	18.8 (19)
% Reporting limiting long-standing illness	10.2 (24)	5.4 (10)	9.9 (32)	10.9 (11)
% Reporting perceived vulnerability to getting ill as 'less likely'	28.4 (65)	30.3 (56)	37.6 (109)	24.8* (25)
% Reporting health as 'good' in the last year	60.0 (141)	55.4 (102)	50.6 (163)	49.5 (50)
Overweight (BMI males \geq 25.1 , females \geq 23.9)	M 4.1 (5)	6.3 (6)	7.7 (11)	10.5 (4)
	F 13.1 (14)	7.1 (5)	16.4 (25)	10.4 (5)
Psychological well-being or malaise				
GHQ caseness-12 (Cut-off point of \geq 3)	M 15.7 (19)	22.6 (24)	7.8 (11)	23.8 ** (10)
	F 19.8 (21)	50.0 *** (39)	21.5 (32)	54.2 *** (32)

chi-square (1995/1987) sig at * $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$

1.3. Self-rated health

In respect of self rated health, the overall picture is one of similarity over time in both areas among mid adolescents.

1.4. Overweight

The percentage 'overweight' as measured by BMI for males in both localities has increased between the two studies (4.1% to 6.3% in the NW, and 7.7% to 10.5 in the SW). The opposite trend is seen among females (13.1 to 7.1 in the NW, and 16.4 to 10.4 in the SW), though none of the differences were statistically significant.

It is important to remember that the height and weight measurements (from which the BMI was obtained) used in the present study were self reported. A number of studies (Steward 1982, Palta et al. 1982, Nieto-Garcia et al. 1990, and Gutierrez-Fisac et al. 1995) have obtained results that show an acceptable degree of validity and reliability in self reported weight and height, although there is some overestimation of height particularly among males, and underestimation of weight particularly among females, with a consequent underestimation of BMI.

1.5. Psychological well-being or malaise

As can be seen, the level of psychological distress of mid adolescents, as measured by the GHQ, has increased over this period in both localities.

Rates of GHQ caseness (cut-off 3) among 15 year old males in the NW (22.6%) and SW (23.8%) localities in 1995 were 1.5 and 3 times higher than the 1987 rates

(15.7% and 7.8%) while among females the rates in the NW (50.0%) and SW (54.2%) were 2.5 times those found in 1987 (19.8% and 21.5%). This remarkable increase in levels of psychological distress in the nine year period is statistically significant for girls in both areas, and for boys in the SW area.

2. Health knowledge

2.1. Health education in school

Table 6.2. presents changes which have occurred between 1987 and 1995 in the proportion of 15 year olds who reported having lessons covering specific health education topics in school.

Dramatic changes in young people's health education at school appear to have taken place particularly in topics such as smoking, drugs, and sexually transmitted diseases (STD) in both areas, alcohol in the SW, and contraception in the NW.

Table 6.2. shows that adolescents were much more likely to receive health education in these topics in 1995 than nine years previously. Health education covering personal hygiene and exercise, by contrast, shows no statistically significant changes over this period in both areas while the proportion of young people receiving health education on diet appeared to decline in the NW over this period (46.0% versus 33.9%). There is no corresponding statistically significant change in the SW (53.4% and 54.5% in 1987 and 1995 respectively).

Table 6.2. Health education in school

	NW		SW	
	% (n)	% (n)	% (n)	% (n)
	1987	1995	1987	1995
% Receiving health education on particular topics in school				
Smoking	66.4 (156)	83.1 *** (154)	50.0 (161)	69.7 *** (70)
Alcohol	70.2 (165)	79.7 * (147)	42.5 (137)	73.7 *** (74)
Diet	46.0 (108)	33.9 * (63)	53.4 (172)	54.5 (55)
Personal Hygiene	66.4 (156)	62.4 (115)	75.2 (242)	77.8 (79)
Contraception	33.2 (78)	77.0 *** (142)	34.8 (112)	48.5 * (49)
Drugs	73.2 (172)	85.6 ** (158)	51.2 (165)	89.9 *** (91)
Child Care	11.1 (26)	9.2 (17)	18.6 (60)	8.2 * (8)
STD	24.3 (57)	73.5 *** (136)	25.8 (83)	49.5 *** (50)
Exercise	66.4 (156)	58.9 (109)	79.2 (255)	83.8 (85)

chi-square (1995/1987) sig at *p< 0.05 ** p< 0.01 *** p< 0.001

2.2. Perceived most important influences on health

Respondents were also asked to rank six items reflecting influences on people's health (Table 6.3.).

Looking after self: In the NW, the importance ascribed to looking after self (e.g. taking vitamins, keeping warm, getting enough sleep) as an influence on health has

declined among young people: in 1987, 44.7% regarded it as the most important influence compared to 32.2% in 1995. In the SW, there was no change.

Table 6.3. Perceived most important influences on people's health

	NW		SW	
	% (n)	% (n)	% (n)	% (n)
% Assessing of most influence on health	1987	1995	1987	1995
Looking after self	44.7 (105)	32.2 * (57)	37.1 (119)	38.5 (37)
Habits	26.4 (62)	42.9 *** (76)	18.1 (58)	46.9 *** (45)
Health Services	9.8 (23)	18.1 * (32)	18.1 (58)	28.1 * (27)
Constitution	9.4 (22)	15.8 * (28)	12.8 (41)	10.4 (10)
Environment	9.4 (22)	18.6 ** (33)	12.1 (39)	22.9 ** (22)
Luck	0.4 (1)	5.1 ** (9)	1.9 (6)	8.3 ** (8)

chi-square (1995/1987) sig at *p< 0.05 ** p< 0.01 *** p< 0.001

Personal habits: The importance ascribed to personal habits (e.g. smoking, drinking) as an influence on health has dramatically increased among young people in both areas: in 1995, 42.9% in the NW and 46.9% in the SW regarded it as the most important influence compared to 26.4% and 18.1% in 1987.

Health services: The importance of health services as an influence on health also increased with 18.1% (NW) and 28.1% (SW) regarding it as most important in 1995 compared to 9.8% and 18.1% in 1987.

Constitution: There were also statistically significant changes over the period among adolescents in the NW involving the importance of the constitution people are born with for health: in 1995, 15.8% regarded it as the most important influence compared to 9.4% in 1987.

Environment: The importance ascribed to environment as an influence on health has also increased in both areas. In 1995, 18.6% in the NW and 22.9% in the SW regarded it as the most important influence, about 2 times greater than the rates found in 1987 (9.4% and 12.1%).

Luck: Luck, too, appeared to increase as a perceived influence over this period: in 1995, 5.1% in the NW and 8.3% in the SW regarded it as the most important influence compared to less than 1% and 1.9% in 1987.

It is important in assessing these changes to note that in general most of the perceived influences on health have attracted more support in the years between 1987-95. This is at least in part due to different methodologies used in the two studies: in the Adolescents' Health study the instrument used was a self-completion

questionnaire and equal ranking were allowed, the combined effect of which is to promote more 'first choices' than in the earlier interview based Twenty-07 study.

3. School life

With regard to perceptions of school usefulness, pupils were asked the extent to which they thought school had been useful for different aspects of their life. The results are presented in Table 6.4..

Table 6.4. School usefulness

	NW		SW	
	% (n)	% (n)	% (n)	% (n)
% Rating of school usefulness as 'very or quite useful'	1987	1995	1987	1995
Job / Career	79.8 (186)	85.8 (157)	74.9 (239)	84.2 (85)
Job Applications	60.9 (143)	80.0 *** (148)	60.1 (193)	76.0 ** (76)
Youth Training Scheme Information	52.3 (123)	49.7 (91)	49.1 (157)	65.0 ** (65)
Adult Life	45.5 (107)	62.5 *** (115)	44.1 (142)	63.6 *** (63)
Behaviour	76.6 (180)	67.9 * (125)	76.4 (246)	74.0 (74)
Money Management	26.4 (62)	35.5 * (65)	36.4 (117)	50.0 * (50)
Parenthood	12.3 (29)	27.9 *** (51)	21.7 (70)	25.0 (25)
Health	57.9 (136)	64.5 (118)	66.5 (214)	79.2 * (80)

chi-square (1995/1987) sig at * p< 0.05 ** p< 0.01 *** p< 0.001

Table 6.4. attests to the fact that young people in both areas were more positive about the usefulness of school in 1995 compared with 1987, particularly in respect of coping with adult life, how to apply for a job, and how to manage money. In addition, this is seen in the NW with respect to becoming a parent, and in the SW providing information about YTS, and how to look after health.

In only one area was there evidence of a reverse trend, and this only in the NW, where the perceived usefulness of school on how to behave had declined. No statistically significant differences are observed over the period in the usefulness of school for doing the job/career young people want to do.

In the 1995 survey, other additional comments were encouraged with 3.1% of respondents mentioning things such as increasing confidence, communication with others, and becoming more independent as very or quite useful.

4. Life events

Table 6.5. presents data on life events, showing the proportion of young people who experienced one or more of 30 events in 1987 and 1995.

In many respects there were few differences in the source and nature of life events experienced by young people or either of their parents.

However, as can be seen, in both areas in 1995 about one fifth (20% in the NW and 20.8% in SW) of respondents reported having been attacked or hurt by someone.

Nine years earlier, the picture was totally different with 7.4% in the NW and 8.2% in the SW experiencing such an event.

Table 6.5. Life events

	NW %		SW %	
	1987	1995	1987	1995
% Reporting have experienced the following life events in the past 12 months				
Moved to a new house	0.9	7.0 ***	3.4	14.9 ***
Got a new sibling	1.3	2.2	4.8	3.0
Serious illness in family	11.4	14.6	16.0	15.8
Parent got a new job	19.7	21.1	16.9	19.8
Serious row between parents	11.8	16.8	19.2	22.8
Serious trouble at school	12.1	9.2	10.7	5.9
New step parent	0.9	2.2	2.4	2.0
Serious illness to close friend	6.6	18.9 ***	14.7	22.8
Failed to get into sports team	8.8	5.9	6.1	4.0
Sibling left home	13.2	9.2	19.9	18.8
poor school report	20.2	20.5	14.4	23.8 *
Close friend moved far away	11.0	15.7	11.0	8.9
Death of parent / sibling	0.9	2.2	2.0	2.0
Praised for good schoolwork	53.4	57.8	41.7	43.6
Trouble with the police	10.0	15.7	10.3	8.9
New girlfriend/boyfriend	45.9	44.3	45.9	51.5
Joined a new club	31.0	35.7	27.6	20.8
Lost part or spare time job	8.4	6.5	6.2	8.9
Accident happened to you	4.0	5.9	2.7	5.9
Suspended from school	2.6	7.6	8.6	5.9
Got into a sport team	31.3	32.4	23.4	14.9
Parents decided to separate	2.6	1.6	4.8	3.0
Serious row with sibling	16.7	29.7 **	23.5	26.7
Broke up with girlfriend/boyfriend	26.8	24.9	34.4	38.6
Death of a close friend	5.3	5.4	8.0	12.9
Got a spare or part time job	30.6	34.1	39.1	32.7
Made it up with girlfriend/boyfriend	11.6	11.4	15.6	7.9
Attacked or hurt by someone	7.4	20.0 ***	8.2	20.8 ***
Parent lost a job	8.3	7.0	11.3	8.9
Changed to a new school	3.1	3.2	4.1	5.9

chi-square (1995/1987) sig at *p< 0.05 ** p<0.01 *** p<0.001

The findings show that the experience of moving to a new house over the past twelve months had also increased over this period in both localities (7.0% (NW) and 14.9% (SW) in 1995 compared to 0.9% and 3.4% in 1987).

Other minor differences were that in 1995 among young people in the NW the experience of serious illness in close friends and a serious row with siblings had increased compared with 1987, among those in the SW the experience of a poor school report had also increased compared with 1987.

There were no statistically significant differences observed between 1987 and 1995 in any other items in either area.

5. Concerns and Aspirations

Four measures of concerns and aspirations regarding young people's plans for the future are shown in Tables 6.6. and 6.7..

5.1. Aspirations for next year

Surprisingly, there were relatively few changes in aspirations in either area between 1987 and 1995 (Table 6.6.). However, among the fifteen year olds in the SW in 1995, 16.8% said they would like to leave school and go to college, a fivefold increase compared to their counterparts nine years earlier in the same area, a change accompanied by the decline in the proportion of participants who wanted a job immediately after leaving school. Interestingly, in the present survey none of the

respondents in either area said they would like go on YT, an almost identical result to their counterparts nine years earlier (in the NW just 0.9% and in SW 1.6%).

Table 6.6. Concerns and Aspirations

	NW		SW	
	% (n)	% (n)	% (n)	% (n)
	1987	1995	1987	1995
Aspirations for next year (like to do)				
Stay on at school	73.6 (173)	67.0 (124)	46.1 (148)	47.5 (48)
Go to college	3.8 (9)	5.9 (11)	3.4 (11)	16.8 *** (17)
Go on Youth Training	0.9 (2)	0.0 (0)	1.6 (5)	0.0 (0)
Have job	20.4 (48)	18.9 (35)	45.8 (147)	33.7 * (34)
Other (depends on exams, don't know)	1.3 (3)	8.2 *** (15)	3.1 (10)	2.0 (2)
Careers guidance about jobs				
In school	75.3 (177)	91.2 *** (166)	45.2 (146)	87.0 *** (87)
Outside school	18.7 (44)	23.0 (40)	17.0 (55)	15.5 (15)
Family or friends	64.7 (152)	79.4 ** (143)	48.4 (156)	80.8 *** (80)
Ideal age to leave home ■				
15-19	43.0 (101)	33.7 (61)	43.4 (139)	28.7 (29)
20-24	46.4 (109)	21.5 (39)	38.4 (123)	19.8 (20)
25 or more	5.1 (12)	2.8 (5)	7.2 (23)	2.0 (2)
No best age	3.4 (8)	42.0 (76)	7.2 (23)	49.5 (50)
chi-square (1995/1987) sig at				
*p< 0.05 ** p< 0.01 *** p< 0.001				
■ chi-square (diff 1987/1995)				
NW: 96.44 df=3 p< 0.001				
SW : 92.86 df=3 p< 0.001				

5.2. Careers guidance about jobs

When participants were asked 'have they ever had any careers advice or guidance about jobs' the overall picture shows an increase in use in both areas, but particularly in the SW (Table 6.6.). In 1995, young people were more likely to have careers guidance in school (91.2% in the NW and 87.0% in SW), and advice from family or friends (79.4% in the NW and 80.8% in SW) than those in the Twenty-07 Study in 1987 (75.3% and 45.2% in school, and 64.7% and 48.4% by family or friends).

5.3. Ideal age to leave home

In respect of this important issue, there was a remarkable change between 1987 and 1995 which reflects a greater perceived likelihood of staying in the parental home among adolescents in both areas. Among the 15 year olds surveyed in 1995, 42.0% in the NW and 49.5% in SW stated there was no 'best age' to leave home (Table 6.6.). Nine years earlier, hardly any of the Twenty-07 participants had answered in this way, the majority expressing much greater certainty about leaving the parental home and establishing the independence of adulthood (just 3.4% in the NW and 7.2% in SW localities).

5.4. Plans for further or higher education

In 1995, mid adolescents were more likely to be flexible or undecided about their plans for further or higher education (30.8% in the NW and 43.5% in SW stated that their plans depended on exams, or they did not know). Nine years earlier, hardly any

of the Twenty-07 participants had answered in this way (4.7% in the NW and 5.3% in SW) (Table 6.7.).

Table 6.7. Concerns and Aspirations - Further or Higher education

	NW		SW	
	% (n)	% (n)	% (n)	% (n)
	1987	1995	1987	1995
Plans for further or higher education ■				
Yes	68.0 (157)	62.2 (115)	39.7 (126)	41.6 (42)
No	29.0 (67)	7.0 (13)	55.5 (176)	14.9 (15)
Depends on exams	3.0 (7)	18.9 (35)	4.7 (15)	27.7 (28)
Don't know	1.7 (4)	11.9 (22)	0.6 (2)	15.8 (16)
Type of further or higher education aspiration				
University / Polytechnic	53.6 (81)	55.6 (80)	33.3 (43)	7.7 *** (5)
Teachers Training College	0.6 (1)	0.7 (1)	2.3 (3)	3.1 (2)
Technical College	14.6 (22)	10.4 (15)	24.0 (31)	10.8 * (7)
College of Commerce	4.6 (7)	2.8 (4)	8.5 (11)	10.8 (7)
Secretarial College	3.3 (5)	5.5 (8)	6.2 (8)	7.7 (5)
College of Art, Music or Drama	7.3 (11)	6.2 (9)	6.2 (8)	18.5 ** (12)
Nursing College	1.3 (2)	6.2 * (9)	3.9 (5)	18.5 *** (12)
Physical Education College	1.3 (2)	7.6 ** (11)	0.8 (1)	9.2 ** (6)
Other	13.2 (20)	4.9 (7)	14.0 (18)	13.8 (9)

chi-square (1995/1987) sig at *p< 0.05 ** p< 0.01 *** p< 0.001
 ■ chi-square (diff 1987/1995) NW: 69.09 df=3 P<0.001
 SW: 108.65 df=3 p<0.001

5.5. Type of further or higher education aspiration

In the 1995 survey, among the young people who had decided to go to further or higher education, nursing and physical education became more popular in both areas compared to their counterparts nine years earlier (Table 6.7.). The rates in the NW (6.2% nursing and 7.6% physical education) and SW (18.5% and 9.2%) localities in 1995 were much higher than in 1987 (1.3% and 1.3%)(3.9% and 0.8%).

In 1995 in the SW locality, the proportion of participants aspiring to university/polytechnic (and technical college) had dramatically declined since 1987. The figures of 7.7% (university/polytechnic) and 10.8% (technical college) were a quarter and a half that of the 1987 rates respectively (33.3% and 24.0%).

Another change occurring only among young people in the SW locality was the proportion wanting to go to a college of art, music or drama, an option which increased from 6.2% in 1987 to 18.6 nine years later.

6. Satisfaction with amenities, facilities, and services relevance to young people in the local area

Table 6.8. shows the proportions of young people whose satisfaction with amenities, facilities, and services was very good or good in the NW and SW areas.

The results show an increase in both localities in the level of young people's satisfaction with 'opportunities for further education/training' and 'health services'.

The proportions rating 'opportunities for further education/training' as very

good/good in the NW (62.8%) and SW (47.5%) in 1995 were two times higher than in 1987 in both areas (31.9% and 25.2%). The percentage rating 'health services' as very good/good in the NW (58.5%) and SW (60.4%) in 1995 were 1.4 times higher than in 1987 in either area (39.6% and 45.7%).

Table 6.8. Quality of amenities, facilities, and services for young people in the localities - % rating as very good or good

Amenities/ Facilities/ Services	NW		SW	
	% (n)	% (n)	% (n)	% (n)
	1987	1995	1987	1995
Places for young people to meet	8.5 (20)	12.0 (22)	9.6 (31)	8.9 (9)
Sports facilities	22.5 (53)	56.0 *** (103)	27.1 (87)	13.9 ** (14)
Availability of part-time jobs while still at school	19.1 (45)	18.0 (33)	10.2 (33)	9.9 (10)
Public transport	75.2 (176)	70.6 (130)	76.3 (245)	57.4 *** (58)
Availability of jobs when leaving school	5.9 (14)	10.4 (19)	4.1 (13)	5.0 (5)
Opportunities for further education / training	31.9 (75)	62.8 *** (115)	25.2 (81)	47.5 *** (48)
Places for young people to live when leaving home	14.9 (35)	9.8 (18)	6.9 (22)	3.0 (3)
Help / advice for young people	6.9 (16)	22.0 *** (40)	17.4 (56)	22.8 (23)
Health services (clinics. doctors etc.)	39.6 (93)	58.5 *** (107)	45.7 (146)	60.4 * (61)
Entertainment facilities	11.5 (27)	23.0 ** (42)	8.1 (26)	13.9 (14)

chi-square (1995/1987) sig at *p< 0.05 ** p< 0.01 *** p< 0.001

It is also apparent that among respondents in the NW satisfaction with other amenities has increased, a pattern not observed in the SW. Thus, satisfaction with 'sports facilities' dramatically increased from 22.5% in 1987 to 56.0% in 1995 (2.5 times) in the NW while it actually declined among young people in the SW. Similarly, in the NW satisfaction with 'entertainment facilities' (23.0%) and 'help/advice for young people' (22.0%) also increased and were two and three times higher in 1995 than nine years earlier (11.5% and 6.9%). In addition, young people in the SW in 1995 were less likely to be satisfied with 'public transport' (57.4%) than their counterparts in 1987 (76.3%).

7. Summary

- ❏ In the NW the rate of longstanding illness among 15 year olds has declined between 1987 and 1995.
- In the SW young people were more likely to assess their vulnerability to illness as 'less likely' in 1995 than their counterparts in 1987, i.e. an improvement.
- ❏ In respect of self-rated health, the overall picture is one of similarity over time in both areas among mid adolescents.
- The level of psychological distress of young people has increased remarkably over this period in both localities, particularly among young females.
- ❏ Major changes in young people's health education at school appear to have taken place particularly in topics such as smoking, drugs, and STD.

■ In 1995, young people were more likely to regard 'personal habits', 'health services', 'environment', and 'luck' as the most important influence on health than their counterparts nine years earlier.

▣ Between 1987 and 1995 pupils became more positive about the usefulness of school, particularly in respect of coping with adult life, how to apply for a job, and how to manage money.

■ In 1995, about one fifth of mid adolescents reported having been attacked or hurt by someone. Nine years earlier, the picture was totally different with around one twelfth experiencing such an event. The experience of moving to a new house had also increased over this period .

▣ Among the 15 year olds in the SW in 1995, about one sixth said they would like to leave school and go to college, a fivefold increase compared to their counterparts nine years earlier in the same area, a change accompanied by the decline in proportion of those who wanted a job.

■ In 1995, young people were more likely to have careers guidance in school and advice from family or friends than those in the Twenty-07 study in 1987.

▣ There was a remarkable increase in the perceived likelihood of staying in the parental home among adolescents in both areas.

■ In 1995, mid adolescents were more likely to be flexible or undecided about their plans for further or higher education.

▣ Among the young people who had decided to go to further or higher education, nursing and physical education became more popular in both areas in 1995 compared to their counterparts nine years earlier.

■ An increase in both localities in the level of young people's satisfaction with 'opportunities for further education/ training', and 'health services' was observed. In the NW, satisfaction with other facilities/ services such as 'sports facilities', 'entertainment facilities', and 'help/ advice for young people' has increased, a pattern not observed in the SW. Young people in the SW in 1995 were less likely to be satisfied with 'sports facilities', and 'public transport' than their counterpart in 1987.

In general, the level of young people's psychological well-being has declined remarkably, particularly among young females. In 1995 young people were also more likely to be living in a violent environment compared to previous generations. Staying in the parental home rather than leaving had almost become the norm. The last decade also witnessed a dramatic increase in young people's health education at school, a change particularly emphasising the importance of individual's lifestyle for health. There is evidence overall that they have become more individualistic.

CHAPTER SEVEN

RESULTS OF PROFESSIONALS' SURVEY, AND COMPARISONS OF THE VIEWS AND PERCEPTIONS OF ADOLESCENTS WITH THOSE OF PROFESSIONALS

Two groups of professionals (representing health care and education) were selected to investigate their views on young people's health related issues, from two different localities (socioeconomically advantaged and disadvantaged). An additional purpose was to explore whether their opinions differed from adolescents who were living in the identical areas.

1. Results of professionals' survey

The main part of this chapter presents the data obtained in the professionals' survey (1995) comparing the two localities.

The data are organised into six sections:

1. Assessment of vulnerable groups in health terms in the community.
2. Young people's health issues in the localities.
3. Quality and importance of amenities, facilities, and services for young people in the localities.

4. Young people's health promotion initiatives and health-related projects or activities in the localities.
5. Actions for improving young people's health in the localities.
6. Young people's participation.

1.1. Assessment of vulnerable groups in the community

Table 7.1. shows how professionals within each community ranked various groups in terms of their vulnerability to health problems.

Table 7.1. Vulnerable groups in health terms in the community

	NW % (n)	SW % (n)	p
% Ranking of 'client groups in the community in terms of their vulnerability to health problems' as high vulnerable			
Children	34.1 (15)	57.9 (22)	0.03
Adolescents	42.2 (19)	66.7 (26)	0.02
Elderly	78.3 (36)	68.4 (26)	0.30
Women	9.5 (4)	34.2 (13)	< 0.001
Men	4.8 (2)	13.5 (5)	0.16
Single parents	31.8 (14)	59.0 (23)	0.01
Disabled	59.1 (26)	54.1 (20)	0.64

Professionals' general perceptions of vulnerable groups were obtained through the question: - Which do you think are the vulnerable groups in health terms in the community as whole? It can be seen from this table that there are more differences between professionals according to the location of their work than there are similarities.

In the SW, professionals were more likely to rank adolescents, children, single parents, and women as highly vulnerable client groups in the community compared with their colleagues in the NW locality. In addition, there was a significant association between professionals' occupation and the ranking of vulnerable groups with health care professionals being more likely to rank 'adolescents' (70.8% vs. 46.7% at $p < 0.05$ level) and 'single parents' (66.7% vs. 35.6% at $p < 0.001$) as highly vulnerable than educational professionals.

Overall, other groups including the mentally ill, the homeless, and carers of chronically ill and of dementia sufferers were mentioned by only a minority (5.6%) of respondents as highly vulnerable.

1.2. Young people's health issues in the localities

This section describes the views of professionals' about young people's health issues.

1.2.1. The overall health of young people: When professionals were asked to rate the overall health status of young people in terms of health-compromising behaviours, accidents etc., in their locality compared to the rest of the city a remarkable difference between the areas was observed (Table 7.2.). Around a half

(49.%) of professionals in the NW locality expressed the view that the overall health of young people in their location was better or much better compared to the rest of the city. By contrast, in the SW only 5.1% expressed this view.

Table 7.2. Young people's health in the localities

	NW % (n)	SW % (n)	p
Overall health of young people in the locality compared to the rest of the city			< 0.001
Much better / better	49.0 (24)	5.1 (2)	
Similar	32.7 (16)	43.6 (17)	
Much worse / worse	18.3 (9)	51.3 (20)	
% Rating of 'Major health-related problems' as high importance			
Accidents	4.8 (2)	0.0 (0)	0.49
Smoking	43.8 (21)	48.7 (19)	0.64
Drug abuse	34.7 (17)	64.1 (25)	< 0.001
Alcohol problems	54.2 (26)	71.8 (28)	0.09
Depression	14.3 (6)	29.7 (11)	0.09
Sexual transmitted diseases	4.9 (2)	11.1 (4)	0.27
Accessibility to health services			0.09
Better	17.0 (8)	5.3 (2)	
Similar	74.5 (35)	84.2 (32)	
Worse	8.5 (4)	10.5 (4)	

1.2.2. The major health problems for young people: Professionals were also asked to indicate which of several health problems were of most importance for young people in their work localities (Table 7.2.).

The majority of professionals in both areas indicated that alcohol problems (54.2% in the NW and 71.8% in SW) were of highest importance. Smoking was also mentioned as highly important by almost half of professionals (43.8% in the NW and 48.7% in the SW). As can be seen, accidents (4.8% NW and 0% SW) and STD (4.9% NW, 11.1% SW) were regarded as of much lower importance in both localities while 14.3% in the NW and 29.7% in SW said that depression was important for young people in their locality. None of these differences, however, was statistically significant. By contrast, around one-third (34.7%) of professionals in the NW, and two-thirds (64.1%) of their counterparts in the SW stressed that drug abuse was a highly important health-related problem for youth in the area, a difference statistically significant at the 0.1% level. Since additional comments were invited, other health problems such as teenage pregnancies and assaults were mentioned by 7% of professionals.

1.2.3. Accessibility to health services: When professionals were asked their opinion about young people's accessibility to health services in the area compared to the rest of the city, rather few differences emerged. In the NW 17.0% and in SW 5.3% rated it 'better', though the majority (74.5% in the NW and 84.2% in SW) indicated that it

was similar (Table 7.2.). There were no statistically significant differences between the areas in this respect.

1.2.4. Socioeconomic status in the localities and young people's health: To ascertain professionals' views about the potential significance of a range of influences related to socioeconomic background on young people's health, they were asked to indicate which of several possible 'causes' had a negative influence on young people's health status in the localities (Table 7.3.).

Table 7.3. Young people's health and socio-economic issues in the localities

	NW % (n)	SW % (n)	p
% Rating of possible 'causes' with a negative influence on young people's health status in the locality' as high influence			
Poor socio-economic circumstances	69.6 (32)	76.3 (29)	0.48
Poor housing	53.3 (24)	62.5 (25)	0.39
Unemployment	61.7 (29)	87.5 (35)	< 0.001
Violence	29.8 (14)	52.5 (21)	0.03
Alcohol	53.2 (25)	70.0 (28)	0.10
Drugs	48.9 (23)	70.0 (28)	0.04
Smoking	52.2 (24)	55.0 (22)	0.79
Poor diet	39.1 (18)	52.5 (21)	0.21
Stress	25.0 (11)	41.0 (16)	0.11
Family breakdown	42.2 (19)	69.2 (27)	< 0.01
Poor schooling and education	14.0 (6)	12.8 (5)	0.88
Poor sports / entertainment facilities	9.3 (4)	35.9 (14)	< 0.001

In general, there were considerable differences between professionals in the two localities. Professionals in the SW were more likely to rate unemployment, drugs, family breakdown, violence, and poor sports/ entertainment facilities as having a negative influence on young people's health in the locality compared with their counterparts in the NW locality (Table 7.3.).

When the difference between health care and educational professionals' rating of influences on young people's health was examined, it was found that the former were more likely to rate 'stress' and 'poor schooling and education' as important than the latter.

A small minority (6%) mentioned other issues (poor pre-school facilities, tension in the family, non educated families, peer group pressure to 'conform', low self esteem and lack of confidence, and poor religious or moral guidance) as having an influence on young people's health.

1.3. Quality and importance of amenities, facilities, services for young people

Table 7.4. refers to the quality and importance of amenities, facilities, and services of relevance to young people in the localities.

Overall, the majority of professionals in both areas rated both the quality of 'public transport' and 'opportunities for further education/training' as very good or good compared to other services, though in each case the rating was significantly higher in the NW compared to SW.

Among the other services, professionals in both areas rated 'places for young people to meet', 'places for young people to live when leaving home', and 'availability of jobs when leaving school' as notably poor, the latter displaying a statistically significant area difference.

Table 7.4. Quality and importance of amenities, facilities, services for young people in the localities

Amenities / facilities / services	NW % (n)	SW % (n)	p
% Rating 'quality' as very good or good, and 'importance' as very important			
Places for young people to meet			
v.good or good	10.2 (5)	5.0 (2)	0.45
very important	69.4 (34)	75.0 (30)	0.56
Sports facilities			
v.good or good	57.1 (28)	10.0 (4)	< 0.001
very important	57.1 (28)	45.0 (18)	0.25
Availability of part-time jobs while still at school			
v.good or good	22.4 (11)	2.8 (1)	< 0.001
very important	12.2 (6)	12.5 (5)	1.00
Public transport			
v.good or good	77.6 (38)	51.3 (20)	< 0.001
very important	28.6 (14)	28.2 (11)	1.00
Availability of jobs when leaving school			
v.good or good	14.3 (7)	0.0 (0)	0.03
very important	91.8 (45)	90.0 (36)	1.00

Table 7.4. (continued)

Amenities / facilities / services	NW % (n)	SW % (n)	p
Opportunities for further education / training			
v.good or good	75.5 (37)	42.5 (17)	< 0.001
very important	81.6 (40)	65.0 (26)	0.07
Places for young people to live when leaving home			
v.good or good	4.3 (2)	2.6 (1)	1.00
very important	52.1 (25)	47.5 (19)	0.74
Help / advice for young people			
v.good or good	47.8 (22)	25.0 (9)	0.03
very important	66.0 (31)	55.0 (22)	0.43
Health services (clinics. doctors etc.)			
v.good or good	61.7 (29)	38.5 (15)	0.04
very important	59.6 (28)	52.5 (21)	0.66
Entertainment facilities			
v.good or good	27.1 (13)	2.6 (1)	< 0.001
very important	38.8 (19)	42.5 (17)	0.72

In respect of differences between professionals working in the two areas, there is evidence that in most respects the quality of amenities, facilities and services for young people is rated worse in the SW than NW. The only two services that show no statistically significant differences are 'places for young people to meet' and 'places for young people to live when leaving home', both of which are assessed as of particularly poor quality compared to other facilities in the localities.

The availability of jobs is regarded as of particular importance by professionals in both areas (91.8% in the NW and 90.0% in SW).

When differences between health care and educational professionals' were examined, it was found that in both areas education professionals were significantly more likely to rate 'public transport', 'opportunities for further education/training', and 'help/advice for young people' as good or very good than health care professionals (71.4% vs. 50.0% $p<0.05$, 73.0% vs. 30.8% $p<0.001$, and 44.4% vs. 11.5% $p<0.001$ respectively).

1.4. Young people's health promotion initiatives and health-related projects or activities in the localities

Table 7.5. refers to professionals' awareness about young people's health promotion initiatives and health-related projects or activities in the localities.

Professionals in the NW locality were more likely to be aware of youth-related initiatives than those in the SW (65.3% versus 45.0%). Very similar percentages in both localities referred to health education projects (87.5% in the NW and 94.4% in SW localities) (see box 2), while 65.6% in the NW and 61.1% in SW had participated in some projects.

The majority in both areas reported participating in the implementation and/or monitoring and/or evaluation of project's activities (52.4% and 47.6% in the NW, and 63.6% and 54.5% in SW localities respectively).

Table 7.5. Awareness about young people's health promotion initiatives in the localities

	NW % (n)	SW % (n)	p
% Reporting awareness of initiatives	65.3 (32)	45.0 * (18)	0.05
Kind of initiatives *			
Health Education	87.5 (28)	94.4 (17)	
Social Education	9.4 (3)	5.6 (1)	
Others	12.5 (4)	16.7 (3)	
% Reporting participation in initiatives	65.6 (21)	61.1 (11)	0.74
Role **			
In initiation of activities	28.6 (6)	45.5 (5)	
In planning of priority activities	33.3 (7)	27.3 (3)	
In implementation of project activities	52.4 (11)	63.6 (7)	
In monitoring and evaluation of projects activities	47.6 (10)	54.5 (6)	
Other (assisting, delivering, supporting, and resource person)	38.1 (8)	9.1 (1)	
Awareness of Glasgow Healthy City Project	42.9 (21)	60.0 (24)	0.11
* some respondents reported more than one initiative			
** some respondents reported more than one role			

Interestingly, education professionals were more likely to be aware of health promotion projects than health care professionals (63.5% vs. 38.5% at a $p < 0.03$ level).

42.9% of professionals in the NW and 60.0% of those in the SW were aware of the Glasgow Healthy City Project (Table 7.5.), with over twice as many health care professionals (88.5%) having an awareness compared with education professionals (34.9%)($p < 0.001$). When those who knew about the project were asked what it meant to them, 75.6% (34 out of 45) gave an answer. These were classified into 6 general categories consisting of projects stressing: improvements in the health of citizens (38%), reduction in inequality (9%), environment and housing (6%), prevention, screening (6%), changed lifestyles (35%), and others (6%).

Box 7.1. Kind of initiatives / projects - details

Health Education	<p>North-West Locality : Lifestyle Programme, Health Club, Teenage Drop-In, Anti-Smoking, Healthy Eating, Community Police "Drug Awareness Seminars", Drugs Education, Drugs Awareness Initiative, Immunisation Campaign, Police-Operation Eagle, Police Community Involvement Drugs Awareness Seminars, Health Education Classes, HIV initiative, Drugwise, Young Women Taking Drugs Seriously Seminar, Alcohol Education, Personal Hygiene, No Smoking Day, Sexual Health Input, Health Week & Health Day, First Aid, Non Alcoholic Drink, and Health and Safety at Work</p> <p>South-West Locality : Caring Health Advice Teenagers "CHAT" Centre, Drop in facility for health education in Health Centre, Support & Advice Group at Health Centre, Drug Project, Drugwise, Greater Pollok Regeneration Alliance Health Group, Drug Rehabilitation / Counselling, Local Health Board Policy for Young People, Promotion of Sexual Health, Healthy Diet Campaign, and Sex Education</p>
Social Education	Elements in schools' SE Course, PSE Lessons

1.5. Actions for improving young people's health in the localities

Table 7.6. refers to professionals' recommendations for actions that could be taken to improve health in the local area. In both areas, the majority of professionals believed that actions involving 'taking more personal interest and responsibility', and 'changing lifestyle' could lead to improvements in health.

Table 7.6. Actions for improving young people's health in the localities

	NW % (n)	SW % (n)	p
% Rating of 'kind of actions which local young people could do in order to improve their health' as high influence			
Set-up self-help groups	6.5 (3)	13.5 (5)	0.46
Seek more information and education on health	23.4 (11)	35.1 (13)	0.24
Change lifestyles	61.7 (29)	71.8 (28)	0.32
Take more personal interest and responsibility	65.3 (32)	76.9 (30)	0.23
Job creation schemes	27.7 (13)	48.6 (18)	0.04
Demand political action	28.3 (13)	28.2 (11)	0.99
Social change	40.4 (19)	51.4 (19)	0.32
Demand more resources	31.9 (15)	44.7 (17)	0.23

More radical solutions such as 'setting-up self-help groups' and 'demanding political action' were expressed by only a minority in both areas.

In the SW locality, professionals were more likely to believe that 'job creation schemes' could influence young people's health compared to their counterparts in the NW (48.6% versus 27.7%).

1.6. Young people's participation

Professionals' opinions about young people's participation were assessed through a question: "Should adolescents be able to participate in decisions concerning their health care delivery? According to your answer, please make a short comment". The vast majority (91.0%) of professionals in both areas believed that young people should be able to participate.

Of those who provided reasons for their views (84.3%), 6 general categories could be discerned: enable services and provisions to be tailored to adolescents' needs (24%), adolescents should have a voice (21.3%), partnership (18.7%), improve motivation and self-esteem (14.7%), increase likelihood of better outcomes (6.7%), and 14.0% gave heterogeneous answers.

2. Comparisons of the views and perceptions of adolescents with those of professionals

To promote the health of young people, it is necessary to assess their need and the resources available to meet them, and also to identify the degree to which the opinions of young people (as a potential clients) and those of professionals (as a

youth's service providers, administrators, and policy makers) coincide or diverge.

Therefore, in the last part of this chapter professionals' views about adolescents' health-related issues are compared with adolescents own perceptions.

Table 7.7. presents a comparison of the adolescents' own ratings of the health and major health problems of young people compared with that of professionals in each locality.

Table 7.7. Comparison of adolescents' own self ratings about 'young people's health issues in the localities' with professionals rating of young people's health issues in the localities ■

	NW		SW	
	YP	P	YP	P
% Rating of 'overall health of young people in the locality compared to the rest of the city' as better or much better	49.7 (92)	49.0 (24)	13.0 (13)	5.1 (2)
% Rating of 'Major health related problems' as high importance				
Accidents	13.4 (23)	4.8 (2)	8.2 (8)	0.0 (0)
Smoking	59.0 (105)	43.8 (21)	64.4 (65)	48.7 (19)
Drug abuse	58.8 (104)	34.7 ** (17)	72.0 (72)	64.1 (25)
Alcohol problems	63.6 (112)	54.2 (26)	68.3 (69)	71.8 (28)
Depression	11.1 (19)	14.3 (6)	15.3 (15)	29.7 (11)
Sexual transmitted diseases	20.1 (34)	4.9 * (2)	21.2 (21)	11.1 (4)

■ YP : Young people P : Professional
chi-square (YP/P) Sig at * p<0.05 ** p<0.001

In general, adolescents' perception of the health and health concerns of young people in general are quite similar to those of professionals who work with young people in their localities. In the NW, around a half of both groups (49.7% of young people and 49.0% of professionals) stated that the overall health of young people in the locality was better than the rest of the city, compared with just 13.0% and 5.1% respectively in the SW.

When both groups were asked to rate young people's major health problems in the locality, in the SW it was found that there were no statistically significant differences between professionals and young people's assessments. In the NW, there is some evidence that professionals might under-estimate the importance of certain problems: among young people, drug abuse (58.8%), and STD (20.1%) were each rated highly important problems compared with 34.7%, and 4.9% of professionals.

When adolescents and professionals were asked to rate the quality and importance of youth-related amenities, facilities, and services in the area, there is also some evidence of differences between the two groups with respect of the quality of services in general, and importance of those in particular (Table 7.8.).

Places for young people to meet In both localities, around 90% of both groups rated this facility as low. In the SW, interestingly, this was accorded more importance by professionals than young people themselves.

Table 7.8. Comparison of young people's opinion about quality and importance of amenities, facilities, services in the localities, with professionals

Amenities / facilities / services	NW		SW	
	% (n)		% (n)	
	YP	P	YP	P
% Rating 'quality' as very good or good, and 'importance' as very important				
Place for young people to meet				
v.good or good	12.0 (22)	10.2 (5)	8.9 (9)	5.0 (2)
very important	58.9 (106)	69.4 (34)	49.5 (50)	75.0 ** (30)
Sports facilities				
v.good or good	56.0 (103)	57.1 (28)	13.9 (14)	10.0 (4)
very important	57.5 (103)	57.1 (28)	45.5 (46)	45.0 (18)
Availability of part-time jobs while still at school				
v.good or good	18.0 (33)	22.4 (11)	9.9 (10)	2.8 (1)
very important	45.5 (81)	12.2 *** (6)	58.4 (59)	12.5 *** (5)
Public transport				
v.good or good	70.7 (130)	77.6 (38)	57.4 (58)	51.3 (20)
very important	52.5 (94)	28.6 ** (14)	52.5 (53)	28.2 ** (11)
Availability of jobs when leaving school				
v.good or good	10.4 (19)	14.3 (7)	5.0 (5)	0.0 (0)
very important	79.3 (142)	91.8 * (45)	89.1 (90)	90.0 (36)
Opportunities for further education / training				
v.good or good	62.8 (115)	75.5 (37)	47.5 (48)	42.5 (17)
very important	73.7 (132)	81.6 (40)	65.3 (66)	65.0 (26)

Table 7.8. (continued)

Amenities / facilities / services	NW		SW	
	YP	P	YP	P
	%		%	
	(n)		(n)	
Places for young people to live when leaving home				
v.good or good	9.8 (18)	4.3 (2)	3.0 (3)	2.6 (1)
very important	45.0 (81)	52.1 (25)	70.3 (71)	47.5 * (19)
Help / advice for young people				
v.good or good	22.0 (40)	47.8 ** (22)	22.8 (23)	25.0 (9)
very important	55.8 (101)	66.0 (31)	66.3 (67)	55.0 (22)
Health services (clinics. doctors etc.)				
v.good or good	58.5 (107)	61.7 (29)	60.4 (61)	38.5 * (15)
very important	69.4 (125)	59.6 (28)	78.2 (79)	52.5 ** (21)
Entertainment facilities				
v.good or good	23.0 (42)	27.1 (13)	13.9 (14)	2.6 (1)
very important	52.5 (94)	38.8 (19)	44.6 (45)	42.5 (17)
chi-square (YP/P) Sig at * p<0.05 ** p<0.01 *** p<0.001				

Sports facilities In both localities, their assessments of sports facilities were remarkably similar. In the NW, both young people and professionals were more likely to rate the quality of this services as good or very good compared to their counterparts in the SW.

Availability of part-time jobs while still at school In both localities, this service was rated as very important by a higher proportion of young people than by professionals.

Public transport In both localities, more than a half of both groups rated this service as high quality, but this was given more attention by young people than professionals.

Availability of jobs when leaving school In both localities, the vast majority of both groups identified this as low quality. In the NW, interestingly, significant differences were found between the two groups in respect of this (79.3% of young people compared with 91.8% of professionals).

Opportunities for further education / training In both localities, there is evidence of similarity between the two groups in respect of assessment of opportunities for further education.

Places for young people to live when leaving home In both localities, the vast majority of both groups rated this as low quality. In the SW, the importance of homes for young people occupied less attention by professionals than young people themselves.

Help/advice for young people In the NW, interestingly, professionals were more likely to rate the quality of this as good or very good compared to young people (47.8% versus 22.0%).

Health services Interestingly, in the SW, a higher proportion of young people rated 'health services' as good or very good than professionals (60.4% versus 38.5%).

Entertainment facilities In both areas, there was no significant difference between the two groups in respect of this facility.

3. Summary

▣ In general, there were considerable differences between professionals' views about young people's health-related issues in the two localities.

■ In the SW, professionals were much more likely to express the view that the overall health of young people is worse than the rest of the city compared to professionals in the NW.

▣ In the SW, professionals were more likely to record 'adolescents' as a 'highly vulnerable client group' in the community than their colleagues in the NW.

■ Alcohol problems and smoking were mentioned as very important health problems for young people by the majority of professionals in both areas. However, professionals in the SW were more likely to stress drug abuse as an important problem than those in the NW.

▣ There was no differences between areas in respect of professionals' opinions about young people's accessibility to health services compared to the rest of the city.

■ Professionals in the SW were more likely to rate unemployment, drugs, family breakdown, violence, and poor sports or entertainment facilities as having a negative influence on young people's health in the locality than their counterparts in the NW.

▣ In most respects the quality of amenities, facilities and services for young people are rated worse in the SW than NW by professionals

■ Professionals in the NW locality were more likely to be aware of youth-related initiatives than those in the SW.

▣ In both areas, the majority of professionals believed that actions on the basis of 'individualism' rather than 'community-based' approaches were important for improving young people's health.

■ The vast majority of professionals in both areas believed that young people should be able to participate in decisions concerning their health care delivery.

▣ Comparison between professionals and young people showed that adolescents' perceptions of the health of young people in general and health concerns were very similar to those of professionals who work with them in their localities. This pattern was also found between young people and professionals' assessments of youth-related amenities and services in many respects, in each locality.

These findings present a paradox for while the assessments of professionals and young people about the health of young people in general are similar (and do differentiate the areas), this is not born out by the evidence relating to young people's own health. No such differences between the areas are apparent when the individual's focus is on himself/herself rather than the community at large.

CHAPTER EIGHT

DISCUSSION OF METHODOLOGICAL ISSUES, DISCUSSION OF RESULTS , CONCLUSION AND RECOMMENDATIONS

The overall aim of the *Adolescents' Health Study* was to determine the health status and health needs of adolescents, particularly from a public health point of view, through:

- (1) assessing health and health-related problems and needs of adolescents with particular reference to different socio-economic context.
- (2) providing an evaluation of existing services as they apply to young people from the point of view of young people themselves, and that of professionals who work with adolescents (directly or indirectly) concentrating on the availability of resources, and gaps in provision.

The intention in the present study has also been to compare adolescents' health and well-being between two contrasting localities and to document changes over the time period 1987-95 in health and health-related measures.

This final chapter consists of three sections. In the first section, some methodological issues are considered; in second section the study results are discussed; and in the third section some conclusions and recommendations are presented.

1. Discussion of methodological issues

A repeated cross-sectional survey is the most appropriate and straightforward design to provide a series of survey estimates to monitor change in a population over time (Duncan and Kalton 1987, Smith et al. 1994). Nevertheless, the survey estimates need careful interpretation, as any observed change may be due to differences between samples and methods rather than to true population (young people) changes. This problem is particularly apparent in the present research where (1) clustered samples such as the school-based sample utilised in the Adolescents' Health Study are compared with the stratified clustered residence-based (postcode) random samples used in the Twenty-07 Study nine years earlier, and (2) the methods of data collection in this study were gathered anonymously through a self-completion questionnaire while in the former study most of the data were gathered through face-to-face interview (the young person was also given one self-completion questionnaire about diet, worries, and opinions, and another one including the GHQ-12 and a life event checklist).

Care, therefore, needs to be taken in the interpretation of findings between the two studies. However, in major respects, many of the potential problems were overcome. First, the respondents in both studies were of the same age, the criteria for inclusion in the Twenty-07 study being a birthdate within the age range for the S4 school year group. Second, the postcode data provided by young people in this study allowed for the exact matching of residential areas, those living outside the NW and SW being excluded. Third, for the most part (and importantly in relation to the GHQ and life

events), the method of data collection (via self-complete questionnaire) was the same in both studies. This was not, however, the case in respect of chronic illness and this may be a factor in accounting for differences between 1987 and 1995. All these reasons suggest that the comparisons between the two samples reflect true differences in the population.

While the *power* of the study was adequate for detecting moderate or large differences (i.e. 10% or more) between the two surveys (to examine the pattern of changes over time) or between the two locality samples (to examine differences in outcome variables between residential locations), small differences may not be detected with these sample sizes. For example, for the comparison of proportions reporting long-standing illness in the NW locality in the 1987 and 1995 surveys ($P_{1987}=0.25$ ($n=250$), $P_{1995}=0.15$ ($n=185$)) the study has greater than 80% power to detect a difference of 10% (e.g. 25% vs. 15%) at the 5% significance level.

For comparison of proportions rating 'fun and relaxation' as a positive way to improve health between two localities in the 1995 survey ($P_{NW}=0.32$ ($n=185$), $P_{SW}=0.07$ ($n=101$)) the study has greater than 99% power (Machin and Campbell 1987).

Inevitably, however, in any investigation there are limitations. In this case at the request of most schools, it was necessary to restrict the sample size to half the school year group. A bigger sample would have increased the power of the study to detect smaller differences, and it is possible therefore that if the same results had been obtained, the conclusions would have been different.

2. Discussion of results

There were five main research questions relating to adolescents' health status and needs that were investigated. These were as follows:

1. What is the health status of adolescents in general, and what are their health concerns, and aspirations?
2. Do adolescents who live in socio-economically disadvantaged areas differ from adolescents in more advantaged areas in this respect?
3. Do Glaswegian mid adolescents' health status and concerns in 1995 differ from those of their counterparts surveyed nine years earlier?
4. Do professionals who work with adolescents (directly or indirectly) in socio-economically disadvantaged areas have different views about the health status and health needs of young people compared to those working in more advantaged areas?
5. Do professionals' opinions about different aspects of the health of young people living in a geographical area differ from the views of adolescents themselves who are living in the same geographical area?

The aim of this section is to present the main (key) points and interpret the findings relating to the central aims of the study. Although this is not primarily a qualitative study, young people and professionals did provide unsolicited comments and these are used to aid interpretation in order to give the reader a better idea about respondents' views and concerns.

The discussion focuses on the following issues, with special reference to the localities:

- (a) the samples under study
- (b) adolescents' health status and well-being.
- (c) perceptions of health-related issues, social environment, and personal concerns.

2.1. The samples under study (pupils and professionals sample)

The Adolescents' Health Study was limited to pupils aged 15 in their last compulsory year of schooling who were studying in nine secondary schools in the north-west and south-west of the city of Glasgow. In order to represent those resident in the NW and SW, only those with postcodes within these areas were retained. The response rate in the NW (91%) was higher than in the SW (85%) which reflects known differences in absence rates between the areas (SRC Department of Education 1995).

With respect to area of residence, 100% of the SW sample and about 2.2% of the NW sample were living in more deprived areas as defined by Carstairs and Morris-1991 (McLoone 1994) such that comparisons between them indicate differences between socio-economically advantaged and disadvantaged areas. It is not, therefore, surprising that young people resident in the more deprived locality (SW) were less likely to live in a household with family car ownership, and more likely to have more siblings. Similarly, about four in five of the NW sample compared to almost half the SW sample described their family as intact, confirming the association between

greater deprivation and single parent household (Sweeting and West 1995, Child Poverty Action Group 1996).

With respect to the professional's survey, around one in two of professionals replied, with education professionals being twice as likely to respond than health care workers. Lack of awareness about adolescents' health issues (as mentioned by some professionals who returned uncompleted questionnaire) may be a major contributing factor to non-response in this study, rather than simply lack of time or interest. The mean length of experience of working in the localities was 8.1 years, a long enough time to develop a sound knowledge about the issues they were asked about.

Interestingly, the response rate was higher in the SW than NW with health care professionals in particular responding at a higher rate. This may reflect their longer experience of the locality and their greater awareness of the local community's health issues and young clients in particular.

2.2. Adolescents' health status and well-being

There is a popular assumption of youthful healthiness. However, the findings on a range of measures of adolescents' health status and well-being produces a varied picture and challenges that assumption. But what is 'health' or 'healthiness'? And how can health and well-being be measured? At its simplest, the term 'health' could be used to define a physiological, a psychological, and a social 'state'. There are

different definitions of health: 'absence of disease' (medical view of health) for example, 'a complete state of well-being' (positive but idealistic view of health', and 'a resource for living - WHO 1984c' (material-structural-cultural view of health)). However, people themselves create and re-create the meaning of health and illness through their life's experience. People's perception of their own state of health influences how they define health (Cox et al. 1987). Adults are more likely to view health in terms of function and coping; carrying out household tasks, managing to work, being able to get around. Young people frequently define it in terms of fitness, energy, vitality and strength, emphasising positive attainment and a healthy lifestyle.

While there are many different definitions of health, in this study health has been defined as the absence of disease, because it is generally relatively valid and easy to record reported illness, disease, or sickness. By contrast, reporting 'health' is rather problematic.

General indicators of health

Chronic illness and current health problem About one in six of 15 year olds in both the NW and SW samples reported a long-standing illness, disability or infirmity that had troubled them over a long period of time, and around 8% reported this as limiting their activities. The overall picture is consistent with that found in several British or Scottish national studies at age 15 (West et al. 1994), though there is no

evidence of an increase over time as suggested by Woodroffe et al. (1993). In common with other studies (West 1988, Foster et al. 1990, West et al. 1990, Rahkonen 1992, Glendinning et al. 1992, Hendry et al. 1993), there were no differences between the advantaged and disadvantaged areas. In addition, around one-fifth in both localities reported one or more current health problems (long-standing or symptoms of acute illness), a finding which is again not consistent with the assumption of youthful healthiness.

Overweight Using a measure of BMI (based on self-reported height and weight), around one in thirteen of mid adolescents of both sexes were identified as overweight. Further analysis again showed no differences between the localities in this respect, although caution has to be exercised in interpretation because anthropometric measures at this age may have little validity as an indicator of overweight and obesity in individuals still in the growth period (under 20) (Harlan et al. 1988).

Self-reported general health The proportion of respondents regarding their health as only 'fairly or not good' (around a half of them) also suggests a picture not consistent with youthful healthiness. This finding may reflect the complex mix of physio-psycho-social factors such as physical fitness, energy, ability to cope physically, mentally, and socially, and enjoyment underling adolescents' understanding of *health*. In addition, young people are more likely to view health in terms of vitality

and strength, emphasising positive attainment and a healthy lifestyle (Cox et al. 1987).

Some respondents expressed their views about their health in the following fashion:

NW - 'My health is very good. I'm lucky, I've never had any major problems.'

SW - 'I'm fit and healthy and I'm always physically active.'

In respect of self-rated health, the overall picture is one of similarity between the localities, and over time in both areas among mid adolescents. Further analysis also showed that there was a strong association between self-reported general health and psychological morbidity among respondents.

Psychological morbidity Around a quarter of boys and half of girls in both the NW and SW exhibited symptoms of psychological morbidity. Overall, the picture is again not commensurate with one of healthiness, but, whereas with respect to physical health this usually applies equally to both sexes, for psychological malaise young females typically exhibit poorer health (Fichter et al. 1988, Avison and McAlpine 1992, Glendinning 1994). Avison and McAlpine (1992) suggested this was due largely to higher levels of self-esteem among males. For example, as some young females expressed:

NW - 'I am quite healthy but I get fed up and depressed very easily.'

SW - 'I just wish I didn't worry so much.'

NW - 'I am quite self-conscious about my weight and it bothers me when people call me fat.'

SW - 'My health has been quite stable at the moment but on occasion I feel very ill which lowers my self esteem. It makes me worry more about the future even though the disease I have isn't serious. I think I worry too much and my health situation is more of a case of mind over matter.'

Adolescence is quite often a period of personal adjustment and stress. Psychological disturbance in young people ranges from minor transient emotional problems to serious psychiatric disorder. In addition, the nature and quality of family life, environmental factors, feelings about school, and peer relationships can affect adolescent mental health (D' Arcy and Siddique 1984, Meijer 1989, Lee et al. 1989, Cairns et al. 1991, Avison and McAlpine 1992, Rubenstein et al. 1992, Wolman et al. 1994). As some respondents stated:

NW - 'Sometimes I feel pressured about school and I often feel my health isn't good due to this but when I am with my friends and we talk about it, it lifts a whole lot off my shoulder.'

SW - 'I have a happy home life and friends who I get on well with and have a good time with. I feel I am doing reasonably well in school and I am generally happy with my aim in life.'

NW - 'Being at the age I am, I find it difficult to get on with my parents and be allowed to do things I want. That is what mainly causes problems for me and my mum is a hard person to reason with.'

SW - 'I feel sad when my mum feels lonely because she is missing my dad.'

As might be expected, some of these statements are supportive of an association between adolescents' psychological distress and negative life events such as a serious

illness or injury to a family member, a death of family member, breaking up with friends, and conflicts (a serious row between parents or with siblings, and having been attacked). For example:

NW - 'I have a lot of problems at home because my father has returned from hospital after suffering a stroke. My mother has had to look after him, work and also run the shop he owned. He is paralysed down his right side. My mother and father are constantly fighting and I get included too.'

Two more cases illustrate a similar point:

NW - 'My dad died a year past in February after a long illness so over the past year I have quite often become depressed and not been able to cope with my schoolwork.'

SW - 'My life has been depressing over the last 3 years, for example my parents splitting up and me having to look after my sister. It is really depressing and putting me under a lot of pressure.'

The study findings show that the level of psychological distress of young people has increased remarkably over this period in both localities, particularly among young females. Nevertheless, it is also the case that in many respects the life events experienced by young people or either of their parents have changed rather little, though they were more likely to experience having been attacked or hurt by someone than their counterparts nine years earlier. It seems, therefore, that the increase in the prevalence of psychological distress that has occurred between 1987 -1995 is not just due to the nature of specific life events experienced by them. Perhaps, more general factors such as personal concerns and worries - particularly relating to school life and

careers - are part of the picture. In addition, as a result of the rapidly changing nature of society today, many additional external stresses are brought to bear on young people (expectations, values, aspirations, opportunities, and barriers). The transition to adulthood (leaving school and entering work or higher education; leaving one's family of origin to set up a new home; becoming involved in sexual relationships, and eventually cohabiting or marrying; becoming a parent, and perhaps full participation in society) have all become more difficult for young people today compared with an earlier generation. It seems the bridge between adolescence (dependency) and adulthood (independence) has been prolonged. The transition to adulthood may never have been easy; today's adolescents are experiencing more associated *stresses*.

Interestingly, whilst most of the general indicators of health show no differences between the localities, about half of the adolescents in the NW locality and only an eighth of their counterparts in SW expressed the view that the *overall health* of young people in their area was better or much better than the rest of the city. Similarly, in the SW, professionals were also much more likely to express the view that the overall health of young people was worse compared to the rest of the city while their counterparts in the NW expressed the opposite. There is thus a *paradox* between the findings about the health of young people themselves (which shows little or no difference between areas with different socio-economic profiles) and what they say about the health of young people in general in their area, a view shared by

professionals. One possible explanation for these differences in findings may be that in thinking about the *overall health* of young people, a combination of matters such as lifestyle, family relationship, social environment, appearance, fitness, and vulnerability to getting ill are taken into account, a more holistic view in which health and its causes are conflated. As one professional in the SW stated:

‘I believe the adolescents in our area are less healthy. Many of them take insufficient exercise and eat too much unhealthy food. Many of them appear to be overweight and unfit.’

Another possible explanation of this paradox may be that young people and professionals alike have a stereotype of the health profile of their area and they echo the rhetoric in their views. Professionals in the SW were more likely to rate unemployment, drugs, family breakdown, violence, and poor sports or entertainment facilities as having a negative influence on young people’s health in the locality than their counterparts in the NW. Interestingly, professionals in the SW were also more likely to rate adolescents as a highly vulnerable client group in the community than their colleagues in the NW.

2.3. Perceptions of health-related issues, social environment, and personal concerns.

Health is an experience of well-being that is very much dependent on the social, economic, political, and cultural conditions in which people live. Health is also

linked to the availability of amenities, facilities and services such as health services; welfare services; education; and sports, recreation, and entertainment facilities. While, with respect to general indicators of the health of adolescents, the findings challenge (1) the popular assumption of youthful healthiness and (2) class inequality in health of young people, the study results also suggest that other aspects of young people's health such as concepts of health (beliefs), concerns about health and health problems, perceptions, and values that define health and illness behaviours with a potential role for young people's *future* life and consequences for health status (1) have changed over the last decade, and (2) in many aspects are different between the two contrasting localities.

The major health-related problems for young people in the localities

It is clear from the research that young people are aware of (the causes of) major health problems, with a considerable proportion of respondents rating alcohol, smoking, and drug abuse as a highly important health problem for young people in their locality. Interestingly, these problems were also mentioned as very important by the majority of professionals, though professionals in the SW were more likely to stress drug abuse as important than those in the NW. Moreover, it is health behaviours and lifestyle that young people and professionals were stressing rather than social conditions. The importance of these problems was expressed in the following fashion by two young persons:

NW - 'As there is nothing to do in the area, in this area a lot of people as young as

me often are converting to alcohol, drugs and smoking.’

SW - ‘I don’t like the look of future generations, they are doing things people my age would never do, smoking etc.’

And one of the professionals stated in a more negative fashion:

SW - ‘I feel that young people do not care much about their health, they tend not to exercise or eat enough fresh fruit, vegetables and fibre. They often seem to drink and / or smoke not to mention drugs’.

Health knowledge and health education

In both localities, young people were also much more likely to receive education on topics such as smoking, drugs, alcohol, or STD than their counterparts nine years earlier. In 1995, young people were more likely to regard ‘personal habits’, ‘health services’, ‘environment’, and ‘luck’ as the most important influences on people’s health.

Many health education policies and programmes have continued to place the main responsibility upon the individual to lead a healthier life (Brannen et al. 1994). This includes health programmes directed at young people in school through teacher led approaches or other education/ health education professionals. This new wave of ‘individualism’ that has dominated the political and policy agenda seems to have impacted on young people’s knowledge and opinion but seemingly not on their behaviours. Within the research literature, there is ample evidence that the prevalence of regular smokers, drinkers, and drug-users among young people has not

declined over the past decade: indeed, all the evidence points to an increase in these behaviours (see for example Thomas et al. 1993, Allbutt et al. 1995, Balding 1995).

As one professional expressed matters:

SW - 'The young people in our society are being very badly let down and I would not blame them if they find it difficult to forgive us in the future. They are the product of years of this government and misrule, which has encouraged and motivated the "I'm all right Jack" attitude, forging an ever widening gap between the haves and the have nots. It pervades our education system, the employment scene and ever increasingly, the health scene. Huge numbers of our youth have been lost in the education system, no job, no status and a future which must look bleak. I am afraid that among all this, health/ the attainment of good health, is down their list of priorities. The root causes must be tackled and it must be by political will.'

People do not necessarily act on what they know. Information by itself is only one small step towards change; it is how and whether it impinges on the many other factors in people's lives, like their age, their priorities, and their social circumstances, that is crucially related to propensity to change (Macfarlane et al. 1987). The major effort has been directed towards developing and implementing school-based educational programmes, with very little emphasis on policy initiatives to promote healthy environments via controls on selling or advertising and creating non-smoking environments; and *facilitating* recommended dietary and physical activity practices and other health enhancing behaviours. For example, as some young people stated:

NW - 'I am a passive smoker and am very angry with smokers in general who

abuse us.'

SW - 'I would be much healthier if there were more sports facilities or even youth clubs.'

SW - 'Young people have too much pressure to get drunk a lot and smoke. There is nowhere for kids to go to prevent them smoking every weekend, no entertainment.'

However, some professionals mentioned the problem in the following fashion:

NW - 'Knowledge of health in the widest sense is very poor. Some 14-16 year olds know very little about their bodies, conception and pregnancy. High intake of crisps, fizzy drinks, chocolate, junk foods. Teenage health status requires more input and funding.'

SW - ' My impression is that adolescents today are less fit than the average adolescent of 20 years ago. Increased usage of motor car for transport, home TVs and Computer Games for entertainment, and diet have all contributed.'

NW - 'Adolescents are under peer group pressure to indulge in drinking and substance/ drug abuse to a far greater extent than my generation. There is a sub-culture of alcohol abuse of easy to swallow drinks that to my mind have been passed on by word of mouth "Buckie" (Buckfast wine) is deliberately targeted at young people - Mad Dog (M.D. 40) White Dragon (High strength cider). Drugs are readily available city wide.'

The vast majority of young people thought that exercise and a good diet were the most important things they could do to improve their health. For example:

NW - 'In the past year, my mum has started having more exercise and eating healthier foods. This has meant that my lifestyle has improved also (because I

now eat better food) and this has made quite a difference to my health (e.g. I'm a less tired, I get less headaches, etc.).'

SW - 'My health has been fine because I don't abuse my body by drinking, smoking or taking drugs.'

It was found that respondents living in the NW were more likely to rate fun and relaxation as improvements to health than their counterparts in the SW. With respect to no smoking/ drinking/ drugs, the opposite was the case. It is important to note that differing perceptions of improvement in health among young people with different family backgrounds (family lifestyle and values) might influence their views.

Awareness about young people's health promotion initiatives

The term 'young people's health promotion' can be limited to include only interventions based on the provision of learning opportunities (health education) directed towards achieving change in health risk behaviours, or the maintenance of health enhancing behaviours. Such a narrow definition does not adequately acknowledge the potential contribution of health to the development of personal and social skills which not only benefit health but enhance the growth and development of young people (Nutbeam and Smith 1991). Further, this definition would exclude other types of programmes which are directed towards improving health status through, for example, the provision of sports and entertainment facilities, environmental control, legislation, or policy development which affects adolescents

and facilitates physical, social and emotional well-being, enhancing the quality of life of young people.

The study results suggest that adolescents had little knowledge of youth initiatives or projects. In both areas, only one in ten young people were aware of health promotion initiatives, projects, or activities related to young people in their area of residence. In contrast, around a half of the professionals were aware of such activities, though the vast majority of professionals referred to health education projects rather than young people's health *promotion* initiatives. As one of the professionals stated:

NW - 'I feel adolescents certainly need guidance in health matters as their knowledge in this respect always seems to me to be very limited and they need a professional to talk to.'

Once again health education is equated with health promotion rather than seen as part of it. As one young people said:

'Bring more entertainment at cheaper prices and get the people off the street.'

As expected, the majority of professionals believed in actions on the basis of 'individualism' (i.e. taking more personal interest and responsibility or changing lifestyle) rather than 'community-based' programmes for improving young people's health. More radical solutions such as setting-up self-help groups and demanding political action were expressed by only minority. However, the vast majority of professionals believed that young people should be able to participate in decisions

concerning their health care delivery. Some professionals expressed matters as follows:

NW - 'It would enable services and provisions to be tailored to adolescents' needs.'

SW - 'They know their needs. Also, participation in the decision-making process encourages involvement and creates interest.'

NW - 'They are old enough to have opinions and participate in decision making.'

SW - 'We must listen to them, they are our future adults who at present feel they have no say in anything including health needs.'

NW - 'This can hopefully improve motivation and self-esteem.'

Satisfaction with amenities, facilities and services

In both areas, there was a large measure of satisfaction with public transport, opportunities for further education/ training, and health services, while less satisfaction was reported with amenities such as places for young people to meet/ live when leaving home, jobs when leaving school, and part-time jobs while still at school, amenities that can increase the opportunity for them to become *less* dependent.

Between 1987 and 1995, the increase in both localities in the level of young people's satisfaction with health services is encouraging. However, in 1995, there was no difference between areas in respect of professionals' opinions about young people's accessibility to health services compared to the rest of the city.

As expected, in most respects the quality of amenities, facilities and services for young people were rated by professionals as worse in the SW than NW. In this respect, the picture provided by young people themselves is similar. In the NW, young people were much more likely to be satisfied with sports facilities and to rate it as very important to them compared with those in SW. In addition, the results showed that among young people who were living in the more advantaged area expressed satisfaction with facilities such as sports, entertainments, and help/ advice has increased, a pattern not observed in the disadvantaged area. While there was no difference between areas in respect of professionals' opinions about young people's accessibility to health services compared to the rest of the city, and also young people' satisfaction with health services as whole, the study findings do show that adolescents living in the NW were more likely than those in the SW to indicate that the *quality* of specific services such as dental health were better in the locality than rest of the city. A possible interpretation of this finding may relate to family lifestyle in relation to dental visiting which differs markedly between advantaged and disadvantaged areas and social class of parents (Attwood et al. 1990, Ferris et al. 1994) rather than the actual quality of this service.

There were also differences between young people's views about their area of residence, those in the SW being more negative and those in the NW more positive.

Some respondents described their feelings in the following fashion:

For example, in the NW

NW - 'It is a great thing to be living in Glasgow.'

NW - 'I have a reasonable good life as the area I live in is very quiet, clean and has very caring people. The only problem is, there is not many people of my age in my area.'

NW - 'I want to move away from Scotland and do something different. I don't want to live in the same place all my life. I want to meet new people.'

NW - 'I think that there are a lot of sports facilities available and clubs.'

By contrast:

SW - 'I have an all right life and my family are the best, I couldn't want more but to live in a different place than I am in now.'

SW - 'I would like to move away from where I am staying and from the school that I am in right now.'

SW - 'I think that teenagers like us should get more help and advice (about different issues). I also think that there should be more for us to do in the evenings specially in my local area.'

SW - 'I think it is where I stay and who lives around me that makes me so unhappy. I wish I lived in another time and place.'

Over the last decade, a strong emphasis has been placed on the responsibility of individuals for their own health. In the UK, this emphasis was challenged in *The Nation's Health* (Smith and Jacobson 1988) on the grounds that it is increasingly recognised that harmful environmental influences are not easily controllable and that

individuals' actions are constrained by the social, economic and political environments which lie beyond their control.

Within this broader context, it is important to indicate in what ways *area of residence* might limit or shape individual actions. There are two ways in which it has been conceptualised. First, its use as a proxy for socio-economic status, and as a non-occupational based measure of social class (Macintyre and West 1991) permits an examination of the hypothesis that youth is characterised by relative equality in health. Second, a measure of the characteristics of geographical areas which directly or indirectly influence health, it incorporates a range of influences from physical features of the environment such as pollution or damp housing, through health services and health facilities (e.g. sports provision) to opportunity structures such as those relating to education and employment. None of these factors is directly within the individual's control.

The study findings indicate that while the physical health of young people has shown some improvement, their psychological well-being has deteriorated. It is possible that this improvement in physical health might be attributable in part to better health services. In general, there was a large measure of satisfaction with health services, and the proportion rating such services as very good or good in 1995 was 1.4 times higher than those in 1987 in either area. The picture in relation to mental health presents a contrast. Analysis shows that young people with symptoms of psychological morbidity were less satisfied with local entertainment facilities' than their counterparts who were not psychologically distressed. One interpretation of

this finding is that such facilities directly influence young people's well-being and happiness. Further analysis also showed that there was an association between respondents' happiness with 'the local area as a place in which to live' and their satisfaction with 'local amenities'. Overall, young people who expressed less happiness with their local area were less satisfied with entertainment facilities, availability of part-time jobs, places for young people to meet, sports facilities, and public transport than their counterparts who were happy with their area of residence.

However, while local facilities such as sports/ entertainment facilities are important, it is only one small influence within in a much bigger set of influences. It may be that the factors influencing young people are less localised and affect them wherever they live. A good example of this applies to labour market opportunities and worries about future unemployment (West and Sweeting 1996). It seems that such worries are no longer confined to young people in more deprived circumstances.

How far does the evidence presented here support the health authorities and professionals' choice of strategies for improving adolescents' health?. They emphasise individual responsibility in reducing the consumption of tobacco and alcohol, preventing accidents, improving diet, increasing physical exercise etc. Less emphasis is given to society's role in improving the adolescent's environment by providing services, amenities and facilities, to reducing the risk of health comprising behaviours and encouraging healthier lifestyles. The evidence on the importance of

physical circumstances suggests that a strategy emphasising individual behaviour may miss important opportunities for prevention and young people's health promotion.

The process of defining and estimating need in the new NHS has developed from the initial simple epidemiological approach of the late 1980s to include economic, social, professional and consumer perspectives within its framework (McEwen et al. 1995). However, as in every section of the population, adolescents should have a *voice* concerning the delivery of specific health care for them, and a *opportunity* to raise their own health agenda. It would help to make them more responsible citizens. They have no collective voice and their interests are easily ignored.

Personal concerns and aspirations

The study shows there were rather few changes in their aspirations for the following year. The results indicate that in 1995 young people were more likely to be flexible or undecided about their plans for further or higher education, and among those who had decided to go on to further or higher education, nursing and physical education became more popular than among their counterparts nine years earlier. One possible explanation for this is that colleges of nursing or physical education (teaching college) are more likely to offer accommodation to students than other higher and further educational establishments. Another possibility is that there is more chance for those who graduate from these colleges (in general and from PE college in particular) to get a job compared to those graduating from university.

Between 1987 and 1995, young people had become more positive about the usefulness of school for coping with adult life, how to apply for a job, and how to manage money. In 1995, young people were also more likely to report careers guidance in school and advice from family or friends than those in 1987, though in both surveys respondents identified the latter as being more useful than the former.

Patterns of transition to work, entering higher education, and establishing the independence of adulthood have changed considerably over the last decade and appear to delay young people's youth-adult transition. It can be argued that this *imposed delay* on today's young people may be one of the main reasons for their depression and worries.

The study also showed that the level of young people's satisfaction with opportunities for further education/ training, increased between 1987 and 1995. This may reflect a pattern of increasing exposure to further and higher education, itself a consequence of the extended youth-adult transition which has meant young people remaining economically dependent on their families for longer period. These changes have taken place partly because of rising unemployment, but also partly because education and training have changed in significance and re-shaped patterns of transition into the labour market (Jones and Wallace 1992).

As mentioned earlier, there was a remarkable change between 1987 and 1995 in respect of the perceived likelihood of staying in the parental home rather than leaving and establishing the independence of adulthood, the proportion thinking they would

still be in the parental home in 1995 being about ten times higher than earlier on. It is possible that the fear of unemployment is a major explanation of this trend particularly in the West of Scotland where unemployment levels have traditionally been relatively high (West and Sweeting 1996). Leaving home, and other transitions to adulthood, have traditionally depended upon getting a job although fewer and fewer young people go straight into employment on leaving school. Instead of becoming workers and earning a viable wage from employment, they are increasingly to be found within various 'transitional' economic positions, dependent upon grants, allowances, help from parents or other support (Jones and Wallace 1992). Poorer mental health is strongly linked to the experience of unemployment and being at home (West and Sweeting 1996).

3. Conclusion, and recommendations

The overall aim of Adolescents' Health Study was to investigate the health status and health needs of adolescents both from their own point of view and from the perspective of the professionals who work with them in the context of different socio-economic circumstances. The present study has also examined the pattern of changes in the health and well-being of young people that occurred over the last decade.

3.1. Conclusion

The overall conclusions from the study can be summarised as follows:

- (a)** Adolescents are typically judged on the assumption of youthful healthiness. Contrary to this popular supposition, there is evidence suggesting that, overall, the picture is one of significant health problems, particularly in relation to mental health.
- (b)** Using a variety of indicators, there is little or no evidence of differences in either physical health or psychological well-being of adolescents in markedly contrasting areas of residence (using areas as a social context and a proxy indicator of socio-economic status).
- (c)** The study has highlighted the fact that in many aspects of adolescents' health concerns, perceptions of their area of residence, and aspirations, differences between contrasting localities are relatively large despite little or no evidence of differences in either their physical or mental health status.
- (d)** In general, while the evidence suggests that the physical health of young people has shown some relative improvement, the level of their psychological well-being has declined remarkably, a pattern which holds in both localities. It is possible this is in part related to a change in life events experienced, particularly that of violent

attacks. Adolescents who had experienced negative life events related to their family or friends (such as conflicts, serious illness or injury) are more likely to be psychologically distressed. Thus, these can be considered as predictors of adolescent malaise. The study findings also indicated that girls reported more emotional problems than boys.

(e) Adolescents in 1995 more often perceived themselves as remaining in the parental home rather than leaving and establishing the independence of adulthood compared to their counterparts in 1987.

(f) Location of work is a strong differentiator of health care and educational professionals' assessments of adolescents' health status and health needs.

(g) Comparison between professionals and young people showed that adolescents' perceptions of the health and health concerns were similar to those of professionals in their localities. This pattern was also found between young people and professionals' assessments of youth-related amenities and services in each locality.

3.2. Recommendations

In the light of the results and discussion, the following recommendations can be made with regard to future research and also with regard to the promotion of adolescents' health and well-being in the community.

3.2.1. Recommendations for future research:

The study findings show that young people had little knowledge of youth health promotion projects in their area of residence. Interestingly, for professionals (working in the locality) this was not the case although their awareness of young people's health promotion initiatives tended to be oriented towards *health education* initiatives rather than youth *health promotion* activities. Over the last decade, young people were also much more likely to be targeted by health education projects in general and in the less advantaged locality (SW) in particular (on topics such as alcohol and drugs).

The study results suggest that in general young people were less satisfied with local amenities e.g. places for young people to meet and availability of part-time jobs while still at school than with more general ones such as health services.

Despite the interesting findings of the study, many questions remain, particularly about what is really important to young people. More qualitative research in this field is required to gain a better understanding of young people's concerns and self-assessment of their needs. There is only scanty research focusing on and assessing young people's needs as defined by them. Most initiatives on adolescents' *health promotion* (mostly to control and alter young people's behaviour) have not been based on information from adolescents themselves about their concerns, and health beliefs. More work and research is required in this respect. Further research into

participation techniques amongst adolescents should begin with good qualitative studies.

More quantitative research is also required on health inequalities in young people using different measures.

3.2.2. Recommendations for professionals:

The study also showed that about one in six of young people reported a long-standing illness, disability or infirmity, around a quarter of boys and a half of girls symptoms of psychological morbidity, and around a half assessed their health as only 'fairly or not good'. The study also showed that while the physical health of young people has shown some relative improvement, the level of their psychological well-being has deteriorated. Young people with symptoms of psychological morbidity were more likely to report less satisfaction with local entertainment facilities than their counterparts who did not express such symptoms. These facilities might have a direct influence on young people's well-being and happiness.

Changes in society have created a dilemma for young people. On the one hand, they have increasingly become more dependent on parents for financial support, whereas, at the same time naturally they are struggling for their independence and seeking to 'be somebody'. Perhaps in consequence, the young people in the study were overall pessimistic about life.

Thus, there were rather low levels of satisfaction with amenities and facilities that might be expected to be available when young people leave school/ home e.g. availability of jobs and places to live. In addition, they displayed a lack of satisfaction about amenities that might directly influence their later life and health. The study also showed that young people were less certain about when they would leave the parental home compared with their counterparts nine years earlier. This applied equally to young people in both areas and is testimony to the similarity of problems facing young people from all sections of society. In such circumstances, it is more important than ever to consider ways in which young people can be assisted in becoming independent and prepare for adult life.

There are different approaches that can be considered to improve young people's health and well-being, each of which reflects a different emphasis on individualistic and societal factors:

Individualistic approaches

Secondary school is a time of stress and pressure for most adolescents. School nurses need to be aware of the high levels of adolescents' psychological distress, and its relationship to negative life events, in order to plan better preventive care and coping mechanism along with teachers, guidance teachers, and parents. The psychiatric-mental health nurse specialist could be a valuable asset to help schools teach health promotion and prevention strategies relating to mental health, identify

pupils at risk for mental health disorders, and offer counselling and guidance for them and consultative services for both teachers and parents.

Societal approaches

Clearly, those responsible for planning services for young people can no longer rely on the common assumption of youthful healthiness. Rather, the overall picture of young people's health as shown here, and in several other studies, reveals young people to have considerable health problems.

These findings suggest a need for closer interaction between mental health professionals and other agencies in the planning and provision of services to young people in general, and to young females in particular. Availability of youth sports and entertainment centres, and the development of techniques to improve adolescents' leisure skills (community-based initiatives) and the involvement of young people in voluntary programmes, health promotion, and social service work are examples of approaches that can be beneficial in limiting the incidence of adolescent mental disorder and health compromising behaviours.

Community-wide participation is needed to improve health care for adolescents, in particular those interventions concerned with mental health.

The study has highlighted the fact that in many aspects of adolescents' health concerns, perceptions of their area of residence, and aspirations, differences between young people in contrasting localities are relatively large despite little or no evidence of differences in either their physical or mental health status. Over the same period

of time, among young people who were living in the more advantaged locality (NW) the level of satisfaction with facilities such as sports and entertainments has increased (partly perhaps because of establishment of complex sports and leisure centre in the locality since 1987), a pattern not observed in the disadvantaged area. Those young people living in the less advantaged locality were more negative about their area of residence than their more advantaged counterparts.

In general, adolescents' health promotion should be seen as *facilitating* physical, social and emotional well-being and enhancing quality of life, in particular for those who living in less advantaged areas.

Because adolescent development (healthy or otherwise) occurs in a social context defined by family, peers, school, and the local community, in order to maximise both the protection of their health and well-being and its promotion, efforts need to target not only individual young people but also the social contexts in which they live. As in every section of the population, adolescents should have a *voice* concerning the delivery of care for them, and the *opportunity* to set their own health and well-being agenda.

What is the best way to achieve the highest possible level of health among young people? Sound public policies, supportive environments, community action, and the re-orientation of health services all have a part to play. There is a need to consider the rights of young people to access to health-promoting environments, opportunities and resources.

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APPENDIX ONE

THE PUPILS' QUESTIONNAIRE

Adolescents' Health Study 1995

S4 Pupils' Questionnaire

Date of completion :// 1995

By answering these questions you will help us find out more about the lives and the health of young people living in Glasgow City. We are giving the same questions to over 500 young people in Secondary 4 classes in schools in this area. Your answers will be looked at by the study team and no one else.

These questions are not like a school test. They do not have 'right' and 'wrong' answers; they are about what you think and feel. Please write down your own answers. Remember, we are only interested in what you think and feel.

There are two kinds of questions asked in this questionnaire. The first asks you to indicate the answer that applies to you either by ringing a number or ticking a box.

The second asks you simply to write an answer in space provided.

Please take your time to read each question in turn and answer it as best you can.

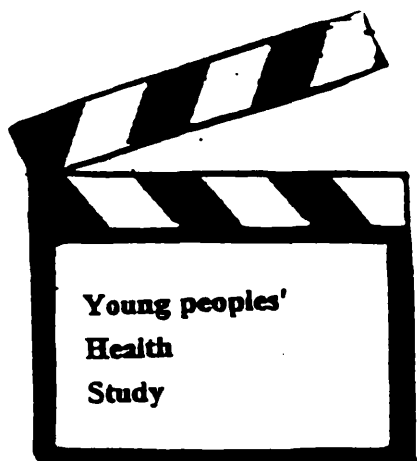
Thanking you in anticipation of your co-operation.



Now please turn over

STRICTLY CONFIDENTIAL

Department of Public Health
University of Glasgow, 2 Lilybank Gardens, Glasgow G12 8RZ
Telephone: 0141-339 8855 Fax: 0141-330 5018



Can we just check some basic details about where you stay and who you stay with ?

1. What do you call the local area you stay in? (e.g. Hillhead G12 8RZ)

..... Post Code :
(Please enter full Postcode if possible)

When did you come to live at your current address? 19.....

2. How many brothers or sisters have you got ? (including step brothers / sisters if present) :

None 1 2 3 4 5 6 or more

How many of them stay elsewhere, e.g. have left home :

None 1 2 3 4 5 or more

3. Are you living with :

(a) Both your parents (i.e.Both natural parents)

(b) One parent : Your real mother only

Your real father only

(c) Step parent(s) : Your real mother and step-father

Your real father and step-mother

(d) Others

4. Does your family own a car?

Yes No

5. We would like to ask about your parent(s) educational level (parents with whom you are living . mentioned above).

What are your parents highest educational qualifications (gained either at school or later)?

Please tick a box as applicable.

- Father :** School leaving certificate
O grades/levels/ Highers/A levels
Degree/ diploma/ professional
Vocational (Trade, Commerce, City & Guilds)
Other :

None

I don't know

- Mother :** School leaving certificate
O grades/levels/ Highers/A levels
Degree/ diploma/ professional
Vocational (Trade, Commerce, City & Guilds)
Other :

None

I don't know

Now, a few questions about you :

6. What is your date of birth? Please enter your date of birth (just Year and Month).

e.g. May 1980.

Month Year

7. What is your sex?

Male Female

8. How tall are you now?feetinches ormetrescms

9. How much do you weigh now?stonelbs or kgs



**We would like now to ask you
a bit about your life in school.**

10. With regard to your school work, compared to other pupils in your class, how do you rate yourself?

Please ring a letter as applicable.

- a. A lot above average
- b. A bit above average
- c. About average
- d. A bit below average
- e. A lot below average

11. In your present school, have you had any lessons covering the following topics?

Please ring a number as applicable.

Topics	Yes	No
Smoking	1	2
Alcohol	1	2
Diet	1	2
Personal Hygiene	1	2
Contraception	1	2
Drugs	1	2
Child Care	1	2
Sexually Transmitted Diseases (include HIV)	1	2
Exercise	1	2

12. Summing up your thoughts about school, how useful do you think it has been for the following things?

Please ring a number as applicable.

	<u>very</u> <u>useful</u>	<u>quite</u> <u>useful</u>	<u>not very</u> <u>useful</u>	<u>not at all</u> <u>useful</u>
. doing the job/career you want to	1	2	3	4
. how to apply for a job	1	2	3	4
. informing you about Youth Training (YT)	1	2	3	4
. coping with adult life	1	2	3	4
. how to behave, be polite(manners etc.)	1	2	3	4
. how to manage money	1	2	3	4
. becoming a parent	1	2	3	4
. how to look after your health	1	2	3	4
name other if you wish :				
.	1	2	3	4
.	1	2	3	4
.	1	2	3	4



**Can we ask you about your plans
for the future?**

13. What would you really like to be doing this time next year?

.....

(a) And what do you think you probably will be doing this time next year?

Please tick a box as applicable.

- | | |
|-----------------------------|--|
| Stay on at school | <input type="checkbox"/> |
| Go to college | <input type="checkbox"/> |
| Go to Youth Training (YT) | <input type="checkbox"/> |
| Have a job | <input type="checkbox"/> |
| Be unemployed | <input type="checkbox"/> |
| Depends on exams | <input type="checkbox"/> |
| Something else | <input type="checkbox"/> (Specify) |

14. Do you have any plans to go on to further or higher education ?

yes no depends on exams I don't know

If yes or depends on exams

What type of higher / further education (college) are you hoping to go to?

Please tick a box as applicable.

- | | | | |
|---------------------------|--------------------------|--------------------------------|--------------------------|
| University or polytechnic | <input type="checkbox"/> | Secretarial college | <input type="checkbox"/> |
| Teachers training college | <input type="checkbox"/> | College of art, music or drama | <input type="checkbox"/> |
| Technical college | <input type="checkbox"/> | Nursing college | <input type="checkbox"/> |
| College of commerce | <input type="checkbox"/> | P.E. college | <input type="checkbox"/> |

Name other if you wish :

15. Have you ever had any careers advice or advice / guidance about jobs?

Please ring a number as applicable.

	yes	no
1. In school (e.g. teacher(s) / careers person coming in)	1	2
2. Outside school (Careers Service, Employment Agency)	1	2
3. Family or friends	1	2

(a) Which has been the most useful source of advice?

Please tick a box as applicable.

In school ⇒ Teacher Career officer

Name other if you wish :

Outside school ⇒ Family Friends Careers Service

Employment Agency

Name other if you wish :

None

16. What job would you eventually like to do?

.....

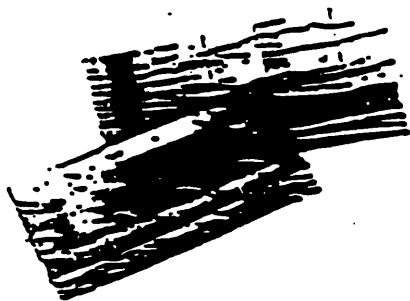
17. Some people your age want to leave home early, some later and some never. At what age would you ideally like to leave home?

enter age no best age



18. Please look through this list of things which sometimes happen to people and circle 1 (Yes) for those which have happened to you in the last 12 months, or 2 (No) for those which have not happened to you in the last 12 months. Like everything else in this survey, this information is treated in the strictest confidence.

Things	Yes	No
. You moved to a new house	1	2
. You got a new brother or sister	1	2
. A serious illness or injury to your mother, father, brother or sister	1	2
. Your mother or father got a new job	1	2
. A serious row between your parents	1	2
. You got into serious trouble at school	1	2
. A new stepmother or stepfather came to live with you	1	2
. A serious illness or injury to a close friend	1	2
. You failed to get into a sports team	1	2
. A brother or sister left home	1	2
. You had a poor school report	1	2
. A close friend moved to live far away	1	2
. The death of your mother, father, brother or sister	1	2
. You have been praised for good school work	1	2
. You got into trouble with the police or had to go to court	1	2
. You have a new girlfriend / boyfriend	1	2
. You joined a new club	1	2
. You lost your part time / spare time job	1	2
. A serious accident happened to you	1	2
. You were suspended from school	1	2
. You got into a sports team	1	2
. Your parents decided to separate	1	2
. You had a serious row with your brother or sister	1	2
. You broke up with your girlfriend / boyfriend	1	2
. The death of close friend	1	2
. You got a part time / spare time job of your own	1	2
. You made it up with your girlfriend / boyfriend	1	2
. You have been attacked or hurt by someone	1	2
. Your mother or father lost their job.	1	2
. You changed to a new school	1	2
. You failed an exam	1	2



Can we ask your opinion about your area of residence?

19. In your opinion , how good do you think the following services are in your area compares to the rest of Glasgow? Please tick a box as applicable.

<u>Services</u>	<u>Better</u>	<u>Similar</u>	<u>Worse</u>
Your GP	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dental Health	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Drug Advice	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mental Health	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Name other if you wish :			
.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

20. Overall, how do you think the health of young people in your area compares to health in Glasgow as whole?(e.g. range of health behaviours, accidents, injuries,...)

Much better Better , Similar Worse Much worse

21. In your opinion, which are the major heath problems for young people in your area? Please insert inside the appropriate brackets an L (Little importance), an M (Medium.importance), or an H (High.importance)

- | | | | |
|--------------------------|-------|------------------------------|-------|
| Accident | () | Alcohol | () |
| Smoking | () | Depression | () |
| Drug abuse | () | Sexually Transmitted Disease | () |
| Name other if you wish : | | | () |

22. What do you think about amenities/ facilities /services in the local area in which you stay?

(a) How would you rate the following things ; very good, good, average, bad or very bad?

(b) How important is this /are these things to you personally? Are they very important, fairly important, a little bit important, or not important .

Please ring a number as applicable .

Amenities/Facilities/ Services/ ...	Scale					Important			
	very good	good	average	bad	very bad	very imp	fairly imp	bit imp	not imp
. places for young people to meet	1	2	3	4	5	1	2	3	4
. sports facilities	1	2	3	4	5	1	2	3	4
. availability of part-time jobs while still at school	1	2	3	4	5	1	2	3	4
. public transport	1	2	3	4	5	1	2	3	4
. availability of jobs when leaving school	1	2	3	4	5	1	2	3	4
. opportunities for further education/ training	1	2	3	4	5	1	2	3	4
. places for young people to live when leaving home	1	2	3	4	5	1	2	3	4
. help/ advice for young people	1	2	3	4	5	1	2	3	4
. health services (clinics, doctors etc.).	1	2	3	4	5	1	2	3	4
. entertainment facilities	1	2	3	4	5	1	2	3	4

23. How happy are you with your local area as a place in which to live.

Please tick a box as applicable.

very happy

quite happy

neither happy nor unhappy

quite unhappy

very unhappy

24. Are you aware of any young people's health promotion initiatives or health-related projects in your area ? (e.g. in clubs, in churches,...) Yes No

If Yes :

(a) What kind of initiatives/ projects/ activities are they ?

(b) Do you participate in these projects/activities?

Yes

No

25. Have you heard about The Glasgow Healthy City Project ?

Yes No

If Yes , how did you hear about it ? (e.g. The project's staffs, your teachers,...)

26. Thinking about yourself, have you any health problems?

Yes No

if Yes, what are the biggest health problems facing you at the moment?

1 -----

2 -----

3 -----

4 -----

27. In general, would you say that you are more likely than other people your age to get ill, about as likely as others to get ill, or less likely than others to get ill?

more likely

about as likely

less likely

28. We would like to know if you have had any medical complaints, and how your health has been in general, over the past few weeks. Please tick () the answer to each question which you think most nearly applies to you. Remember that we want to know about present and recent complaints, not those which you have had in the past. It is important that you try to answer **ALL** the questions.

Have you recently :

1. been able to concentrate on whatever you're doing?	better than usual <input type="checkbox"/>	same as usual <input type="checkbox"/>	less than usual <input type="checkbox"/>	much less than usual <input type="checkbox"/>
2. lost much sleep over worry?	not at all <input type="checkbox"/>	no more than usual <input type="checkbox"/>	rather more than usual <input type="checkbox"/>	much more than usual <input type="checkbox"/>
3. felt you were playing a useful part in things?	more so than usual <input type="checkbox"/>	same as usual <input type="checkbox"/>	less useful than usual <input type="checkbox"/>	much less useful <input type="checkbox"/>
4. felt capable about making decisions about things?	more so than usual <input type="checkbox"/>	same as usual <input type="checkbox"/>	less so than usual <input type="checkbox"/>	much less capable <input type="checkbox"/>
5. felt constantly under strain?	not at all <input type="checkbox"/>	no more than usual <input type="checkbox"/>	rather more than usual <input type="checkbox"/>	much more than usual <input type="checkbox"/>
6. felt you couldn't overcome your difficulties?	not at all <input type="checkbox"/>	no more than usual <input type="checkbox"/>	rather more than usual <input type="checkbox"/>	much more than usual <input type="checkbox"/>
7. been able to enjoy your normal day-to-day activities?	more so than usual <input type="checkbox"/>	same as usual <input type="checkbox"/>	less so than usual <input type="checkbox"/>	much less than usual <input type="checkbox"/>
8. been able to face up to your problems?	more so than usual <input type="checkbox"/>	same as usual <input type="checkbox"/>	less able than usual <input type="checkbox"/>	much less able <input type="checkbox"/>
9. been feeling unhappy or depressed?	not at all <input type="checkbox"/>	no more than usual <input type="checkbox"/>	rather more than usual <input type="checkbox"/>	much more than usual <input type="checkbox"/>
10. been losing confidence in yourself?	not at all <input type="checkbox"/>	no more than usual <input type="checkbox"/>	rather more than usual <input type="checkbox"/>	much more than usual <input type="checkbox"/>
11. been thinking of yourself as a worthless person?	not at all <input type="checkbox"/>	no more than usual <input type="checkbox"/>	rather more than usual <input type="checkbox"/>	much more than usual <input type="checkbox"/>
12. been feeling reasonably happy, all things considered?	more so than usual <input type="checkbox"/>	about the same as usual <input type="checkbox"/>	less so than usual <input type="checkbox"/>	much less than usual <input type="checkbox"/>

29. Do you have any long-standing illness, disability or infirmity? (By long-standing we mean anything that has troubled you over a long period of time or that is likely to affect you over a period of time).

Yes No

If yes,

(a) What is the matter with you?

(b) Does this illness or disability limit your activities in any way?

Yes No

30. Over the last 12 months, would you say your health on the whole has been good, fairly good or not good? Please tick a box as applicable.

good fairly good not good

31. What are the most important things you could do to improve your health?

1 _____ 2 _____
3 _____ 4 _____

32. We would like you to look at the following things and decide which you think has the most important influence on people's health , the next most important influence, down to the least important influence on people's health?

Please insert inside the appropriate boxes 1 for the most important, 2 for the next , 3, 4, 5, and down to 6 for the least important. (equal rankings permitted!)

Luck

The constitution you're born with

Environment (housing, climate, pollution)

Habits (smoking, drinking, or what you eat)

Looking after yourself (taking vitamins, keeping warm, getting enough sleep).....

Health services (doctors, nurses, hospitals)

33. On the whole, how happy are you with your life in general?

Look at the faces and please ring the number under the face which shows best how you feel.



1

2

3

4

5

6

7

Is there anything else you would like to tell us about your life and health?



THANK YOU FOR ALL YOUR HELP

APPENDIX TWO

THE PROFESSIONALS' QUESTIONNAIRE

Adolescents' Health Study 1995

Professionals' views about adolescent's health

QUESTIONNAIRE

Date of completion : / / 1995

A study of **Young People's Health** and professionals' views about adolescents' health in the North-West and South-West of Glasgow City is being planned.

There are two components of this study. The views and perception of young people themselves and the views of professionals compared with young people.

We have selected a random sample of professionals and we would be most grateful for your assistance with filling in this questionnaire. It will take no more than 10 minutes.

There are two kinds of questions asked in this questionnaire. The first asks you to write an answer in the space provided (along the dotted lines). The second asks you to indicate the answer that applies to you by inserting a letter , ringing a number or ticking a box.

Thanking you in anticipation of your co-operation.

Department of Public Health
University of Glasgow, 2 Lilybank Gardens, Glasgow G12 8RZ
Telephone: 0141-339 8855 Fax: 0141-330 5018

(a) What is your occupation? Please tick a box as applicable.

Head Teacher Depute H.T. Assistant H.T. Guidance Teacher

P.E. Teacher P.S.D./ S.E Teacher Learn.Supp Teacher R.E. Teacher

School Doctor School Nurse

General Medical Practitioner District Nurse Health Visitor

Other Please name :

(b) What do you call the local area you work in? (e.g.Hillhead G12 8RZ)

.....

Post Code : (Please enter full Post Code of your place of work if possible)

(c) How long have you been working in this area (mentioned above)? Years

1. In your opinion, have young people in your area of work better or worse access to health services / health care (e.g. adolescent preventive health services) than those in other areas of Glasgow?

Better Similar Worse

2. Overall how do you think young people's health status in your area of work compares to health status in Glasgow as whole?(e.g.range of health-compromising behaviours, accidents,...)

Much better Better Similar Worse Much worse

3. Which do you think are the vulnerable groups in health terms in the community as whole?

Please insert inside the appropriate boxes an L(Low vulnerable),an M (Medium),or an H(High) according to your opinion.

Children		Men	
Adolescents		Single Parents	
Elderly		Disabled	
Women		Name other if you wish :	

4. In your opinion, which are the socio-economic issues with a negative influence on young people's health status in your area of work?

Please, use an L, M, or H to classify them (Little negative influence, Medium or High influence)

Poor socio-economic circumstances		Smoking	
Poor housing		Poor diet	
Unemployment		Stress	
Violence		Family breakdown	
Alcohol		Poor schooling and education	
Drugs		Poor sports/ entertainment facilities	

Name other if you wish :

.....

5. In your opinion, which are the major health-related problems for young people in your area of work ?

Please, insert inside the appropriate boxes an L (Little importance), an M (Medium.I), or an H (Highly.I), according to your opinion.

Accidents		Alcohol	
Smoking		Sexuality transmitted disease	
Drug abuse		Mental well-bing	

Name other if you wish :

.....

.....

.....

6. What do you think about amenities/ facilities / services for young people in your area of work?

(a) How would you rate the following things; very good, good, average, bad or very bad?

(b) How important is this / are these things for young people from your point of view? Are they very important, a little bit important, or not important.

Please ring a number as applicable.

Amenities/Facilities/ Services/ ...	Scale					Important			
	very good	good	average	bad	very bad	very imp	fairly imp	bit imp	not imp
. places for young people to meet	1	2	3	4	5	1	2	3	4
. sports facilities	1	2	3	4	5	1	2	3	4
. availability of part-time jobs while still at school	1	2	3	4	5	1	2	3	4
. public transport	1	2	3	4	5	1	2	3	4
. availability of jobs when leaving school	1	2	3	4	5	1	2	3	4
. opportunities for further education/ training	1	2	3	4	5	1	2	3	4
. places for young people to live when leaving home	1	2	3	4	5	1	2	3	4
. help/ advice for young people	1	2	3	4	5	1	2	3	4
. health services (clinics, doctors etc).	1	2	3	4	5	1	2	3	4
. entertainment facilities	1	2	3	4	5	1	2	3	4

7. What could local young people do in order to improve their health?

As above, please use an M , L , or H , according to the influence on health of each activity.

Set-up self-help groups		Job creation schemes	
Seek more information and education on health		Demand political action	
Change lifestyles		Social change	
Take more personal interest and responsibility		Demand more resources	

Name other if you wish :

.....

.....

.....

8. Should adolescents be able to participate in decisions concerning their health care delivery?

According to your answer, please make a short comment.

Yes (in what way) :

.....

.....

.....

No

.....

.....

.....

9. Are you aware of any young people's health promotion initiatives or health-related projects in your area of work? Yes No

If Yes, what kind of projects/ initiatives are they?

.....

.....

.....

.....

Are you participating in any of these? Yes No

If Yes, what is/ was your role?

In initiation of them

In planning of priority activities

In implementation of project activities

In monitoring and evaluation of projects activities

Name other if you wish :

.....

10. Have you heard about the Glasgow Healthy City project?

Yes No

If Yes, could you please define it briefly?

.....

.....

Is there anything else you would like to tell us about adolescents' health status and problems?

.....

.....

.....

.....

APPENDIX THREE

CORRESPONDENCE, AND COVERING LETTERS

File

YP / Education P.

JMcE/AMAG

Mrs Linda R Marsh
Assistant Director of Education
(Head of Research)
Strathclyde House
20 India Street
GLASGOW G2 4PF

17 February 1995

Dear Mrs Marsh

I am writing to seek your help with a proposed research project on health and young people. We believe that it tackles a relatively under-researched area and that the information will be of practical value to those responsible for health promotion.

A study is being planned of adolescents' health, particularly 15 year old pupils studying in S4 secondary education in the schools are located in the North-West and South-West of the Glasgow . This study is being jointly undertaken by the Department of Public Health and the MRC Medical Sociology Unit (via the West of Scotland Twenty-07 Study of health in the community). We are seeking your permission to undertake this study, and a copy of the outline protocol is enclosed for your perusal. With your permission, the relevant pupils, school head teachers, and S4 guidance teachers (as a part of professionals sample), will be invited to complete a self-completion questionnaire (S4 pupil's and professionals draft questionnaires enclosed).

Mr Amir M Harirchi (MA, MPH), is a postgraduate research student at the University, studying for the degree of PhD under the joint supervision of Dr Patrick West and myself. It is envisaged that he will visit pupils (probably in two or three groups) in their schools to administer the questionnaire which takes about 20 minutes to complete. A separate questionnaire for Headteachers/S4 Guidance teachers will be sent by post directly to them; this questionnaire takes about 10 minutes to complete.

Pilot Study Sample: Hillhead Secondary School

Proposed time of administration of the questionnaires: March 1995

Main Study Samples:

Knightswood Secondary, St Thomas Aquinas Secondary, Hyndland, Clevedon, Victoria Drive Secondary, Jordanhill College School, Bellarmine Secondary, Crookston Castle Secondary, Lourdes Secondary and Hillpark Secondary.

Proposed time of administration of the questionnaires: April, May and June 1995

I would be most grateful if you could agree to this request. Mr Harirchi can be contacted at this address. If you would like any further information, please contact me directly.

Yours sincerely

Professor James McEwen
Head of Department of Public Health

cc Dr Patrick West, MRC Medical Sociology Unit

File

YP/ Education P.

**Mrs Linda R Marsh
Assistant Director of Education
(Head of Research)
Strathclyde House
20 India Street
Glasgow G2 4PF**

20 February 1995

Dear Mrs Marsh

Following the letter by professor James McEwen of date 17 February 1995, please find enclosed a draft copy of Application and Standard Form Contract for Adolescents' Health Study. It has been checked by Dr. Patrick West. I would like remind you that our meeting will be held on Dr. West's office on Tuesday 28 February at 10.00 a.m.

With best wishes.

Yours sincerely

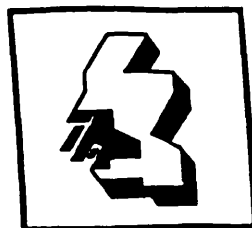
Amir M Harirchi, Ph.D. Student

cc Dr Patrick West, MRC Medical Sociology Unit

Strathclyde Regional Council
Department of Education
Strathclyde House, 20 India Street, Glasgow G2 4PF

Director: Frank Pignatelli

Assistant Director: Linda R Marsh



Strathclyde
SCOTLAND



A nuclear-free zone authority



An equal opportunities authority

Tel: Direct Line 0141-249 4150

Telex: 77428 Fax: 0141-249 4220

Our ref: LRM/JMcM

Your ref:

Date: 22 March 1995

If phoning or calling please ask for Linda Marsh

Location: Dalian House, 350 St. Vincent Street, Glasgow

Mr. Amir M. Harirchi
Department of Public Health
University of Glasgow
2 Lilybank Gardens
GLASGOW G12 8RZ

Dear Mr. Harirchi

Thank you for your letter and completed 'Application and Standard Form Contract'.

I am pleased to inform you that because your current study is a continuation of a study which commenced in 1987 you may approach the headteachers of the relevant schools direct to establish whether or not they are prepared to continue their participation.

Heads of establishment do have the final veto as to whether their schools shall become involved in research projects. When you contact them for the first time you should therefore ensure that you provide sufficient information for them to ascertain the nature and extent of any commitment. Additionally you should enclose a copy of this letter to indicate regional approval of your project. It will however be up to individual headteachers to decide whether or not it will be necessary for parental approval to be obtained in order for pupils to participate. I enclose a copy of the parental consent procedures for information.

I wish you every success with your project and if I can be of further assistance please do not hesitate to contact me.

Yours sincerely

Linda R Marsh

cc Professor James McEwan: Head of the Department of Public Health
Dr. Patrick West: Medical Research Council (Medical Sociology Unit)

NOTE TO RESEARCHERS ON PARENTAL CONSENT PROCEDURES

Items to be included in the covering letter to accompany the consent form requesting permission for school age children to participate in a research study.

1. The Research Management Unit will provide you with a master copy of the appropriate consent form which you should copy and attach to your covering letter.

2. The covering letter should be produced on the headed notepaper of the University (including where appropriate faculty/department or centre), institution or research body you represent unless some other arrangement has been agreed with the Research Management Unit.

3. The covering letter must in the first instance be forwarded to the Research Management Unit for approval prior to distribution; subsequently this must also be approved by the head(s) of establishment(s) involved.

4. The covering letter is required to contain information on the following:

(a) It should be sent in the name of the person heading the research project and should cite his or her title and designation. In the case of post-graduate research students the letter should be issued in the name of the student's supervisor.

(b) The subject area of the study should be cited along with a brief description of the purpose of the study in lay and jargon-free language.

(c) The exact requirements relating to the role of the participating pupil(s) must be outlined in a clear, precise manner. If it involves close contact with children, such as weighing them, measuring them or conducting any medical or associated test or procedure then this will require fairly detailed description and explanation. Where the requirement relates to data collection involving the use of self-completed questionnaires, interview schedules etc., some details on how these will be administered and what information they are aimed at soliciting (e.g., fact, behaviour, opinion, attitude etc.) should be given.

(d) The time taken to undertake the test procedure should be indicated and also when (approximately) such tests/procedures will take place.

(e) A paragraph covering matters relating to confidentiality must be included. This should explicitly state that in any report or publications deriving from the research project neither individuals nor the educational establishments which they attend will be cited by name or be identifiable.

(f) A contact address or telephone number must be provided and readers attention drawn to the fact that should they require additional information it can be provided.

5. In some cases, when access is sought to confidential records such as those held by the Department of Education (e.g., Records of Needs) or Medical Records held by medical authorities and which can be accessed by the researchers and the research project intends to utilise a further test or procedure (including a questionnaire or survey) which will permit linking or cross-matching of this test or procedure with the confidential record, this fact must be disclosed to the Research Management Unit, so that necessary data safeguards can be instituted.

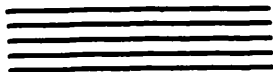
6. Researchers will be personally responsible for complying with the relevant legislation pertaining to data protection and access to personal files (including that relating to unauthorised access and the safeguarding and security of such data).

7. In cases where a high proportion of communications seeking further information on the project are received from parents/guardians either prior to them completing the consent form or at any time during the conduct of the research these should be reported to the Research Management Unit.

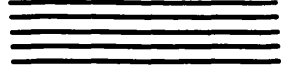
8. Research projects involving young people in which the main area of study relates to AIDS, sexual *behaviour* or criminal *behaviour* including drug/substance abuse will require to be handled with sensitivity in so far as the consent procedures are concerned, this applies both to the way of describing the nature of the study and with regard to the possibility that a parent/guardian may request feedback, information or even access to his or her child's responses. With regard to any request for feedback in such areas, whether indicated on the consent form or rising during or after any fieldwork, the Research Management Unit should be informed immediately, so that expert legal advice can be sought.

L R Marsh
Assistant Director of Education
November 1993
9111260513





CONSENT FORM



FOR PERMISSION FOR A SCHOOL AGE CHILD TO PARTICIPATE IN A RESEARCH STUDY

To be completed by the child's parent or guardian.

Please read the following notes carefully before completing the form.

This form must be attached to a covering letter (which you may detach and keep), and should only be completed and returned **IF YOU ARE UNWILLING** to have your child participate in the research study described in the attached letter.

If you do not complete and return the form this will be taken as implying that you **WISH** your child to participate in the study.

ONLY COMPLETE AND RETURN THIS FORM IF YOU DO NOT WISH YOUR CHILD TO PARTICIPATE IN THE RESEARCH STUDY

PLEASE USE BLOCK CAPITALS

I, (INSERT YOUR NAME) _____,

BEING THE (INSERT YOUR RELATIONSHIP TO THE CHILD, E.G. MOTHER/FATHER/GUARDIAN) _____,

OF (INSERT CLASS OR FORM) _____

OF (INSERT NAME OF SCHOOL) _____

Do NOT GIVE PERMISSION FOR MY CHILD TO PARTICIPATE IN THE RESEARCH STUDY DESCRIBED IN THE LETTER ATTACHED.

SIGNATURE: _____

DATE: _____

File

YP / Education P.

**Adolescents' Health Study
1995**

Dear

I am writing to seek your help with the Adolescents' Health Study which focuses on the health of 15 year olds in two localities in Glasgow (North-West, and South-West). It is being conducted by myself under the supervision of Professor James McEwen and Dr. Patrick West in the Department of Public Health and the MRC Medical Sociology Unit respectively at the University of Glasgow and has received support from Strathclyde Region's Education Department (Please see attached). We hope you will support the project to ensure its success.

The study involves a survey of around 500 pupils in the 4th year of secondary school, and 100 education professionals (Headteachers, S4 Guidance teachers, ...) in schools in the North-West and South-West of Glasgow. Your school is one of the 9 secondary schools selected to fully represent 15 year olds resident in these two localities.

We would like to administer a self-completion questionnaire, which has already been successfully piloted, to pupils in the classroom. This takes about 30 minutes to complete. Most usually, 2-3 classes of S4 pupils would be involved. We would also like to give a 'Professional Questionnaire' to education professionals regarding adolescents' health related issues which takes about 10 minutes to complete. If possible, we would like to do this sometime between now and the end of the summer term.

We believe the Adolescents' Health Study tackles a relatively under-researched area and that the information will be of practical value to those responsible for health promotion. In particular, it will enable a comparison with a study conducted by the MRC unit on 15 year olds who were resident in these same areas in 1987. (A copy of the outline protocol is enclosed).

I will follow up this letter by telephone to arrange a meeting and discuss how we should proceed. I look forward to meeting you.

Thanking you in anticipation of your help and co-operation.

Yours sincerely,

Amir M Harirchi MA, MPH
Research Student (Ph.D.)

File
Education P

Adolescents' Health Study
1995



UNIVERSITY
of
GLASGOW

Dear

A study of **Young People's Health** and professionals' views about adolescents' health in the North-West and South-West of Glasgow City is being planned.

There are two components to this study. The views and perception of young people themselves and the views of professionals compared with young people.

We have selected a random sample of professionals and we would be most grateful for your assistance with filling in the enclosed questionnaire. It will take no more than 10 minutes.

Thanking you in anticipation of your co-operation.

Yours sincerely,

Amir M Harirchi *MA,MPH*

Research Student (Ph.D.)

File
Education P

Adolescents' Health Study
1995



UNIVERSITY
of
GLASGOW

Dear

A study of **Young People's Health** and professionals' views about adolescents' health in the North-West and South-West of Glasgow City is being planned.

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We have selected a random sample of professionals and we would be most grateful for your assistance with filling in the enclosed questionnaire. It will take no more than 10 minutes.

Thanking you in anticipation of your co-operation.

Yours sincerely,

Amir M Harirchi *MA, MPH*

Research Student (Ph.D.)

File

YP / Education P.

**Adolescents' Health Study
1995**

**Mr.
Head Teacher,**

Dear

I am writing to thank you for your help and assistance with the Adolescents' Health Study. I would also like to thank your colleagues and your pupils for their help in completing the questionnaire.

I am very grateful to all those who were particularly helpful in assisting me to administer the questionnaires.

The study is progressing well and we anticipate that the results will yield information which will facilitate a more effective and efficient provision of health and social services to young people in the future.

I will send you a copy of the results at the end of my programme.

With kind regards,

**Amir M Harirchi
Research Student (Ph. D.)**

File

Y/P/ Education P.

**Adolescents' Health Study
1995**

**Mrs Linda R. Marsh
Assistant Director of Education
Dalian House
350 St. Vincent Street
Glasgow G2 5TT**

3 October 1995

Dear Mrs Marsh

I am writing to thank you for your assistance in the Adolescents' Health Study. I am very grateful to you for your help, and also to your colleagues at **Bellarmino, Clevedon, Crookston Castle, Hillpark, Hyndland, Jordanhill, Knightswood, St. Thomas Aquinas, and Victoria Drive Secondary Schools**, particularly the Heads who I have already written to thank for their help with the administration of the questionnaires.

The study is progressing well and we anticipate that the results will yield information which will facilitate a more effective and efficient provision of health and social services to young people in the future.

I will send you a copy of the results at the end of my programme.

With kind regards,

**Amir M Harirchi
Research Student (Ph. D.)**

Health Care P.

JMcE/AMAG

7 February 1995

Dr K Harden
Honorary Secretary, LMC
GGHB Unit Offices
Gartnavel Royal Hospital
1055 Great Western Road
GLASGOW
G12 0XH

Dear Ken

A study of young people's health in the North-West and South-West of Glasgow City, and also including health professionals' views about adolescents' health, is being planned. The Medical Sociology Unit is helping the Department of Public Health with this study and the new study builds on, and is linked to, the Twenty-07 Study. We would like your assistance in this project and a copy of the outline protocol is enclosed.

This study will involve contacting a sample of **General Medical Practitioners, District Nurses, and Health Visitors** who are working in the above localities and inviting them to complete a self-completion questionnaire (draft questionnaire enclosed), which takes about 10 minutes to complete. We will obtain the list of relevant staff from the community offices and contact them directly. It is hoped to undertake this phase of the study around Easter.

Mr Amir M Harirchi (MA, MPH), who is a research student at the University of Glasgow for the degree of PhD under my supervision, is conducting the study and should you wish any further information he can be contacted at this address.

Please contact me if you would like to discuss the study.

Yours sincerely

Professor James McEwen
Head of Department of Public Health

Enc

cc Dr R Gardee, Consultant in Public Health Medicine, Gartnavel Royal Hospital

File
Health Care P.



UNIVERSITY
of
GLASGOW

Your Ref:
Our Ref:

Dear Sir / Madam,

A study of **Young People's Health** and professionals' views about adolescents' health in the North-West and South-West of Glasgow City is being planned.

There are two components to this study. The views and perception of young people themselves and the views of professionals compared with young people.

We have selected a random sample of professionals and we would be most grateful for your assistance with filling in the enclosed questionnaire. It will take no more than 10 minutes, and should be completed by yourself.

Please return the completed questionnaire to Department of Public Health in the reply paid envelope provided before end of April.

Thanking you in anticipation of your co-operation.

Yours faithfully,

Amir M Harirchi *MA.MPH*
Research Student (Ph.D.)

le
health care P.

Adolescents' Health Study
1995



UNIVERSITY
of
GLASGOW

Dear Sir / Madam,

You may remember that I sent you a questionnaire about this a few weeks ago. The study is progressing well and I would like to thank all who took the time to complete the questionnaire and return it.

Since the questionnaire is anonymous I do not know who has replied. If you have not replied I would be most grateful if you could complete the enclosed questionnaire and return it in the reply paid envelope provided before the middle of June.

This would enable me to proceed with the analysis of data.

Thanking you in anticipation of your co-operation.

Yours faithfully,

Amir M Harirchi *MA, MPH*
Research Student (Ph.D.)

File
Health Care F.

Adolescents' Health Study
1995

Dr R Gardee
Consultant in Public Health Medicine
Trust Headquarters
Gartnavel Royal Hospital
1055 Great Western Road
Glasgow G12 0XH

24 July 1995

Dear Dr Gardee

I am writing to thank you for your help and assistance with Adolescents' Health Study. I am very grateful to your secretary Sharon and others who were particularly helpful in assisting me to administer the questionnaires.

The study is progressing well and we anticipate that the results will yield information which will facilitate a more effective and efficient provision of health and social services to young people in future.

I will send you a copy of the results at the end of my programme.

With kind regards,

Amir M Harirchi
Research Student (*Ph.D.*)

