PERSPECTIVES ON SMOKING OF LIVERPOOL PRIMARY SCHOOLCHILDREN IN THEIR EARLY YEARS

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THE FOLLOWING APPENDIX AND FIGURES HAVE BEEN EXCLUDED ON INSTRUCTION FROM THE UNIVERSITY

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Abstract

There is a dearth of smoking research involving young children despite the knowledge that the developmental process begins in early childhood. This paucity hinders the development of effective smoking prevention strategies, which need to be based on an accurate understanding of the perspectives of the target group. Therefore basic research is required, to discover where primary schoolchildren are at in their thinking about smoking before any potent anti-smoking initiatives can be devised. Such an endeavour however, is exacerbated by the lack of appropriate methods of data collection for this particular age group.

The aim of this research study was to explore the perspectives that Liverpool primary schoolchildren in their early years (four to eight years of age) have about smoking by examining the beliefs, knowledge, perceptions and behavioural intentions that inform their attitudes about the habit and subsequently, to assess any changes in these factors over time. This work not only provides the understanding and insight fundamental to the development of proactive health promotion programmes aimed at tackling the increasing prevalence of smoking among local children but also the empirical evidence needed to fill the significant gap in the existing literature on smoking as well.

To achieve these aims, a multi-method, child-centred participatory approach was used. This between-methods triangulation included questionnaires, The Draw and Write Technique, semi-structured interviews and focus group interviews. For the cross-sectional study, a representative sample of primary schoolchildren in their early years from wards of varying socio-economic status participated. All were involved in the quantitative method and a subsample partook in the qualitative methods. For the longitudinal study, the same research design was used to track one birth cohort – the children from Reception for a period of three years, to document any changes in perspectives over time.

The research findings from both studies demonstrated that the children in this investigation had considerable understanding about the nature of tobacco smoke, had as yet to take up the habit and generally expressed little intention to smoke in the future. Their perspectives were predominantly negative, very stable and relatively homogenous. They were grounded in a broad knowledge base that was primarily influenced by cognitive development and socio-cultural experiences. They acknowledged the importance of the family and perceived parents to be both preventers and promoters of the habit. The children also harboured some misconceptions, believing that the health implications from smoking were far greater for children than adults. This belief has cultivated a widespread notion that smoking is an intrinsic part of adulthood.

The study findings have substantive implications for the development of proactive smoking interventions in primary schools. The results suggest that any prevention strategy devised must be implemented as early as possible in the school curriculum, that it should be developmental in nature and more than knowledge-based. A grass roots approach, one that fosters empowerment through the active involvement of the children in both the development and implementation of the strategy, in collaboration with the school, the home and the community is recommended, as this work has confirmed that children in their early years can be reliable and valid participants in the research process.

Acknowledgements

It is most fitting that this research work was completed in Liverpool, a place immortalised by the Beatles, who themselves recognised that everyone gets by with 'a little help from their friends'. This final product is indeed a culmination of effort from many friends, whose continued encouragement and support has been much appreciated.

Special thanks is owed to my supervisory team of Jane Springett, Lindsey Dugdill and Frank Sanderson. Each with their own special talents guided me through the research process from beginning to end and this thesis is very much a tribute to their abilities. May this auspicious start be the dawn of a productive working relationship together.

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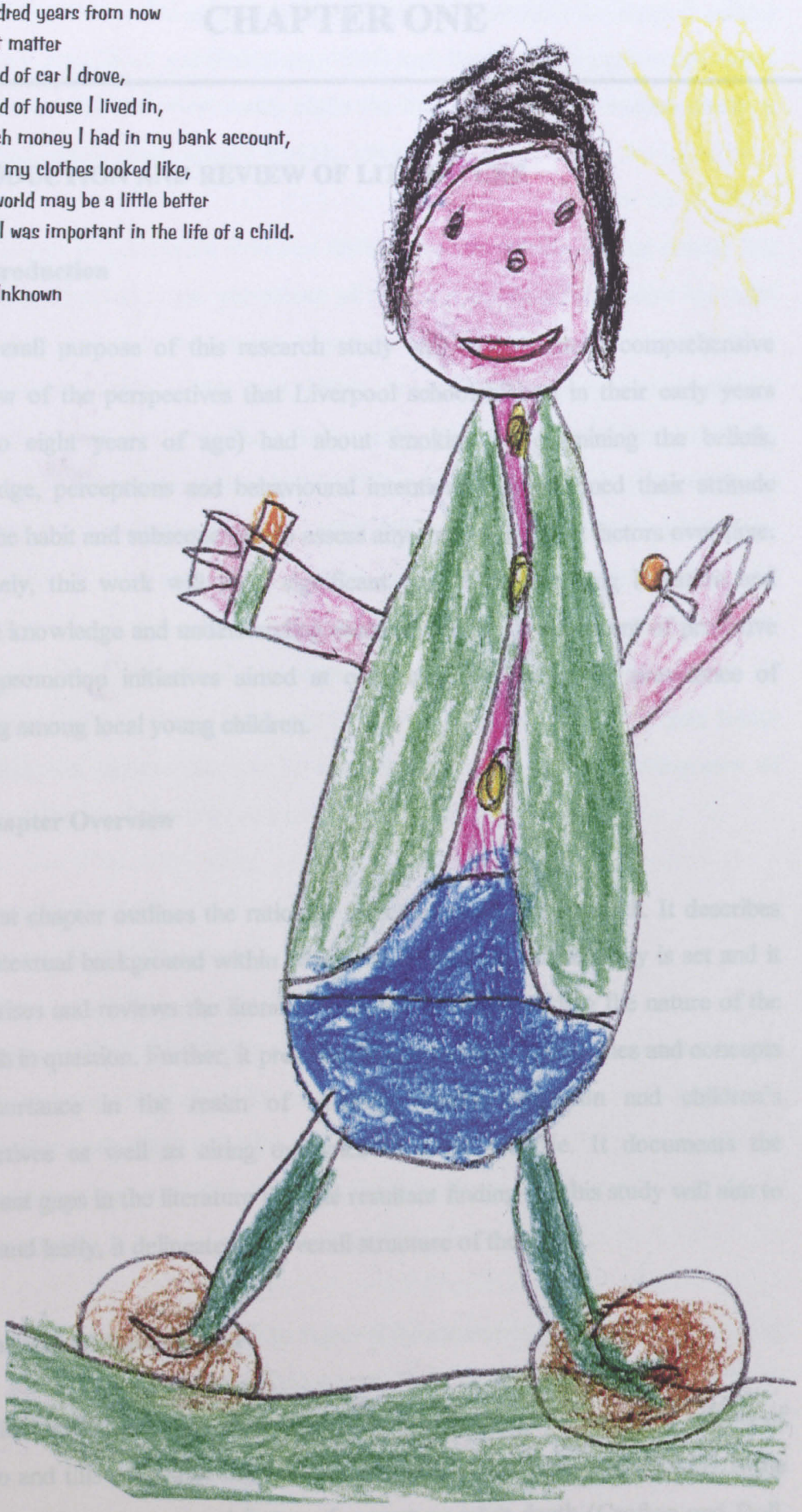
One hundred years from now
It will not matter
What kind of car I drove,
What kind of house I lived in,
How much money I had in my bank account,
Nor what my clothes looked like,
But the world may be a little better
Because I was important in the life of a child.

Author Unknown



CHAPTER ONE

INTRODUCTION AND REVIEW OF LITERATURE

1.1 Introduction

The overall purpose of this research study was to generate a comprehensive overview of the perspectives that Liverpool schoolchildren in their early years (four to eight years of age) had about smoking by examining the beliefs, knowledge, perceptions and behavioural intentions that informed their attitude about the habit and subsequently, to assess any changes in these factors over time. Ultimately, this work will fill a significant gap in the smoking literature and provide knowledge and understanding essential for the development of proactive health promotion initiatives aimed at combating the increasing prevalence of smoking among local young children.

1.2 Chapter Overview

This first chapter outlines the rationale for conducting this research. It describes the contextual background within which the framework of the study is set and it summarises and reviews the literature relevant to understanding the nature of the research in question. Further, it presents diverse models, approaches and concepts of importance in the realm of smoking, health education and children's perspectives as well as citing examples of good practice. It documents the significant gaps in the literature that the resultant findings of this study will aim to rectify and lastly, it delineates the overall structure of the thesis.

1.3 Contextual Background

Since the 1950's, there has been a heightened awareness of the adverse effects of tobacco and this has led to the development of a global view that smoking is the single most important causal factor of premature adult death (Crofton and Doll,

1996). Tobacco, heeded as a growing epidemic is responsible for about 3 million deaths per year (Wald and Hackshaw, 1996) and *'unless tough actions are taken immediately, [it] will prematurely claim the lives of about 250 million children and young people alive today'* (W.H.O., 1998:1).

Whilst compelling scientific evidence linking tobacco smoke to lung cancer has resulted in a decline in the prevalence of smoking among adults, there has been little change evident in the patterns of young smokers in developed countries over the last decade (OPCS, 1994; Reid, 1996). According to recently released official figures, it would seem that there has actually been a dramatic increase in the number of children who smoke. Almost 70% more children are smoking today as compared to 10 years ago (Warden, 1998). This gives rise to considerable cause for concern, in view of the fact that the continued initiation into smoking by young people is occurring in the midst of a proliferation of pervasive anti-smoking campaigns aimed specifically at them. Smoking, now considered to be *'a paediatric epidemic'* (Perry et al., 1994), is a major dilemma for the public health movement and their challenge, in essence, has become the development of effective means to deter children from starting to smoke.

1.4 Government Initiatives

A concerted effort to address the scourge of tobacco, by the prevention of smoking and the reduction of its prevalence has progressed into one of the most studied areas in the field of health (McGuffin, 1982). In fact, the issue of tobacco has become so important that it can be found on the political agenda at all levels of government.

In T*he Health of the Nation White Paper* (Department of Health, 1992), smoking targets (to reduce smoking prevalence of 11-15 year olds by at least 33% by 1994) were clearly delineated but unfortunately not met. In the current Government's Green Paper, *Our Healthier Nation: A contract for Health*, their new broad-based philosophical approach to health targets four priority areas for

improvement, two of which are smoking related: heart disease (to reduce death rate of under 65's by one third) and cancer (to reduce death rate amongst under 65's by one fifth). In addition, the healthy school, with its focus on children, has been earmarked as one of three settings for action (Department of Health, 1998). At present, we await the release of the Government's *White Paper on Tobacco Control* in which one of the key priorities for action will be *'... to prevent the young from starting to smoke'* (Baroness Jay of Paddington, 1998: 239).

Endorsement for the Government's commitment to smoking prevention in the young was promulgated by Baroness Blackstone, the Minister of State, Department for Education and Employment in her statement that education is to be *'a key component of the overall strategy to reduce smoking'* (ASH, 1998a:11). Education is also the vehicle of action through which the Government is attempting to combat drug misuse. According to the recently released Government's White Paper on *Tackling Drugs to Build a Better Britain* (1998), one objective is to increase levels of knowledge of children as young as 5 about the risks and consequences of drug misuse. *'The move into primary classrooms is part of a 10 year anti-drug strategy...'* (Craig, 1998:1) that applies to tobacco as well. Called a 'gateway' drug, smoking cigarettes is often considered to be a precursor to other substance misuse (Dalli, 1996).

1.5 Local Initiatives

At the local level, smoking and its consequences to health has become an item of priority as well. Lung cancer has now become a key health issue for the city of Liverpool (Liverpool City Health Plan, 1995) and the unique post of Smoking Prevention Co-ordinator, to oversee the strategic approach to smoking prevention across the city, has been implemented. Furthermore, the Roy Castle Foundation International Centre for Lung Cancer Research, the first centre of excellence of its kind concentrating research efforts on lung cancer, tobacco control and health promotion in primary schoolchildren is situated in the city of Liverpool.

1.6 Prevalence Of Smoking

It is widely accepted that few people commence smoking in adulthood. Children and young people are being targeted for recruitment by the tobacco companies, to replace the 120, 000 UK smoking-related deaths that occur yearly (Roy Castle Foundation, 1998). Current research has concluded that 450 children start to smoke in Great Britain, each day (Royal College of Physicians, 1994). About 390 000 young people aged 11-15 were regular smokers in 1996 (Warden, 1998) and at least half of them will ultimately die as a result of the habit (Zatonski et al., 1997).

The rates of smoking among Britain's teenagers are at the highest ever with 40% of boys and 50% of girls having tried smoking by age thirteen (ASH, 1996). According to national data compiled by the Health Education Authority, 23% of children have tried to smoke by age 11 (Walters and Whent, 1995) and by age 15, 30% are regular smokers (Jarvis, 1997).

Locally, in the city of Liverpool, where both the prevalence of adult smoking and the lung cancer rates are some of the worst in the country (Mersey Regional Cancer Registry, 1993), a recent survey entitled *Healthy Lifestyles in Liverpool 1994-95* found that the percentage of 10 and 11 year olds smoking is 2% higher than the national average which is 17% for boys and 3% higher than the national average which is 13% for girls (Dawson, 1995).

The age of onset also continues to decline (Baugh et al., 1982; Meier, 1991). Although studies show that few children younger than nine years of age are regular smokers (Oei et al., 1990), emerging research seems to indicate that initial experimentation with cigarettes is, at times occurring between the ages of five and eight years (Tucker, 1987). OPCS statistics reveal that 2% of children have tried to smoke before the age of six (Royal College of Physicians, 1992).

This propensity towards trying cigarettes at an earlier age (Oei, Fae and Silva, 1990; Van Kammen et al., 1991; Flay, 1993) is significant because it can

jeopardise health in later life (Gillies et al., 1987; Jurs, 1990; Chassin et al., 1991; W.H.O. and Chollet-Traquet, 1992; Young, 1992), as the younger individuals become regular smokers, the earlier the emergence of smoking-related diseases (Royal College of Physicians, 1992).

In a recently released bulletin, the Health Education Authority cites medical research that illustrates conclusively that damage to the lungs and heart begins with the initial cigarette smoked (HEA NEWS, 23 July 1998). It also potentially predisposes children to acquiring a lifelong habit (Wilkinson, 1986), as early use increases the likelihood of continual use (Murray et al., 1988; Armstrong et al., 1990; Chassin et al., 1990). Moreover, it would seem that these individuals tend to be heavier smokers (Factsheet, n.d.) and find it more difficult to give up the habit (Department of Health, 1996).

1.7 The Development of Smoking

Smoking is a habit generally associated with adolescence or adulthood, but the process of becoming a smoker originates in childhood via the mechanism of primary socialisation. Both Bewley (1977) and Henningfield (1985) contend that children show a very early interest in smoking, a premise supported by Baric and Fisher (1979) in their innovative study on smoking and primary socialisation in children under 5 years of age. Their research revealed that 3 out of 4 children were aware of cigarettes before their fifth birthday regardless of parental smoking habits. Many had handled cigarettes, played games with them and on occasion, had experimented with them.

The initiation of smoking behaviour has been described as a developmental, multi-stage process (Leventhal and Cleary, 1980; Flay et al. 1983). There appears to be much agreement in the literature (Stern et al., 1987; Murray et al., 1988; Swan et al., 1989; Royal College of Physicians, 1992; Flay, 1993) that this complex process, which takes several years to evolve, does so through several stages.

Endorsement for this premise is provided by the theoretical causal model of the major influences on stages of smoking behaviour depicted below.

Figure 1: A Model For the Major Influences and Their Relative Strengths, On Smoking Behaviour (Flay et al., 1983)

1.7.1 *Stages of Smoking*

As delineated in the model, the stages of smoking that lead to 'adult' smoking behaviour include the following:

Preparation or Precontemplation where attitudes, beliefs and intentions to smoke are formed and modified. At this point children, who are generally in their early years, have not really started to think about smoking and as yet, are unaware of the positive aspects of partaking in the habit. Through exposure to cigarettes, they learn the nuances of smoking and are assimilating the messages from significant

others who smoke. This enables them to become informed about the nature of the habit and ultimately, cultivate their attitudes and beliefs about smoking (Leventhal & Cleary, 1980).

The second phase of this initial stage is known as *Anticipation or Contemplation* where children start to think about smoking, perceive some positive aspects to the habit and become aware of the pressure to experiment. The key factors of persuasion at this pre-smoking stage are primarily demographic and social. Demographic variables like socio-economic status influence social environment, namely the family and friends with whom the children interact, and they in turn, influence the children. The Royal College of Physicians (1992) also suggests that the media, in the form of advertisements, television and films can be cogent at this point of the developmental process.

Initiation when children try the first cigarette. For many children, this is the furthest extent to which they are involved in the smoking process although they may try it again, on diverse occasions. Little is understood about the triggers that impel some to go on to become regular smokers whilst others cease to continue. It has been suggested that failure to move beyond this stage may be due to a distaste for cigarettes or the lack of perceived benefits from continuation Major influences include peers, availability, curiosity and family.

Experimentation where children begin to experiment with cigarettes; the peak ages being 9 to 12 for boys and 10 to 13 for girls, although it can start earlier. It would appear that young people receive minimal pleasure from smoking at this stage and are as yet, not fully committed to the habit but do contemplate the positive aspects of smoking. The major influences are mainly those from the previous stage, as well as intrapersonal factors such as personality and self-image.

Regular Smoking where adolescents are committed to smoking, finding much gratification in the process and expressing little desire to stop smoking. Uptake of habit is influenced by such variables as peers, rebelliousness, poor self-concept and addiction.

Much is known about the complexities involved in *experimentation and regular smoking* because the major focus of smoking research over the years has concentrated on these latter stages of the developmental process. Less however, is known about the nature of *preparation and anticipation*, and the variables within that first stage which, according to Flay (1993: 371) are the most *'proximal determinants to actual tobacco use.'* All potentially dictate behaviour therefore, all must be considered when developing an intervention strategy (Flay, 1993). It is ironic then, that this initial stage of smoking, so crucial to future smoking behaviour is that least explored, least researched and least understood. This paucity in itself, should precipitate the need to study the variables within this critical stage, to acquire a comprehensive understanding of the interactions that are transpiring in the onset process.

1.7.2 *Determinants of Smoking Behaviour*

A plethora of research has been accumulated with respect to the onset of smoking (for reviews, see Tucker, 1987; Royal College of Physicians, 1992; Conrad et al., 1992; Stead et al., 1996); much of it attempts to ascertain what the major influencing factors on smoking behaviour are. Because smoking is multifactoral (Charlton, 1984; Oakley et al., 1992), there is no single explanation for why children start to smoke (Goddard, 1990). However, a range of personal, socio-cultural and environmental determinants have been established as predictive factors in the uptake of the habit.

Personal determinants found to affect smoking behaviour range from personality characteristics such as risk taking, rebelliousness and low self esteem, to gender, knowledge of health risks, intention to smoke, attitudes and beliefs about smoking and poor level of academic achievement. Some of the contributing social factors involve parental smoking habits, sibling smoking behaviour, peer influence, and leisure activities. Key environmental determinants are family, socio-economic status, availability and price of cigarettes and media influences (Flay et al., 1983; Murray et al., 1983; Royal College of Physicians, 1992; Walters and Whent, 1995; Stead et al., 1996).

The above mentioned antecedents are by no means inclusive of all correlates that impel children to smoke nor is there agreement that all are considered to be predictors of onset, as divergent results from the myriad of studies undertaken on the aetiology of smoking exist (Stead et al., 1996). Parental smoking habits for example, are found to be highly influential in some studies (Charlton and Blair, 1989; Oei and Burton, 1990), but less so in others (Conrad et al., 1992). Equally, socio-economic status, highly predictive of adult smoking behaviour (Marsh and McCay, 1994; Glendinning et al., 1994) has been found to have varied or even no impact on the uptake of smoking by adolescents (Warburton et al., 1991; Conrad et al., 1992; Oakley et al., 1992). Best et al. (1988) suggests that the relative influence of these determinants alters according to the different stages of smoking behaviour outlined in Figure 1.

1.8 Young Children and Smoking

Although the allusion to the necessity and importance of looking at young children '*in view of the recognised influence of the early years on attitude and habit formation*' (Schneider and Vanmastright 1979: 72) has been advocated by prominent researchers in current smoking studies (Leventhal and Cleary, 1980; Shute et al., 1981; Oei and Burton 1990; Stanton and Silva, 1991; Bowen et al., 1991; Chassin et al., 1991; Young, 1992; Bhatia et al., 1993; OPCS 1993; Fidler and Lambert, 1994; Greenlund et al., 1997), a paucity of pertinent research prevails.

To date, the principal focus of most investigations on young smokers has primarily been on children nine years of age and older, when experimentation with cigarettes is often already underway. Thus, children in their early years are largely, a much neglected cohort in smoking studies despite the widely known tenet postulated by Leventhal and Cleary (1980), that smoking patterns begin prior to experimentation, with the development of attitudes and beliefs that in turn, can influence behaviour.

1.8.1 *Awareness and Knowledge of Smoking*

Tucker (1987) in a review of the literature pertaining to elementary school children and cigarette smoking, identified two studies as the only research that focused exclusively on children under 8 years of age. One was by Tennant (1979) on a sample of pre-school children which demonstrated that five and six year olds were aware of cigarette smoking and had some knowledge of the consequences of the habit. The other was by Shute et al. (1981) which illustrated that youngsters between the ages of 3 and 8 were clearly aware of smoking in their environment, with many expressing interest in future use of tobacco based products.

Other studies included children who were 7 or 8 years old but that was the minimum age for participation. Schneider and Vanmastright (1974) for example, used three age groups of children: 7-8, 10-11 and 13-14, to explore adolescent-preadolescent differences in beliefs and attitudes about cigarette smoking. Although their findings showed that most children of different ages recognised the harmfulness of smoking and had a negative disposition about the habit, the differences were not examined in relation to cognitive development.

The assertion that children are aware of the hazards of smoking (Bynner, 1969; Bewley and Bland, 1978) and generally do not condone the habit is well documented in the scant research that does exist. For instance, the findings of Parcel et al. (1984) are consistent with those of Baric and Fisher (1979), Tennant (1979) and Shute et al. (1981), in that pre-school children are very cognisant of smoking behaviour in their environment. Equally, Young and Foulk (1985) who investigated the correlates of expected tobacco and alcohol use among primary schoolchildren, found significant recognition of tobacco products and a statistically significant relationship between exposure to smoking at home and intention to smoke in the future.

Fidler and Lambert (1994), in a seminal project on the influence of the adult role model of smoking on children aged 3 to 5 years found that subjects as young as three assimilate and take on board the adult role model of smoking. Moreover, the

findings from this Oxfordshire research also demonstrated that children of this young age were fairly well versed about the nature of smoking. Fifty percent of girls and 64% of boys demonstrated apparent understanding of smoking, the majority (99.6%) knew smoking was bad for health. More than half (57%) the sample had played at 'pretend' smoking and some were aware of advertising in their environment.

An exploration of 5 to 13 year old children's changing perceptions of cigarette smoke, cigarette smokers and cigarette smoking by the Somerset Health Education Authority and Somerset Education Consultants with the Best of Health Project (1994) also illustrated clearly that primary schoolchildren were knowledgeable about smoking and generally tended to express negative views about the habit. Age-related changes in perceptions of smoking were also noted.

1.8.2 *Age Related Differences*

Age related changes in children's understanding of smoking were explored by Meltzer, Bibace and Walsh (1984). They examined the development of children's ideas about smoking, its causes and consequences from a Piagetian theoretical perspective, using three different age groups: four, seven and eleven year olds. This study, based on structured interviews, is one of few conducted in the realm of smoking to investigate the manner in which children of diverse levels of cognitive development think about smoking. Their major finding was that the meaning and significance of cigarette smoking is largely dependent upon children's level of cognitive development.

In their research on the social and physiological knowledge about smoking of 7 and 11 years olds, Eiser and colleagues (1986:122) also found *'an encouraging level of awareness'* and understanding of smoking that increases and changes with age. Their results suggest that beliefs about smoking are influenced by much social rather than purely cognitive learning.

1.8.3 *Attitudes and Beliefs About Smoking*

In a large-scale study of 8-19 year olds, Charlton (1984) who explored children's beliefs about smoking in relation to sex, age and behaviour to gain insight into why children smoke, surmised that programme development needed to consider age related differences.

Oei and Burton (1990), when looking at the attitudes toward smoking of 7 to 9 year old children, found that perspectives were principally negative and that there was an association between attitude toward smoking and subsequent smoking behaviour. Additionally, parental habits and attitude on children's decision to smoke was seen to be significant. They postulate that their findings reflect the importance of implementing anti-smoking interventions for children as young as seven and probably younger.

Correspondingly, Bhatia et al. (1993) in their examination of the attitudes toward, and beliefs about, smoking in children ranging from 7 to 15 years of age discovered that children as young as age 7 were knowledgeable about the health consequences of smoking and likely to express negative attitudes concerning smoking. They concluded that smoking prevention programmes need to offer more than just information about the health hazards of smoking but rather, need to take on board the developmental process in conjunction with personal, interpersonal and social expectation. Recently, in a longitudinal birth to ten study being conducted by De Wet et al. (1997), it was also concluded that adult smoking behaviour and advertisements have a substantial impact on the perceptions, attitudes and expressed intentions regarding cigarette use of 5 year old South African children.

Although Bewley et al. (1974), found that children's attitudes toward smoking were complex and somewhat confusing, much of the smoking research involving children's perceptions about the habit has shown that generally, they have quite negative attitudes (Michell 1989; Goddard, 1990). It does appear however, that as children grow older, their attitudes and beliefs toward tobacco become

increasingly favourable (Schneider and Vanmastright, 1974; Botvin et al., 1983; Chassin et al., 1987).

In light of this age-related attitudinal change and armed with the knowledge that there is greater facility in establishing positive health attitudes than changing negative ones (Jurs, 1990), it would seem logical to introduce health promotion measures prior to this 'transition'. Such an initiative would ideally maintain and build upon the prevailing anti-smoking outlook and subsequently enable primary schoolchildren to resist taking up the habit as they enter the age of experimentation. This postulation is corroborated by Young and Foulk (1985:17) who contend '*that most children start out with a non-use orientation. It may be that lack of positive reinforcement of this attitude allows them to alter their perspective as they are exposed to the substances.*'

1.9 Smoking Education in the National Curriculum

Unfortunately the reality of the situation is such that presently, in the United Kingdom, there is no mandatory forum to address the issue of smoking in Key Stage 1 of the National Curriculum Guidance 5: Health Education document (National Curriculum Council, 1990) and no smoking specific intervention available for children under eight years of age. In Liverpool for example, few schools approach the topic until Year 6 (Ord and Ashton, 1991) by which time, almost one quarter of children have already tried to smoke (Walters and Whent, 1995).

At the local level, this deficiency of formal smoking education is further exacerbated by the prevailing socio-demographic variables present in the region, in view of the widely accepted association between social deprivation and prevalence of smoking (Marsh and McCay, 1994). According to the latest figures published by the Health Education Authority (Walters and Whent, 1995), individuals in the unskilled manual socio-economic group are three times more likely to smoke than those in the professional group. Traditional occupations such

as dock working which are characteristic to Liverpool have been linked to smoking.

Locally, the rate of unemployment for the city of Liverpool is twice that of the national average (Shepton, 1994) which makes it hardly surprising that the prevalence of adult smoking (30% in the North West Region) is high in the area (Walters and Whent, 1995). This can have profound implications on children in the area as previous research has verified the fact that parental smoking habits can influence the future smoking behaviour of children (Oei, Fae and Silva, 1990; Charlton, 1996).

1.10 Health Education

Health education, in conjunction with prevention and policy development, is considered to be an integral element of all health promotion initiatives (Tones et al., 1990; Naidoo and Wills, 1994). Its primary function – 'to promote health', is based on the assumption that the health status of individuals or communities can be influenced purposefully (Kiger, 1995). Generally, this is accomplished by means of raising awareness to generate self-empowerment; providing knowledge and skills to capacitate individuals to make their health decisions (Tolley, 1994).

There are many definitions for the term but one of the most comprehensive is given by Tones (1997:37):

> *Health education is any intentional activity which is designed to achieve health- or illness-related learning i.e. some relatively permanent change in an individual's capability or disposition. Effective health education may therefore produce changes in knowledge and understanding or ways of thinking. It may influence or clarify values; it may bring about some shift in belief or attitude; it may facilitate the acquisition of skills; it may even effect changes in behaviour or lifestyle.*

1.11 Health Promotion

Health promotion is the process of enabling people to increase control over, and to improve, their health according to the WHO (Gallagher and Burden, 1993) and health education is considered to be an important dimension within this larger field. In a like manner to health education, there are a myriad of definitions for this conceptualisation but the quintessential explanation, in the opinion of this author is Raeburn and Rootman's (1998: 11):

> *...health promotion is an enterprise involving the development over time, in individuals and communities, of basic and positive states of and conditions for physical, mental, social and spiritual health. The control of and resources for this enterprise need to be primarily in the hands of the people themselves, but with the back-up and support of professionals, policy-makers and the overall political system. At the heart of this enterprise are two key concepts: one of development (personal and community), and the other of empowerment.*

1.11.1 *Approaches to Health Promotion*

Because health is multi-dimensional and necessitates the use of diverse strategies to advance the concept in society, a range of divergent approaches have emerged. A framework of five models (Naidoo and Wills, 1994; Kiger, 1995; Ewles and Simnett, 1995) is identified and discussed in brief, below:

➢ The medical model where the prevention of ill health and premature death is attained by medical intervention. This model encourages reliance on medical knowledge and expertise by means of primary health care.

➢ The behaviour change model where health is considered a commodity and people have to be manipulated to value and subsequently adopt it. Experts encourage individuals by means of motivation or persuasion to take responsibility for their own health and adopt healthier lifestyles.

➢ The educational model which provides knowledge and information thus clarifying values and beliefs about health and health behaviours, and skill development to enable individuals to make their own informed choices about adopting healthier lifestyles.

➢ The empowerment model whereby individuals, facilitated by experts, identify their perceived needs and subsequently gain the skills and confidence to act upon them. Self-empowerment pertains to non-directive, person-centred health promotion approaches aimed at increasing control over their own lives whilst community empowerment refers to a manner of working which fosters active participation within that setting thus enabling them to challenge and change their social world.

➢ The social change model also known as radical health promotion, addresses inequalities in health and considers the importance of the socio-economic environment in determining health. The focus of this model, to bring about changes which have the effect of promoting health is at the policy or environmental level and is based on the adage 'to make the healthier choice the easier choice'.

Each of the approaches listed above has its own inherent strengths and weaknesses. They are not totally distinct, nor do they operate in isolation from each other. They do however, differ significantly in their aims and assumptions about health, society and behavioural change and which approach one adheres to is generally determined by a multiplicity of factors including the aim of the health promotion activity itself, the philosophical orientation of those involved and the needs of the target group.

1.12 The School as a Key Setting For Health Promotion

The school has been touted by many as one of several important contexts for effective health promotion practises (Johnson, 1981; Bruhn and Nader, 1982;

Iverson and Kolbe, 1983; Oei and Fea 1987; Tones and Tilford, 1994; Naidoo and Wills, 1994; Kaplin 1996; Green 1998). There are numerous reasons given for this accolade.

Schools are comprised of defined, easily accessible populations that have a mandate to provide education, including health education. Professional identities are linked to the school setting which make it both a credible and accountable institution in society; its effectiveness proven by research studies. Schools are also existing social structures thus making the dispersal of health education both cost effective and convenient and the implementation of policies feasible. Because of the existing infrastructure in schools, there is ongoing interaction between providers (teaching staff) and users (schoolchildren), which acts as a channel and a mechanism of influence that facilitates the dissemination of information.

The school setting, according to Johnson (1981), also affords the opportunity to counter balance the vicarious learning of health risk behaviours that children experience through social interaction. Although school-based health education has been espoused as one of the most effective smoking prevention strategies to deter children from starting to smoke, the evaluation of such programmes would suggest otherwise (Oei and Fea, 1987).

1.13 The Efficacy of School-Based Smoking Prevention Interventions

School-based smoking prevention interventions, initially came about in the 1960's, in response to research highlighting the long term health risks of cigarette smoking and the addictive nature of the habit. Attention thus, was focused on prevention and as a consequence, many campaigns were instigated, in attempts to prevent the onset of smoking in young people. Most school-based initiatives were of limited success (Swan 1987). The failure has largely been attributed to the fact that those interventions, based on the 'medical model' were factual, non directive approaches whereby the deleterious effects of tobacco were discussed occasionally, with the aid of some educational resources. At best, such

knowledge-oriented strategies only resulted in changes in attitude but not changes in smoking behaviour (Oei and Fea, 1987).

A shift from this traditional approach, to an emphasis on programmes that took into account psycho-social influences and looked to improving personal and social skills appears to have garnered the most consistent degree of success in the battle to delay onset and reduce prevalence (Nutbeam and Aaro, 1991). There are a myriad of examples available world-wide, of such interventions and several comprehensive reviews of smoking prevention programmes have been undertaken (Flay et al., 1983; Oei and Fea, 1987; Best et al., 1988; Stead et al., 1996; Little, 1997), all with similar conclusions. Although there is a place for school-based interventions, because of an acknowledged consistently positive effect (Glynn, 1993), it is only marginal and confined to delaying but not preventing the onset of adolescent smoking (Reid et al., 1995; Stead et al., 1996).

There is a consensus amongst researchers however that delaying onset is useful, albeit limited in impact (Reid, 1996). According to Breslau et al. (1993) postponement is worthwhile because individuals who take up the habit later in life are more likely to be successful at cessation than those who began smoking at an early age. Furthermore, the emergence of smoking-related illnesses are likely to occur later in life if onset of smoking is delayed (Royal College of Physicians, 1992).

The timing of school-based smoking interventions appears to be a crucial (Charlton et al., 1985; Jackson et al., 1994) but contentious issue and at present, there is little consensus of opinion as to when the optimal period for implementation is. For example, Reid (1996) suggests programmes should be implemented at ages 12-14 years, before teenagers become established smokers whilst Bellow et al. (1991), who distinguished three phases in which to administer smoking education: pre-onset, typical age of onset and post-typical age of onset, recommend 7 years as the minimum age.

The age which one considers appropriate for intervention generally ranges in accordance with one's philosophical convictions. Some believe that educating young children about smoking may induce them to smoke whilst others are of the opinion that smoking is a risk behaviour inherent to adolescence and that efforts should be concentrated on cessation. Few seem to consider early intervention as a viable option despite the fact that research demonstrates that knowledge and attitudes about smoking are well developed by the time children start primary school (Baric and Fisher, 1979).

Childhood today is not a tobacco-free zone and children themselves are not empty vessels. They come to school equipped with the wisdom and understanding of the many varied experiences in their social world. Williams et al. (1989) contend that teachers often underestimate this wealth of information that children bring with them and it is principally because of this disregard, that Johnson et al. (1981) believe that health education should start earlier than is currently accepted.

1.14 Early Interventions

The proactive approach to smoking prevention, that is implementing programmes early, before the habit manifests itself, has many advocates (Baric and Fisher, 1979; Flay et al. 1983; Schinke and Gilchrist, 1983; Tucker, 1987; Michell, 1989; Jurs, 1990; Oei, Fae and Silva, 1990; Cohen et al 1990; Amos 1992). It is endorsed by drug educators (Ives and Clements, 1996; Jackson, 1996) and young people themselves (Kaplan, 1997; Jones, 1998) and sanctioned by the Government in their new anti-drugs strategy in which they advocate the education of children from age five.

The premise that preventing the causes of problems is better than treating the consequences is further supported by the research efforts of Botvin and Eng (1982) and Flay et al. (1983) who are of the opinion that prevention strategies with children who have yet to start smoking are preferable to later efforts and Glynn et al. (1991: 285) who surmise that early intervention *'even if it predates*

expected onset by several years' is imperative, to ensure that early school leavers, those most likely to be early initiators are privy to some preventative measures.

There is further concordance amongst a significant group of researchers that primary prevention strategies need to be implemented early in the school curriculum. Both Tennant (1979) and Shute et al. (1981) argue that pre-school children are a suitable target population for anti-smoking interventions based on the fact that they already possess significant awareness of smoking in their environment. Furthermore, Schwartz and Scherr Trenk (1978) demonstrated that significant gains in knowledge and attitude change about health and smoking are possible with young children as a result of an innovative health education curriculum implemented in their school district. McCormick (1976) argues that because health behaviours are formulated at an early age, educational institutions like day care and pre-schools are prime candidates to teach youngsters about health, before deviant behaviour patterns are established. Moreover, regular contact with parents affords these educators the opportunity to reinforce what is learned in the school environment.

In an evaluation of a smoking prevention strategy for four and five year old Canadians, Kishchuk and colleagues (1990) felt that the positive attitudes toward smoking expressed by almost half the subjects justified the implementation of early intervention but they caution that the lack of appropriate methods to evaluate the attitudes of young children makes it difficult to assess whether these programmes do in fact, inhibit the onset of smoking. Such a caveat highlights the fact that issues of methodology not only dictate how research is done but what assumptions can be made from the nature of the findings.

Johnson (1981), in a comprehensive discussion of health education in the primary schools, extols the virtues of early intervention. He contends that schools need to recognise the early influences on the developmental process of smoking by implementing a prevention strategy before attitudes have become entrenched in children's belief systems. He alleges that, in implementing programmes when

habituation has already occurred, schools leave themselves little time to educate and support children and little opportunity to affect any change on the health behaviours of those who might be inclined to take up the habit.

Natapoff (1982) also maintains that any health promotion initiatives should be started during the pre-school years, prior to the crucial period in children's lives when health beliefs and health behaviour alter, usually around age nine. She recommends that any interventions developed, to be effective should be set in the context of the present, that is, what they see, what they understand and what they know to be true, as a result of experiences in everyday life. For example, because young children find the future abstract and thus difficult to conceptualise, informing them about the potential of developing lung cancer as a result of smoking would be a pointless exercise. However, concentrating on the visible ramifications of smoking such as yellow fingers, wrinkly skin and black teeth which are more perceptible and thus more familiar would probably be more effectual.

Correspondingly, Schinke and Gilchrist (1983) believe that primary prevention whilst both useful and cost-effective needs to be executed before smoking is habituated. In agreement is Oei and Fea (1987: 23) who stipulate that '*Health education directed at children before the onset of addiction has been advocated as the most potentially effective method of preventing smoking-related disease.*' Michell (1989) is also of the opinion that school-based interventions, to be effective must be implemented early into the curriculum because anti-smoking antagonism, at this stage is naturally strong and subsequent strategies need to build on these beliefs to ensure children remain non smokers as the mature.

Similarly, Meier (1991), in a study on the impact of role models on children's attitudes toward smoking, recommended that programmes addressing addictiveness of nicotine and cessation difficulties be integral to comprehensive Kindergarten to Grade 12 programmes. In addition, the behavioural tracking study by Kelder and colleagues (1994) highlighting the early consolidation of health activities like smoking provides justification for early intervention and may

help to inform the development of future health promotion strategies. Greenlund et al. (1997: 1345) also advocate that smoking prevention programmes begin '*as early as possible*' because health behaviours which are established early are resistant to change once adopted.

Whilst many espouse the view that young children afford an unprecedented opportunity for effective intervention, there are some who challenge the premise, in the belief that such strategies might act as a catalyst that could encourage children to try out smoking. Support for such an argument can be found in Berberian and colleague's review (in Bartlett, 1981) of a drug education programme that may have led to some increased drug experimentation. Swan (1987) although not completely dismissive of the concept, cautions that observed outcomes in smoking behaviour as a consequence of early intervention may be deceptive. In his estimation, the rationale for very early experimentation is different from regular smoking and in effect, experimentation with cigarettes is inevitable, regardless of mediating factors like health education that are meant to discourage it.

Attempts to refute the claim that too early an introduction of smoking education leads to increased experimentation can be found in the rationale of The Hampshire Education Committee Working Party's Guidelines, Health: Learning to Care (1972 as quoted in Johnson, Health Education in Primary Schools, 1981:86)

> *There are stages of emotional development at which a pupil can accept and integrate information relating directly to himself, to his own development, and to his relationships with others ... These stages of development vary greatly between individuals, and information often requires repetition, and needs to be readily available at many levels ... it was felt that there is probably less danger in giving information to pupils too early than in being too late.*

Furthermore, in the Universal Declaration of Children's Rights (United Nations, 1989 in Tones and Tilford, 1994), children have been accorded the right to

knowledge about health. The results of this research and that of others (Baric and Fisher, 1979; Tennant, 1979; Shute et al., 1981; Parcel et al., 1984; Fidler and Lambert, 1994) demonstrates that primary schoolchildren have a significant understanding of the implications of smoking by the time they start school, thus it would seem appropriate that further provision of health education commence from Reception.

1.15 The Effectiveness of Early Interventions

The effectiveness of early interventions for the most part are unknown, as most interventions target older children (Glynn, et al., 1991). In their review of school-based smoking interventions, Oei and Fea (1987) maintain that most efforts have been directed at children in the 12 to 13 age range but report that some recommend introducing prevention programmes at an earlier age, as established smokers were not receptive to the programmes.

Certainly such findings are indicative of the need for prospective school prevention. In agreement are Jackson et al. (1994: 104) who contend that *'the lack of long-term effectiveness of current programmes may be due in part to the age and pre-intervention smoking experience of the target group.'* Thus, one explanation for the limited success of smoking intervention measures could perhaps be attributed to fact that anti-smoking strategies tend to be reactive; that is implemented into the school curriculum at a stage when attitudes and beliefs toward smoking have long been established and experimentation with cigarettes is already underway.

An extensive review undertaken by Best et al. (1988) highlighted the fact that none of the smoking intervention programmes examined were aimed at school children less than 9 years of age. Although in their overview, Stead et al. (1996) do not incorporate age levels in their evaluation of different smoking prevention programmes, a comparison with the other reviews indicates that educational strategies are still being delivered to older children. In fact, there is only evidence

in the literature on smoking of the three programmes, two of which are grounded in health education as opposed to smoking education aimed specifically at children under eight years of age. These are outlined below.

1.15.1 *The Pre-school Health Education Programme*

The Pre-school Health Education Programme (PHEP), was an American project designed to study the development of health and safety behaviour of children 2 to 4 years of age in which smoking was a targeted health behaviour in the curriculum. The affects of PHEP on the smoking intentions of pre-school children were assessed by Parcel et al. (1984) and results showed that significantly fewer of the children who had participated in the programme intended to smoke in the future. Those who expressed interest in smoking when older appear to have been influenced by adult models. Unfortunately, school-based interventions cannot modify such external factors, which limits the impact of this intervention. Parcel and colleagues (1984) also admit that it is not possible to predict if pre-school smoking interventions could prevent onset of smoking but they do confirm that knowledge and expectations of smoking are developed at a very early age and therefore some children could potentially be influenced by early intervention. They advocate the conduction of longitudinal studies with children from pre-school level onward, to investigate the origins of smoking intention accurately.

1.15.2 *The School Health Curriculum Project*

The second health based approach to primary prevention is the School Health Curriculum Project (SHCP), an American programme that uses diverse methods from Kindergarten through to Grade Seven and is one of few grounded in the theoretical conceptualisation of child development. Flay and colleagues (1983) regarded it as 'promising' because in assessing effectiveness, it was found that programme participants smoked significantly less than those not involved in the intervention. Although they do contend that the intervention alone was probably not responsible for all the differences, they felt the results were encouraging.

1.15.3 *The 'Generation Pre-school Programme'*

The 'Generation Pre-school Programme', a Canadian smoking prevention education tool for children ages 3 to 6 years is the third proactive strategy. Evaluation of the effectiveness and appropriateness of the intervention (Ekos Research Associates, 1987) demonstrated that this age group had very high levels of awareness about smoking and tobacco products, in conjunction with an apparent short-term reduction in the percentage of pre-schoolers who intend to smoke. As such, widespread dispersal of the tool and continued monitoring of programme impact was recommended.

In recent years, interest in and support for early intervention has surfaced on the European and Asian front as well. Several countries have developed and implemented anti-smoking interventions for very young children with significant success. Hungary has initiated a 'Smoking Prevention Model Experiment', apparently the first of its kind and findings indicate that efforts with children age 6 are worthwhile as the programme can effectively form the opinion of children about smoking (Demjen, 1995). Poland has also designed an educational programme for 6 year old children entitled 'Clean Air Around Us' (Szymborski et al., 1997) and the 'Care for Kids' Campaign has been introduced by ASH Thailand, in attempts to safeguard children from birth to 12 years of age from smoking, through school-based sessions (Ritthiphakee et al., 1997). Most recently, a European Taskforce on Smoking Prevention in Childhood under the auspices of the European Network for Young People and Tobacco has been formulated, with a mandate to address tobacco related issues specific to young children at a European level.

1.16 Children's Concepts of Health

Although health is a salient value (Blaxter, 1990), it means different things to different people. As a consequence, health needs to be understood in the context

of how it is defined by children. Therefore, a review of research investigating children's perceptions of health merits consideration.

Little is known about how children perceive health. This area of study, like smoking and young children, is plagued by a privation of relevant research. However, a body of literature examining the general conceptions of health in this age group is mounting, in attempts to understand the causes and determinants of it. Such investigative efforts are an imperative prerequisite to the creation of relevant and effective health promotion strategies (Green and Bird, 1986; Nutbeam et al., 1989).

There is evidence to suggest that concepts of health originate in childhood and are correlated to the different stages of cognitive development (Farrand and Cox, 1993). Conceptualisations appear to change with cognitive maturity. As children get older, they are able to think more rationally and the resultant effects are subtle but meaningful differences in their perceptions of health (Heaven, 1996). For some however, children's understanding of health concepts is not only the consequence of maturation but a product of their personal experiences as well (Eiser, 1989).

1.16.1 *A Review of The Literature*

The emphasis on the need to ground effective health promotion initiatives in the attitudes and beliefs that inform children's perspectives has reverberated throughout the literature on children's concepts of health. In a pioneering study of children's understanding of health, Rashkis (1965) discovered that children's conceptualisation of health is age-related whilst Hester (1987) found that school-age children view health holistically, from a multi-dimensional perspective. Others have noted that children defined health pragmatically, in terms of fears, dangers and the absence of leisure facilities (Kalnins et al., 1992).

Palmer and Lewis (1976) studied how children, in the latency period (5 to 12 years) defined health and illness. Their findings, consistent with theories on

Palmer and Lewis (1976) studied how children, in the latency period (5 to 12 years) defined health and illness. Their findings, consistent with theories on children's cognitive and behavioural development suggest that health promotion strategies need to be developmentally appropriate. This postulation is upheld by Bruhn and Parcel (1982), who assert that children are '*inherently motivated*' to learn health behaviours and that the promotion of positive ones, is most likely to occur when children's stages of development are considered.

A developmental study of children's views of health was conducted by Natapoff (1978) on children of varying ages. The results illustrated that children view health positively, as something that allows them to partake in desired activities. She noted differences in the quality and quantity of ideas about health, based on age and deduced that theories of concept development have much bearing on health education, as concepts of health change over time. Moreover, she also advocated the utilisation of children's ideas as a framework for health promotion strategies.

Children from four different age groups were interviewed by Eiser et al. (1983), to assess their knowledge on health and illness. From their results, they confirmed that attitudes about health are shaped in childhood and the lack of early intervention at this stage in life means that prime opportunities to educate children are being ignored. Interestingly, they propose that health promotion interventions would be most effective if based on aspects of interest to children rather than correlated to cognitive development.

Cohen et al. (1990) however, felt that it was imperative to focus on sex and age differences in the health habits and beliefs of schoolchildren (grade 3 to 12) as the findings would foster the development of interventions within a developmental framework and subsequently, programmes could then be implemented in the most appropriate stage of development for the habit.

1.16.2 *The Conceptual Framework*

The research on children's concepts of health has been primarily dominated by two distinct conceptual frameworks: the cognitive-developmental approach from a Piagetain perspective and expectancy theory from social psychology (Kalnins et el., 1992). In recent years, there has been a philosophical shift in the current thinking about children's views to suggest that results from these studies do not provide a valid account of children's actual perspectives on health (Kalnins et al., 1982). In the view of Kalnins and colleagues (1992: 54), '*To fully understand children's perceptions we must search out the principles according to which they interpret their world rather than measure the extent to which they have incorporated adult standards.*'

Examples of this practise are rare and Kalnins et al. (1992) call on researchers to develop new and innovative techniques to facilitate the study of children's concepts of health and health behaviour from their own perspective. One such example is a methodologically unique study of young children's health-related beliefs and behaviours in which Backett and Alexander (1991:37) found that children gave both *'public'* and *'private'* accounts of health and illness, had the capacity to hold inconsistent views about health concurrently and displayed limited awareness of parental health-related behaviours. They also advocated the construction of approaches which are *'meaningful within the children's own frame of reference'*.

1.17 The Importance of Children's Perspectives

The marginal success of many school-based anti-smoking invention strategies can perhaps be attributed to the fact that many are developed without the foundation of basic research to inform their conceptualisation. The US Surgeon General (1979) observed that '*most of the programmes are not based on any sound theoretical model, but rather on what people think might work - or what seems reasonable to them at the time'* (as quoted in Swan, 1987: 20).

Health promotion specialists, under the auspices of their own expertise, tend to develop and impose strategies from the 'top down', often without any input from the individuals to whom the intervention is targeted. This is problematic because *'Health professionals' views of the likely appeal of health education messages frequently differ from those of their intended audiences'* (Baggaley in Chapman, 1994 :890). The ramifications of this are consequential in light of the fact that the efficacy of health promotion strategies appears to be correlated to the perceived significance it has on individuals in the context of their own lives (Bendelow et al., 1996a).

'Top down approaches' and little, if any contribution on the part of children is the status quo in childhood health promotion. This failure to involve children, to accept them as collaborators in the process of addressing the problem of tobacco is perhaps another explanation for the increasing prevalence in the rates of smoking among the young. If there is to be any hope of reversing this trend, researchers need to recognise that they are only 'process experts', that those most qualified to address the issue of tobacco and children are in reality, the 'content experts', the children themselves.

Backett and Alexander (1991: 37) surmise that children's perspectives about health are largely disregarded, in favour of those 'legitimised' by health experts when in fact, because

> *good health and healthy practices have their roots in children, it is crucially important for health educators to increase their understanding not only of the ground in which they sow their seed but also of the processes which might help or hinder germination and growth.*

In concordance are Williams, Wetton and Moon (1989:8), who declare that it is crucial to know '*the extent of each child's knowledge and understanding ... [or] ... the work may be irrelevant and the important health messages may have little*

impact.' Bendelow and colleagues (1996b: 31), when looking at the views that young people have about health and cancer prevention, also stressed the necessity of building onto baseline knowledge and emphasised that need to heed the perspectives of children and young people, *' to respect their own views and opinions as legitimate and valid sources of knowledge.'* This is further endorsed by Wetton and McWhirter (1998: 282) who state that *'Curriculum development strategies which start where children are, value the children's knowledge and understanding, and the sense they make of the world, providing a firm foundation for constructing more sophisticated meaning in a complex world'.*

The need to base health promotion strategies on children's own starting point is historically rooted in the early theories of child development. Rousseau's notion that it was necessary to 'educate the child according to his nature' laid the groundwork for today's 'child-centred' education. This ideology, that effective health promotion must be grounded in one's own perspectives, as delineated by each individual's cognitive development although paramount to the success of any health promotion, is not widely accepted (Weare, 1992).

Because of the dearth of research involving young children, especially those in the early years, in conjunction with an apparent absence of appropriate methods to accommodate these young subjects, a lack of awareness has resulted in relation to where children are at in their thinking about smoking and to what extent they partake in the habit. This deficiency frustrates the development of effective smoking prevention strategies which need to be based on an accurate understanding of the beliefs and knowledge of the target group (Oakley et al. 1995; Bendelow et al., 1996b). *'Understanding how this information and beliefs are structured and how that information-belief-behaviour structure changes with age is also relevant'* (Green and Bird, 1986:325). In light of this presupposition, research efforts involving primary school children are therefore essential before health educators and health promoters can put into practice their general belief that the elimination of smoking related diseases can only be achieved via primary prevention; i.e. deterring children from starting to smoke.

Stead et al. (1996) believe that improved rates of success for school-based smoking education programmes are unlikely to transpire, noting that other researchers perceive current interventions to be of high standards and thus beyond reproach. It can be argued however, that developing relevant interventions based on the personal perspectives that are products of children's attitudes and beliefs about smoking and implementing them early in the school curriculum could potentially culminate in greater advances in the effectiveness of school-based smoking health promotion strategies.

1.18 Aim Of The Study

This research study was devised to address the issue of smoking in local children in their early years, specifically before the habit manifests itself. Through the investigation of children's beliefs, knowledge, perceptions and behavioural intentions that inform their attitudes about smoking, this study aimed to yield insight into the perspectives that children in their early years have on the subject. By adopting an unorthodox approach to data collection, namely from the children's own perspectives, this work will provide the understanding needed to develop an effective intervention model for health promotion.

1.19 Objectives

The aim was attained by fulfilling the following objectives:

A) *Cross-sectional study*

- To develop an appropriate, child-centred methodology to investigate the perspectives that Liverpool primary schoolchildren (4-8 years of age) in wards of varying socio-economic status had about smoking

- To identify the attitudes, beliefs, knowledge, perceptions and smoking behaviour that informed these children's perspectives

B) Longitudinal cohort study

- To assess changes in perspectives on smoking of one birth cohort over time

- To provide the understanding needed to develop an effective smoking prevention model for health promotion in local primary schools

1.20 Structure of the Thesis

An exploration of the perspectives on smoking of Liverpool primary schoolchildren in their early years was achieved through the conduction of a multi-method triangulated study. This was necessitated by the dearth of available information on this particular population, as summarised by the overview of literature in this first chapter.

Chapter Two details the theoretical framework of this study by outlining some the paradigms that have influenced the research design. Specifically the concepts of attitudes and beliefs will be discussed and the major theories of child development that inform these notions will also be explored. The third chapter focuses on research design. Discussion centres around the methodological framework that underpins the entire study. Particular attention is given to the rationale for adopting a multi-method approach, the tools selected, the procedure and protocol of the study and an account of the pilot work. Chapter Four presents the results of the cross sectional study. The findings for each method are outlined and the discussion is a culmination of the salient ideas that emerged from the triangulated study.

Chapter Five introduces the longitudinal cohort study. It outlines the justification for conducting the study and addresses issues of methodology. Variables of

particular interest are defined and the research protocol is documented. The following two chapters provide the longitudinal cohort study results and the subsequent discussion of the findings. Chapter Six supplies an in-depth analysis of results whilst Chapter Seven is dedicated to a comprehensive discussion of these findings and attempts to draw together pertinent issues from both the cross sectional and longitudinal studies in the context of children's perspectives about smoking.

Finally, Chapter Eight explores the impact and importance of the completed work with regards to the understanding gained and implications on the development of health promotion initiatives for children in their early years. Overall conclusions and directions for future research will conclude the main textual component of the thesis.

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CHAPTER TWO

CONCEPTUAL FRAMEWORK

2.1 Chapter Overview

The following chapter will outline the theoretical framework of the study by discussing some of the paradigms that have strongly influenced the development of the research design. The concept of attitude will be examined in detail, with reference to composition, formation, development and its relationship with the notion of beliefs and behaviour. Theoretical perspectives from the field of child development are also presented. Emphasis is given to cognitive-development and social learning theories, as both are of particular relevance to attitudes.

2.2 Introduction

To understand how children perceive smoking, there is a need to delve into the underlying principles that sustain their perspectives. Perspectives are defined as one's personal point of view, a manner of viewing things or in essence, *an attitude* (Universal Dictionary, 1987). Thus, an exploration of the attitudes that local primary schoolchildren in their early years have about smoking is the first crucial step to understanding smoking from their own frame of reference.

2.3 Attitudes

The importance of attitudes to the understanding and prediction of smoking behaviour is well documented in research on smoking (Sutton, 1989). These constructs are developed in early childhood (Jurs, 1990) via the mechanisms of primary socialisation (McDavid and Garwood, 1978). Attitudes are not innate but

rather learned (Halloran, 1967; Fishbein and Ajzen, 1975; Gagne, 1977; Cothern et al., 1992) often incidentally; fashioned and altered constantly from birth onwards and generally dictated by primary group influences: parents, siblings, peers and teachers. Attitudes can be learned in many ways, from single events, to experiences of success and failure and imitation of others. Because both positive and negative dispositions are assimilated, the postulation that it is much easier to establish positive attitudes than to change engrained ones (Cohen et al., 1990), gives justification to this study's emphasis on the need to introduce smoking intervention programs to young children as a proactive measure.

Definitions of Attitudes

There is no ubiquitous definition for the concept of attitude despite extensive investigation (Olson and Zanna, 1993). Of the voluminous ones in existence in the literature, perhaps the most reiterated explanation of the concept is Gordon Allport's (1967: 8) assertion that an attitude is '*a mental and neural state of readiness, organised through experience, exerting a directive or dynamic influence upon the individual's response to all objects and situations with which it is related*'. Krech et al. (1948 in Halloran, 1967:21) contend that an attitude is '*an enduring system of positive and negative evaluations, emotional feelings and pro and con action tendencies with respect to a social object*'. Roediger et al. (1984 in Downie et al., 1996: 120) conceptualise an attitude as '*a relatively stable tendency to respond consistently to particular people, objects or situations*' whilst Cothern et al. (1992: 84) consider an attitude to be '*a behavioural by-product of individuals' experiences with certain situations and within certain cultural groups*'.

In lay terminology, attitudes which are enduring in nature because they are based on beliefs (Ajzen and Fishbein, 1980) are the principles that primarily govern our actions. Although they are relatively stable, they are not fixed and thus can be changed (Downie et al., 1996). In essence, they are learned predispositions to respond in a consistently favourable or unfavourable way towards a given object, person or event (Fishbein and Ajzen, 1975). Attitudes are shaped by the

information to which people are exposed (Krech et al., 1962) and as products of their experience, provide indicators to future behaviour (Deaux and Wrightsman, 1988).

Despite the absence of universal agreement on a definition, there is significant consensus among researchers that attitudes are complex, multi-dimensional concepts, encompassing three main components: the cognitive, the affective and the conative (Krech et al., 1962; Reith and Adcock, 1976; Gagne, 1977; Deaux and Wrightsman, 1988) as demonstrated below. This model provided the guiding principles for the assessment of children's attitudes toward smoking.

Figure 2. Three Component View of Attitudes (Rosenberg and Hovland, 1960 as illustrated in Ajzen and Fishbein, 1980)

The cognitive element refers to the beliefs and ideas an individual has about some attitude object and includes their evaluative beliefs that it is good or bad, appropriate or inappropriate. The affective element concerns the emotional feelings an individual has about the attitude object, in effect, evaluative feelings of like or dislikes. The conative or behavioural element pertains to an individual's action tendencies in regard to the object, their readiness to behave in a particular way that is associated with their attitude but not related to actual behaviour itself, as attitude-related behaviour is also caused by external social and physical determinants.

A difference of opinion as to which component is most important has led to divergent philosophies on attitudes. Some have continued to employ the multidimensional model whilst others have adopted a dual or unidimensional perspective: focusing only on one or two aspects. However, because the majority define attitudes in terms of evaluation, this dimension is thought to be central to the structure of the concept (Olson and Zanna, 1993).

The evaluative aspect is considered most important in view of the fact that attitudes refer to the enduring positive and negative feelings about some object, person or issue, that is the amount of 'affect' for or against an attitude object (Open University, 1975). In recent years however, attitude theorists have come to recognise that not all attitudes have cognitive, affective or conative manifestations to them but acknowledge rather, that these elements are correlates of attitudes which can be distinguished as both antecedents and consequences of attitudes (Olson and Zanna, 1993).

2.4 Beliefs

It can be said that all attitudes include beliefs but not all beliefs are attitudes. The conceptual distinction between attitudes and beliefs has been greatly debated but to date, there has been no definitive resolution. In some cases, both terms are used interchangeably. The lack of differentiation is based on the premise that attitudes

and beliefs both refer to personal opinions of contentious public issues (Holloran, 1967).

Definitions of Beliefs

Many however, do feel the need to distinguish between attitudes and beliefs and this has spawned a myriad of definitions. They range from the view that beliefs are knowledge that has no basis in personal experience but exercises some control over perceptions, thoughts and feelings (Claxton, 1984), that they are predispositions to action (Rokeach, 1972) or conversely, that they are not predispositions to act, in the view of McGillicuddy-De Lisi et al. (1979). Stahlberg and Frey (1988) stipulate that the term belief refers to the opinion based on the knowledge, information or thoughts people have about an object.

For Fishbein and Ajzen (1975) the difference between attitudes and beliefs lies in the emotional dimension; beliefs are neutral whilst attitudes are evaluative. They contend that there are three levels of beliefs: awareness, acceptance and personalised acceptance and that attitudes develop from beliefs about the likely outcome. For example, people are aware that smoking causes cancer, they believe that smoking is dangerous but unless they come to accept that their own smoking habit is self-injurious, anti-smoking campaigns will be ineffective at modifying the behaviour.

According to the literature, beliefs, those things we know to be true (Blaxter, 1990), are acquired ideas and thoughts which may be descriptive, evaluative and prescriptive in nature (Rokeach, 1972). Like attitudes, they tend to develop very early in childhood, from diverse sources, including personal experiences, learning situations, mass media and information from significant others (Glover, 1988). Beliefs are constantly defined and refined by experiences (Cothern and Collins 1992) and are not held in isolation but rather comprise part of a system (Glover, 1988). Attitudes are in effect, applications of these systems.

2.5 Attitudes and Behaviour

The question of whether attitudes govern behaviour is pervasive in the literature, but answers are rather evasive. Traditionally, it was assumed that attitudes could predict behaviour but research has demonstrated that attitudes and behaviour are not always directly related. It would appear that attitudes do not determine certain action but make it more or less likely to happen (Gagne, 1977).

The lack of correlation between attitudes and behaviour may be due in part, to the fact that there is no one-to-one correspondence between an attitude and any given behaviour (Ajzen and Fishbein, 1980). Having an attitude about someone or something may have some effect on behaviour but mediating factors such as direct experience with the attitude object or the situational context exert influence on behaviour as well (Gagne, 1977). According to Stahlberg and Frey (1988 :162), ' ... *attitudes will be weak predicators of behaviour when the situational constraints are so strong that no individual behaviour is possible.*' In essence, knowing an individual's attitude sheds some light on the overall pattern of behaviour and perhaps allows for the predication of how one may react but does not necessarily dictate how the individual will behave.

Another reason for the weak empirical relationship between attitudes and behaviour possibly stems from the research methodology utilised in previous studies. Deaux and Wrightsman (1988) noted that researchers often use a general measure of attitude and then look at very specific measures of behaviour. This lack of correspondence contributes to the poor correlation between attitudes and subsequent behaviour (Stahlberg and Frey, 1988).

Additionally, whilst many researchers advocate the multi-component view of attitudes, most research is conducted at the unidimensional level, in particular on the affective element as evaluative statements are easy to measure. This in itself is not problematic when the cognitive and affective elements of the attitude are consistent with each other, but if they do not coincide, it can result in unstable attitudes which are poor predictors of subsequent behaviour. As such, the

adoption of a holistic approach to attitude measurement is prescribed. Because attitudes are complex, multi-faceted and multi-dimension in nature, it follows then that the measurement of this concept should be multi-method as well.

2.6 Measurement of Attitudes

Attitudes are hypothetical constructs; such abstractness is difficult to measure. In actuality, attitudes as underlying constructs (Deaux and Wrightsman, 1988) cannot be measured directly only deduced or inferred from other observable data (Krech et al., 1962; Halloran, 1967; Downie et al., 1996). Further, it is based on the assumption that attitudes can be measured by the opinions or beliefs individuals hold about the attitude object. Research tools used to measure attitudes include open- ended questions, self reported techniques like questionnaires and rating scales, physiological measurements and behaviour observation.

The task of assessing children's attitudes in particular is complicated by the fact that '*Children do not generally express their beliefs because they think that everyone believes as they do, because they are afraid of making mistakes or, finally, because the ideas are not sufficiently systematised to be formulated*' (Inhelder et al., 1960: 434). Thus, an appropriate methodology must attempt to chronicle beliefs that are already formed, as well as clarify implicit beliefs that guide children's reasoning.

2.7 Formation of Attitudes

People's perceptions of reality, their view of the world manifests itself through the attitudes and beliefs they have come to assimilate, as a function of early experiences and social learning, shaped by cognitive development and the cultural norms of their social world. The origin of attitudes therefore have their roots in primary socialisation and as a consequence, forms an important dimension of child

development (Yarrow, 1960; Open University, 1975; Cohen 1976). The theoretical framework that shapes the measurement of children's attitudes and beliefs toward smoking in this research study is grounded in the ideologies that inform the field of child development.

CHILD DEVELOPMENT

2.8 Theoretical Perspectives

Several divergent theoretical perspectives have been constructed to explain child development (Shaffer, 1988; Bee, 1992; Crain, 1992; Papalia et al., 1992; Santrock and Yussen, 1992). The most influential are discussed below. Although Santrock and Yussen (1992:75) recommend the adoption of an *'eclectic theoretical orientation'* to best understand the complexity and multi-facetedness of child development, particular attention will be given to the philosophical principles purported by the cognitive theorist Piaget, who emphasises the developing child's rational thinking and stages of thought, and the social learning theorist Bandura, who accentuates behaviour, environment and cognition as the key variables in development (Crain, 1992) as the underlying process of attitudinal acquisition specifically involves these mechanisms.

2.8.1 *Psychoanalytic Theories*

The basic premise of psychoanalytic theories is that development is primarily unconscious and to understand it, an analysis of the underlying process of the mind and the personality is required. Further they emphasise that development occurs in distinct sequential stages and success at meeting the demands of each stage is dependent upon interactions with people and objects in the child's world. They also assert that behaviour is governed by both conscious and unconscious processes, and that the internal processes are as important as the external

experiences in shaping behaviour. Significant contributions to this theory were made by Sigmund Freud, Carl Jung and Erik Erikson.

2.8.2 *Phenomenological Theories*

According to the proponents of this approach, the importance of children's perceptions of themselves and their environment is central to their development. Development is not based on stages but experience, in particular immediate experience. Of all the phenomenological theories, the humanistic ones are the most recognised. They emphasise the potential for positive, healthy development, the freedom of choice, creativity and self-actualisation. Leading humanists are Carl Rogers, who believes that the self is the core of development and defines self concept as an individual's overall perceptions of their ability, behaviour and personality and Abraham Maslow who contends that people have the ability to take charge of their lives and foster their own development.

2.8.3 *Behavioural Learning Theories*

This theoretical perspective emphasises behaviour, the environment and cognition as vital elements to development. Traditional learning theorists like Ivan Pavlov and Skinner are behaviourists who believe that the environment shapes children. They maintain that development, which is observable behaviour, learned through experience with the environment can be changed by altering those experiences. For these behaviourists, the process of learning is not contingent upon cognition but rather based on such concepts as classical conditioning whereby a neutral stimulus acquires the ability to produce an automatic response originally produced by another stimulus and operant conditioning whereby the probability of a behaviour occurring is dependent upon the consequences of reinforcements or rewards which would increase the likelihood of occurrence or that of punishment which would decease it.

Classical Conditioning

Attitude development by means of classical conditioning can occur when attitude objects are paired with favourable or unfavourable characteristics. In subsequent circumstances, when the object is associated with a positive attribute, a positive attitude can form and inversely, when linked with a negative trait, a negative attitude can arise.

Operant Conditioning

Operant conditioning dictates that attitudes are affected by positive or negative reinforcements and that the reinforced attitude will probably reoccur in similar situations. For example, individuals who hold strong anti-smoking attitudes will have them strengthened each time the see a 'No Smoking' sign or receive social approval for not partaking in the habit. Clearly, verbal rewards such as praise and approval from others can effectively mould attitudes (Gagne, 1977).

2.8.4 *Social Learning Theory*

Social learning theorists contend that reinforcement is not necessary to learning an attitude. Learning can occur as a result of observing a human model: reinforcement just increases the probability that the acquired action or attitude will be repeated. In fact, the majority of habits and attitudes acquired are learned via observation and imitation, most frequently in childhood. Gagne (1977) postulates that human modelling is essentially the most effective approach to attitude learning.

2.8.4.1 Bandura's Cognitive Social Learning Theory

The most influential social learning theorist is Albert Bandura. He acknowledged that the environment is an significant factor in development but he recognised the importance of cognitive processes as well. According to Bandura, children have the capacity, through beliefs, values, thoughts and social skills to control their

own behaviour. They develop a range of new behaviours, ideas and attitudes mainly through observing parents, peers, siblings, teachers and television personalities to name a few, and subsequently imitating their behaviour.

Learning Via Imitation

Imitative learning occurs when the child's acquisition of a symbolic representation of the model's action is stored in the memory and retrieved at a later date, to guide attempts to imitate (Shaffer, 1988). However, *'children of different ages notice different things and analyse or process observations differently, [thus] learning is going to vary systematically with age'* (Bee, 1992: 23).

The ability to imitate emerges early in child development. There is conclusive evidence in the literature that indicates that children are capable of imitative responses as young as eight months of age (Meltzoff, 1988). Indeed, by eighteen months, Piaget surmises that most infants are capable of deferred imitation, reproducing the actions of an absent model (McDavid and Garwood, 1978). Moreover, as children are rewarded for imitative behaviour in various situations and as their capacity for abstraction increases, it seems reasonable to assume that imitative proclivities continue to develop (Rokeach, 1972).

This imitative ability has tremendous repercussions for the learning of attitudes because it verifies the fact that attitudes which are learned incidentally rather than a result of preplanned instruction, can be learned even if individuals are not aware of, nor able to verbalise, the principle upon which the attitude is based (Rhine, 1967). Ultimately, just by keeping their eyes and ears open, children learn many attitudes, both positive and negative in context.

Learning Via Modelling

Because observational learning is not automatic, its success is contingent upon four interrelated cognitive elements: attention, retention, motor reproduction and motivation (Shaffer, 1988). In lay terms, this means that what children learn from

observing others is influenced by what they pay attention to, by their ability to make sense of what they see, and to remember and repeat the observed action.

Children are exposed to a variety of models but to learn by observation, they must attend carefully to the model, which is often selected on the basis of their influence, power, distinction and value. Because the family is the central focus of a young child's life, parents generally assume this primary role. As models, the parents have the capacity to shape most aspects of the child's behaviour. They determine what is right and what is wrong (Pikunas, 1976) and this cultivates a blind obedience to authority (absolutism). As children mature, their model preferences change. Parental imitation tends to give way to imitation of peers. Parents at this point, can potentially become 'negative shapers' of attitudes as adolescents often intentionally adopt attitudes diametric to those of their parents (Open University, 1975).

To learn via human modelling, a child must commit the model's actions to memory. This is accomplished by means of symbolic coding through the imaginal representational system, whereby observers form retrievable sensory images of what they have seen and the verbal representational system, whereby observers translate what they have seen into labels that are easy to retrieve (Olson and Zanna, 1993). These symbolic representations need to be translated into action before the child can imitate the behaviour. The rate at which this transpires depends upon the observer's ability to complete all the component responses and upon the availability of the necessary motor skills. A child cannot smoke a cigarette without the manipulative skills required nor can a child develop strong attitudes about smoking without prior knowledge about tobacco.

Lastly, what often determines whether a child re-enacts the responses they have learned rests not only upon the actual consequences received for performing the action but rather upon the consequences expected (Shaffer, 1988). Furthermore, the approval or disapproval of significant others can profoundly effect performance of an observed action.

2.8.5 *Cognitive- Developmental Theories*

Theorists from the cognitive-developmental school of thought attempt to explain common patterns of development. They believe that the child is an active participant in the process of development and that the source of developmental change comes from within. Their basic assumption is that the environment does not shape the child but rather the child seeks to understand the environment. Central figures in the realm of cognitive development are Lev Vygotsky, Heinz Werner and most importantly, Jean Piaget.

2.8.5.1 Piaget's Cognitive Stage Theory

Piaget, the distinguished Swiss psychologist was instrumental in radically changing people's perceptions about the development of children's minds. He asserted that children are active agents in their own self development, that they learn largely on their own, from an intrinsic interest in the world. He believed that in constructing their own cognitive world, they organise experiences and observations into coherent systems and adapt their thinking by way of assimilation: the incorporation of new ideas into existing knowledge and accommodation: the adjustment to the new information. This process allows for a greater understanding of the world and accounts for intellectual maturation, whereby children's perceptions become more accurate and sophisticated as they progress through a series of stages (Donaldson, 1978; Crain, 1992).

<u>Four Stages of Cognitive Development</u>

These developmental stages, of which there are four, occur in invariant sequence that build upon each other.

- The sensorimotor stage (birth to 2 years) whereby infants organise their physical actions in conjunction with sensory experiences.

➢ The preoperational stage (2-7 years) whereby children learn to think, albeit unsystematically and illogically and to symbolically represent the world with words, images and drawings.

➢ The stage of concrete operations (7-11 years) whereby children develop the capacity to think systematically and perform operations but only in reference to concrete experiences.

➢ The stage of formal operations (11 years onward) whereby individuals have the capacity to think in abstract and idealistic ways.

Piaget's stages of development, in light of its enduring and proven validity and the reality of the *'five-to-seven'* transition, a period of time when children in this age range undergo major psychological and behavioural changes, best explained by the shift from preoperational thought to that of concrete operations (Crain, 1992) provides a good theoretical framework in which to examine age-related differences in children's perspectives of smoking.

Piagetian theory underpinned a study by Meltzer et al. (1984), who explored children's concepts of smoking, as a function of cognitive development. They interviewed children of three different ages (4, 7 and 11 years) and, in attempts to account for their understanding of the habit, coded and categorised responses to beliefs about smoking into a Piagetian cognitive-developmental framework. They discovered that at the least mature level, children perceived the consequences of smoking to be catastrophic and universal, and at the next level, their perceptions, based primarily on externally visible consequences such as stained teeth rather than internal problems were not considered to be drastic. These generalisations typified pre-operational thinking. At the stage of concrete operational thinking, children could discriminate between external and internal damage, describing in diffuse terms, the process by which smoking affected the body. The effects of smoking were seen to be multi-consequential and the causes multi-causational.

Much research on children's understanding of health and health behaviour has been rooted in Piaget's 'stages model of development' but Eiser (1989) challenges the premise, based on the doctrine that children do not develop within a vacuum and that personal experience and socio-cultural factors are as much determinants of children's perceptions as the process of maturation. Consequently, this 'social learning' perspective, in conjunction with Piaget's cognitive stage theory underpinned the theoretical framework for the research study.

2.9 Moral Development

Because learning is a product of one's own development, it has implications for the kinds of attitudes individuals hold and the type of moral evaluations that they make. Moral development '*concerns rules and conventions about what people should do in their interactions with other people*' (Santrock and Yussen, 1992: 585). It is learned, primarily through the processes of reinforcement, punishment and imitation and is a function of a person's cognitive development and their cognitive capacity (Open University, 1975).

Children's moral development has been studied at great length by the developmental theorists Piaget and Kohlberg. A brief summation of their ideas is presented below.

2.9.1 *Piaget's Stages of Moral Judgement*

Heteronomous Morality

Piaget, by studying how children think about moral issues, concluded that they have two moral attitudes which are contingent upon their developmental maturity. The first is *heteronomous morality* which occurs between 4 and 7 years of age and is linked to their egocentrism; children view rules from a single perspective, the grown ups. Thus, children have a blind obedience to these adult-imposed

rules. They believe that there is only one law which is fixed and absolute, and non compliance will result in immediate punishment. Moral judgement tends to be based on consequences of the action rather than the intention (Crain, 1992; Santrock and Yussen, 1992).

Autonomous Morality

The second moral attitude, *autonomous morality* is displayed by children age 10 and older. At this stage, children are cognisant that rules and regulations are created by equals for the sake of co-operation and that both intentions and consequences need to be considered when judging action. According to Piaget, this view is more relativistic, as children understand that consensual rule changes are possible (Crain, 1992; Santrock and Yussen, 1992).

2.9.2 *Kohlberg's Stages of Moral Development*

Kohlberg's philosophy is centred around moral reasoning. He believes that as children develop, their moral thoughts are subjected to internalisation, '*the developmental change from behaviour that is externally controlled to behaviour that is controlled by internal, self-generated standards and principles'* (Santrock and Yussen, 1992: 587). Kohlberg's notion of moral development is characterised by six stages, subdivided into three levels of development – preconventional, conventional and postconventional (Lerner, 1976; Crain, 1992; Santrock and Yussen, 1992).

Preconventional Reasoning

Preconventional reasoning is the lowest level of moral development where internalisation does not exist. It bears striking resemblance to Piaget's first moral attitude. Within this level is Stage 1- *Punishment and Obedience Orientation* where moral reasoning is based on punishment. Children believe that obeying authority and avoiding punishment is the best course of action. Stage 2 - *Individualism and Purpose* where moral reasoning is based on rewards and self-

interest. Children see that things are relative, different people have different points of view. They often use the notion of 'fair exchange' in their pursuit of personal interests.

Conventional Reasoning

The second level of development is conventional reasoning. Internalisation is intermediate, children generally abide by societal norms and expectations. Stage 3 - *Interpersonal norms* where children base moral judgement on value, trust, caring and loyalty and often take on parent's standards. The emphasis is on trying to be good and helpful to significant others. Stage 4 - *Social System Morality* centres around obedience to the law, with moral judgement grounded in an understanding of social order, law, justice and duty.

Postconventional Reasoning

Level three, postconventional reasoning is the highest level in Kohlberg's theory of moral development. Individuals adopt a moral code that is not based on others' standards but completely internalised. Stage 5 - *Community rights versus Individual Rights* is when individuals realise the standards vary and values and laws are relative. The focus is on basic rights and the democratic process. Stage 6 - *Universal Ethical Principles* where the conscious prevails and moral standards are based on universal human rights.

Children's moral development, how they perceive, behave and feel about the rules and regulations that govern social interaction has implications for the manner in which their attitudes about smoking develop.

2.10 Summary of Conceptual Framework

It is apparent that the acquisition of attitudes is a complex process embedded in the mechanisms of cognitive development and social learning. Thus, the

embodiment of these theories of development is crucial to this study because as Yarrow (1960) contends, the developmental framework in which one conceptualises attitudes and beliefs, prescribes to some extent, the research design that is ultimately adopted. Furthermore, consideration must be given to these theories when conducting research on children because cognitive ability, in essence dictates the choice of research tool (Ausubel et al., 1980; Mahon et al., 1996). An understanding of developmental concepts allows for informed choices about methodology; a developmentally inappropriate selection can threaten the validity of the study. With this in mind, the methodology chosen for this study is outlined in the next section.

CHAPTER THREE

RESEARCH DESIGN

3.1 Chapter Overview

This chapter presents the methodology used to explore children's perspectives on smoking. Firstly, it outlines the methodological and ethical considerations that need to be taken into account when conducting research with children and details the contextual background of research with young children in general. Secondly, it offers an overview of the different tools selected for inclusion in the research design and the rationale behind the utilisation of a multi-method approach. Lastly, the chapter describes the research protocol; the practical manner in which the study was conducted and the tools administered and culminates, with a brief summary of the pilot study.

3.2 Methodological and Ethical Considerations

Young children, as subjects under investigation raise distinctive dilemmas for research design. These difficulties, to name a few can range from the diverse levels of competence and comprehension between and within age groups, the short attention spans necessitating brief but variant measures to the lack of stability in responses thus making interpretation of meaning difficult (Vasta, 1979; Nadelman, 1982). Moreover, children's eagerness to please and provide responses they believe the researcher wants to hear and their inherent egocentrism; the inability to take on another's point of view (Walker, 1973) poses further difficulty.

The ethical implications of conducting research with children must also be taken into account. Some of the issues that need to be addressed are those involving privacy, confidentiality and consent, selection, inclusion and exclusion, risks, costs and benefits and the overall impact on the children themselves (Alderson, 1995). It is imperative that the children be accorded the rights that are inherently theirs by law and that ultimately, the research process embarked upon is in ' *...the best interests of the child'* (UN Convention Of the Rights of the Child as stated in Alderson, 1995).

The methodological obstacles associated with researching children are further exacerbated by the scarcity of viable methods for this population (Wetton, 1987). Despite the myriad of available instruments of measurement for adults, there are few suitable tools for children. Such paucity, which has significant implications on the research design of the present study has led to a demand for the creation of new methods to obtain data from young children (Parcel et al., 1984).

The research design, to lend credence to the results, must encompass the most appropriate methods of data collection for children aged four to eight years of age. As there is a dearth of research in the literature on smoking for this particular age group, appropriate methods were not readily available. Consequently, a unique methodology for the research in question needed to be developed. The final outcome was based on diverse sources including the studies of older children in the smoking literature and the modes of assessment generally administered to young subjects in other disciples. It was also facilitated by the models of good practices from key contacts currently conducting research in the field of child studies.

3.3 Contextual Background

Historically, children have been accorded little value in society. The expectation once was that they were *to be seen but not heard.* Times have changed and in the

wake of a paradigm shift in contemporary political and social thinking, children have been legitimately recognised and their views have been acknowledged as valuable sources of information and thus, it is assumed that they should play an active role in the research process (Lewis and Lewis, 1982; Williams et al., 1989; Hill et al. 1996). A platform for such participation is ratified by the Convention on the Rights of the Child which espouses the creation of a society inclusive of young citizens (Pridmore, 1996).

Unfortunately, Victorian notions of childhood have left a lasting legacy. Although children have long been the subjects of research, it generally has been conducted 'on' rather than 'with' them (Alderson, 1995). As a consequence, children's perspectives as a rich source of data, have remained largely unexplained (Moloney, 1994). There are few research studies based on data collected from children themselves and few if any, resources that document the undertaking of social research with children in the United Kingdom (Morrow and Richards, 1996).

In the field of health-related research, only a small but significant core of researchers such as Wetton (1987), Williams and colleagues (1989), Oakley (1995) and Pridmore and Bendelow (1995) to name a few, have conducted studies that have been truly participatory in nature, that involved children in the research process thereby giving them a voice to contribute their own ideas, their own views and their own perspectives. However, within the realm of smoking, children for the most part, have not been given this opportunity; to define the issues of smoking that are important to them, to be consulted on how they feel the current trends could be best tackled, or on what intervention strategy they think is best suited to their needs.

3.4 Research Tools

To facilitate a 'child-centred' participatory approach to data collection, a variety of techniques were reviewed and derivatives of the following were subsequently adopted in methodological triangulation.

3.4.1 *Questionnaires*

In reviewing the literature, it is apparent that the dominant research tools of choice for the investigation of attitudes and beliefs are generally quantitative in nature. Within the realm of smoking, school-based surveys are used with systematic regularity for their cost effectiveness, ease of administration and proven reliability and validity (Bjarnason, 1995). The highly structured format of this self reported measure, it is suggested, allows for greater objectivity, but inevitably limits the likelihood of personal expression and can lead to predetermined answers by the way the questions are constructed.

As questionnaires are not particularly effective in yielding valuable insight into children's perceptions (Williams et al., 1989), in particular, children's changing perceptions (Wetton and McWhirter, 1998) researchers ' ... *interested in the formation of attitudes or value, in the processes of change over time or as the result of identifiable experiences...* '(Yarrow 1960: 676) need to utilise more qualitative measures. There is still however, notable justification for the utilisation of questionnaires for this particular study. Because there is a significant absence of information on the attitudes and beliefs of primary schoolchildren, a baseline of information is needed and aptly provided for by the administration of a questionnaire to a large sample size. Furthermore, since questionnaires are the method of preference for many smoking studies on older children, the adoption of an analogous tool will facilitate a comparison of results across the diverse age groups.

3.4.2 *Interviews*

There is agreement among researchers that the interview process is an optimal way of obtaining research-relevant information on the underlying thoughts and knowledge of individuals. *'Valid accounts of children's attitudes and experiences could..be obtained by engaging directly with the children ...'* (Mahon et al., 1996: 148) as they *'... are acknowledged to be the best describers/definers of their experiences'* (Deatrick and Faux, 1991: 207). Although the interaction between researcher and interviewee can be prone to bias and subjectivity, and widespread use is often thwarted by time limitations and financial constraints, interviews are suitable for collecting data on children's perceptions (Yarrow, 1960; Bee, 1992; Ireland et al., 1996) because the format enables children to *'contribute their own concerns'* (Hill et al., 1996: 131).

3.4.3 *Drawing*

An alternative qualitative measure that has proven to be effective in the collection of data in terms of children's attitudes, beliefs and perceptions, is drawing (Henry 1960; Porter, 1974; Eiser et al., 1986; Williams et al., 1989; Shaver, et al., 1993; Oakley et al., 1995; Wetton and McWhirter, 1998). This premise is strongly supported by Pridmore and Bendelow (1995: 473) who maintain that *'Using children's drawings, in conjunction with writing or dialogue can be a powerful method of exploring the beliefs of young children which inform health behaviours and influence health status.'* The inherent value of this approach lies in the active participation of the subjects under study in the research process, thereby enabling personal perspective to come to light in a self defined manner.

3.5 The Draw and Write Investigative Technique

The 'Draw and Write' Technique[1] is a research technique pioneered by Noreen Wetton in 1972 and adopted by Williams, Wetton and Moon (1989) in a national study of primary schoolchildren's changing perceptions of health. It is an established method which has been widely used in health research (Shaver et al., 1993; Occelstone and Case, 1994; Somerset Health Authority 1994; Oakley et al., 1995; Pridmore, 1996) and proven to be effective in the collection of data on attitudes, beliefs and perceptions, in particular those of young children. The intrinsic value of this approach lies in following:

- it is a child centred approach
- it is non threatening because the whole class participates at once
- it simulates day to day school activities
- it meets the requirements of a large scale survey
- it allows children the opportunity to work at their own level of ability
- it is non exclusionary

The fact that all children can participate, regardless of ability or language skill is an advantage to using this technique. As a consequence, it is possible to access information from a range of children who may otherwise never be heard from. Additionally, it empowers children, it gives them ultimate control, to draw and write exactly what they think and feel and this is difficult to attain in the interview process because of the dynamics in the adult-child relationship.

Another significant benefit inherent to 'Draw and Write' is the fact that it easily accommodates the diverse levels of competence and comprehension between and within age groups, something that other methods do not always achieve. Pridmore and Bendelow (1995) confirm that the technique enables the investigation of difference and range but caution that ethical constraints, situational limitations,

[1] For a comprehensive overview of The 'Draw and Write' Technique, see Wetton and McWhirter (1998) in Images and Curriculum Development in Health Education.

cultural diversity, and interpretation issues need to be considered, to ensure that the method is truly participatory in nature. For example, the very nature of the classroom set-up perpetuates the copying or sharing of responses and researchers utilising this tool need to be aware of this potential problem. Such methodological issues which are inherent in research with adults as well can be alleviated to some degree, by stressing the importance of '*doing your own work.*'

Draw and Write is fun, a novel way of capturing children's attention which is part of its appeal, as it must be remembered that children are a special subject group characterised by egocentrism and short attention spans. This methodology aptly suits the needs of children, and this fact alone makes it a worthwhile tool. It provides insight into concept formation and cognitive development that to a large degree is much more discernible and perceptible than through the interview process. One can also speculate that the analysis of Draw and Write is more objective than that of interviews, as often the drawings support what the children are saying thereby eliminating misinterpretation.

The Draw and Write Technique is essentially, a well established qualitative method. To facilitate interpretation of the results, written responses are coded and counted and the frequencies are presented as percentages. This data manipulation is done to clarify the overall results and although the format does present the opportunity to apply statistical tests, it is the opinion of this author that this would be inappropriate and potentially could result in inaccurate and meaningless findings.

Because procuring information from children requires '*a special approach*' (Oakley et al., 1995) involving diverse skills and different research methods (Mahon et al., 1996), '*No one technique or method of child study will fulfil all of [the] criteria for a good methodology*' (Damon, 1979:25). Therefore, a consolidation of the methods that best measure attitudes and beliefs with the tools that best accommodate children as subjects would seem to be a prudent

resolution. Further espousal for integration of methodologies is corroborated by the prevailing ethos currently permeating research in health.

3.6 Triangulation

One perspective underpinning health education and health promotion centres around the belief that *'social interventions... are complex phenomena which require the application of multiple methodologies in order to properly understand or evaluate them'* (Steckler et al., 1992: 4). This study accepts this prevailing philosophy. The research thus, was designed to embody triangulation *'the combination of methodologies in the study of the same phenomenon'* (Denzin 1978: 291). This multi-method approach, according to Cohen and Manion (1994: 233) *'attempt[s] to map out, or explain more fully, the richness and complexity of human behaviour by studying it from more than one standpoint and, in doing so, by making use of both quantitative and qualitative data.'*

3.6.1 *Methodological Triangulation*

There are at least four types of triangulation, ranging from theoretical and investigator to data and methodological triangulation (Kimchi et al., 1991; Nolan and Behi, 1995). In methodological triangulation, a variety of diverse techniques, usually quantitative and qualitative are employed in one project, to address the same issue. The differing perspectives produced from the utilisation of methods from divergent paradigms allows for a 'holistic' or 'complete' portrayal of the subjects under study and enables the weakness of one method to be counter balanced by the strength of the other. Triangulation should be considered *'as a strategy that adds rigour, breadth, and depth to any investigation'* (Denzin and Lincoln 1994:2), one that enhances the wholeness of the research by allowing data that may otherwise have remained hidden, to surface (Nolan and Behi, 1995).

Methodological triangulation is subdivided into 2 approaches: ***within-method*** whereby 2 or more variants of the same technique are used and ***between-method*** in which differing but complementary methods are used. Relative to the study in question, a between-methods approach was adopted.

This particular methodology has the ability to increase the range of data collected (Israel et al., 1995), to sensitise the researcher to subtle differences that could prove to be of importance (Breitmayer et al., 1993) and to enhance research validity since the individual results from each approach can be used to cross-validate the study findings. When separate analysis yields similar findings, it enhances the credibility of, and confidence in, the conclusions of the study. Such confirmation strengthens the belief that the conclusions are valid (Bouchard 1976; Kimchi et al., 1991; Breitmayer et al., 1993; Nolan and Behi, 1995).

Although some social scientists argue that the methodological integration of divergent paradigms is infeasible due to fundamental philosophical differences, others like Steckler et al. (1992:4) adopt a more pragmatic approach, subscribing to the premise that *'... each method is based on different yet complementary assumptions and each method has certain strengths that can be used to compensate for the limitations of the other.'* They contend that the current debate revolves around the issue of integrating both methods for effective development of strategies rather than the dominance of one paradigm over the other (Steckler et al., 1992). Moreover, Morse (1991) argues that the suggested 'incompatibility' between qualitative and quantitative methodological triangulation is inane given the fact that each method is administered and analysed independently of each other and that 'blending or merging' of data only happens in summation, when conclusions are drawn and theories confirmed.

3.6.1.1 Between-methods Triangulation

For the purpose of this study, the multiple methods selected for the between-methods triangulation consisted of a questionnaire, the Draw and Write

Investigative Technique (Williams et al., 1989) and semi-structured interviews as illustrated in Figure 3a and 3b.

Figure 3a. Between-methods Triangulation

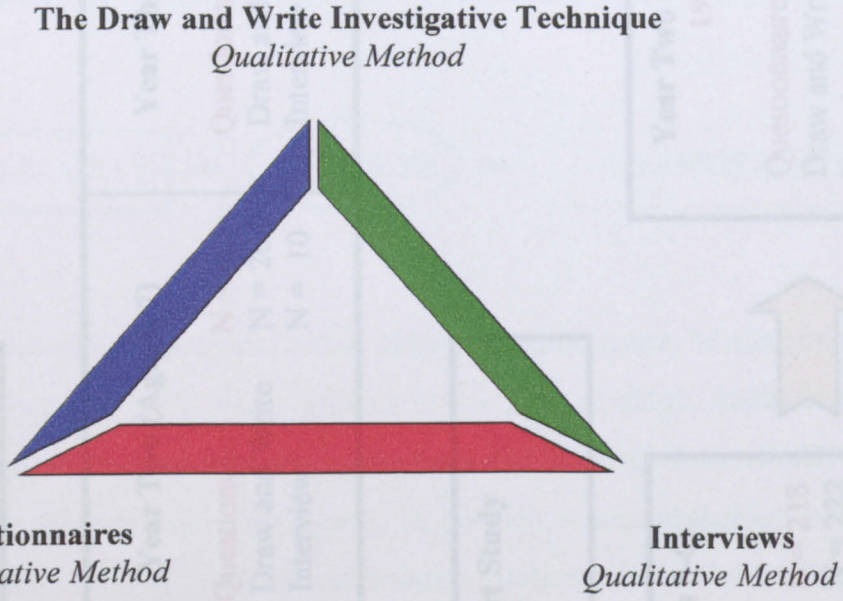


Figure 3b. Overview of Studies

Cross Sectional Study – 1995
12 Schools – Quantitative Method
6 Schools – Qualitative Methods

Reception (Ages 4 –5)		Year One (Ages 5-6)		Year Two (Ages 6-7)		Year Three (Ages 7-8)	
Questionnaire	N = 430	Questionnaire	N = 438	Questionnaire	N = 461	Questionnaire	N = 446
Draw and Write	N = 235	Draw and Write	N = 242	Draw and Write	N = 260	Draw and Write	N = 239
Interview	N = 14	Interview	N = 14	Interview	N = 10	Interview	N = 12

Longitudinal Cohort Study
1995 – 1997
6 Schools

Reception (Ages 4-5)
1995

Questionnaire	N = 237
Draw and Write	N = 235
Interview	N = 14

Year One (Ages 5-6)
1996

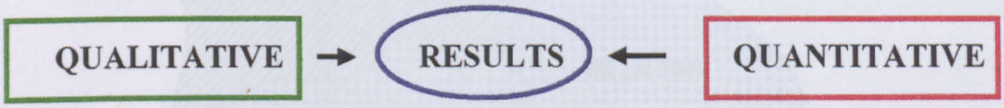
Questionnaire	N = 218
Draw and Write	N = 222
Interview	N = 28

Year Two (Ages 6-7)
1997

Questionnaire	N = 216
Draw and Write	N = 219
Interview	N = 25
Focus Groups	N = 50

The research design attempted to integrate these various qualitative and quantitative methods in a parallel and equal fashion, essentially as a means of confirming the accuracy of the study results (Knafl and Breitmayer, 1991). Such methodological integration is best illustrated by the model below.

Figure 4. A Model of Integrating Methodologies (Steckler et al., 1992)



The use of these three techniques, mainly child-centred in nature, in triangulation is unprecedented with such young subjects in this field of study. Implementing each technique on its own has substantial merit but utilising them collectively increases their inherent value immensely. In the subsequent evaluation of the results, the rich, detailed 'process' information gathered from the qualitative methods of the Draw and Write Technique and semi-structured interviews not only substantiated the factual 'outcome' data of the questionnaires but also enriched them (Jick, 1983).

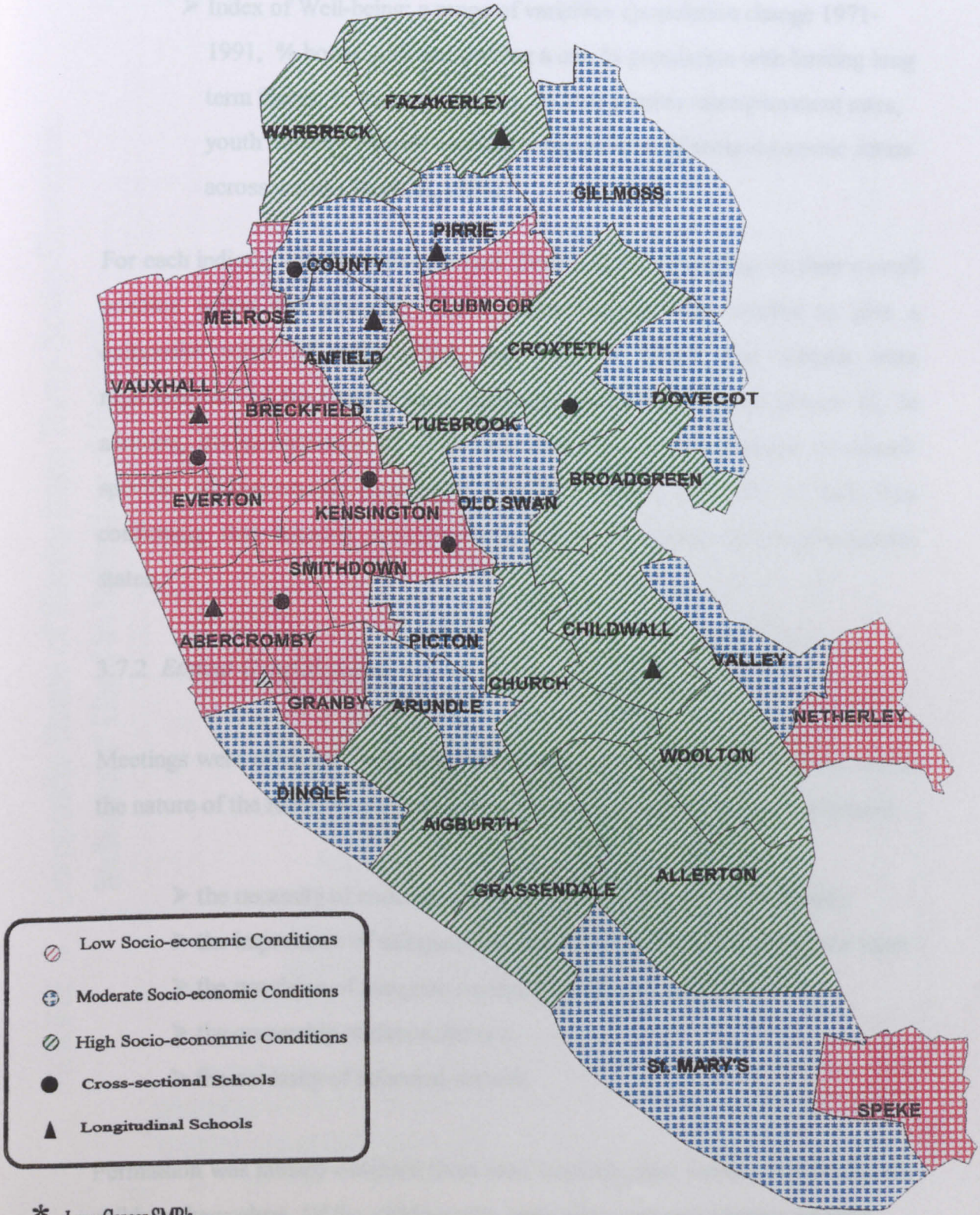
3.7 Sampling Frame

3.7.1 *Recruitment and Selection of Schools*

Letters were sent to all primary schools in Liverpool via the office of the Liverpool City Council Education Directorate inviting Reception to Year Three classes (4 to 8 year olds) to participate in the project. Because of the nature of the research and the time commitment involved, it was hoped that 6 schools would volunteer to participate. However, the response was exceptional and eventually 13 schools (1 pilot, 12 for the main study) were selected. Location of the participating schools, by ward, is illustrated in Figure 5.

Figure 5

Location of Study Schools By Ward Socio-economic Status
Derived From A Variety of Socio-economic Indicators *



* Lung Cancer SMR's
1991 Rate of Unemployment
Index of Well Being

School selection was based on three social and economic indicators:

- employment statistics from the 1991 Census
- Liverpool Lung Cancer Standardised Mortality Ratios (Mooney, 1994)
- Index of Well-being: a range of variables (population change 1971-1991, % households not owning a car, % population with limiting long term illness, % owner occupiers, % lone parents, unemployment rates, youth unemployment) enabling a comparison of socio-economic status across wards (Shepton, 1994).

For each indictor, wards received a rank from 1 to 33 depending on their overall position within the indicator. The 3 ranked scores were totalled to give a composite score of ranks which was used to ensure that schools were representative of the various socio-economic states in Liverpool (Figure 6). In addition, the subsidisation of meals was used as a further measure of school-specific, socio-economic conditions. Subsidies ranged from 5% to 95% thus confirming that selected schools characterised the gamut of socio-economic states.

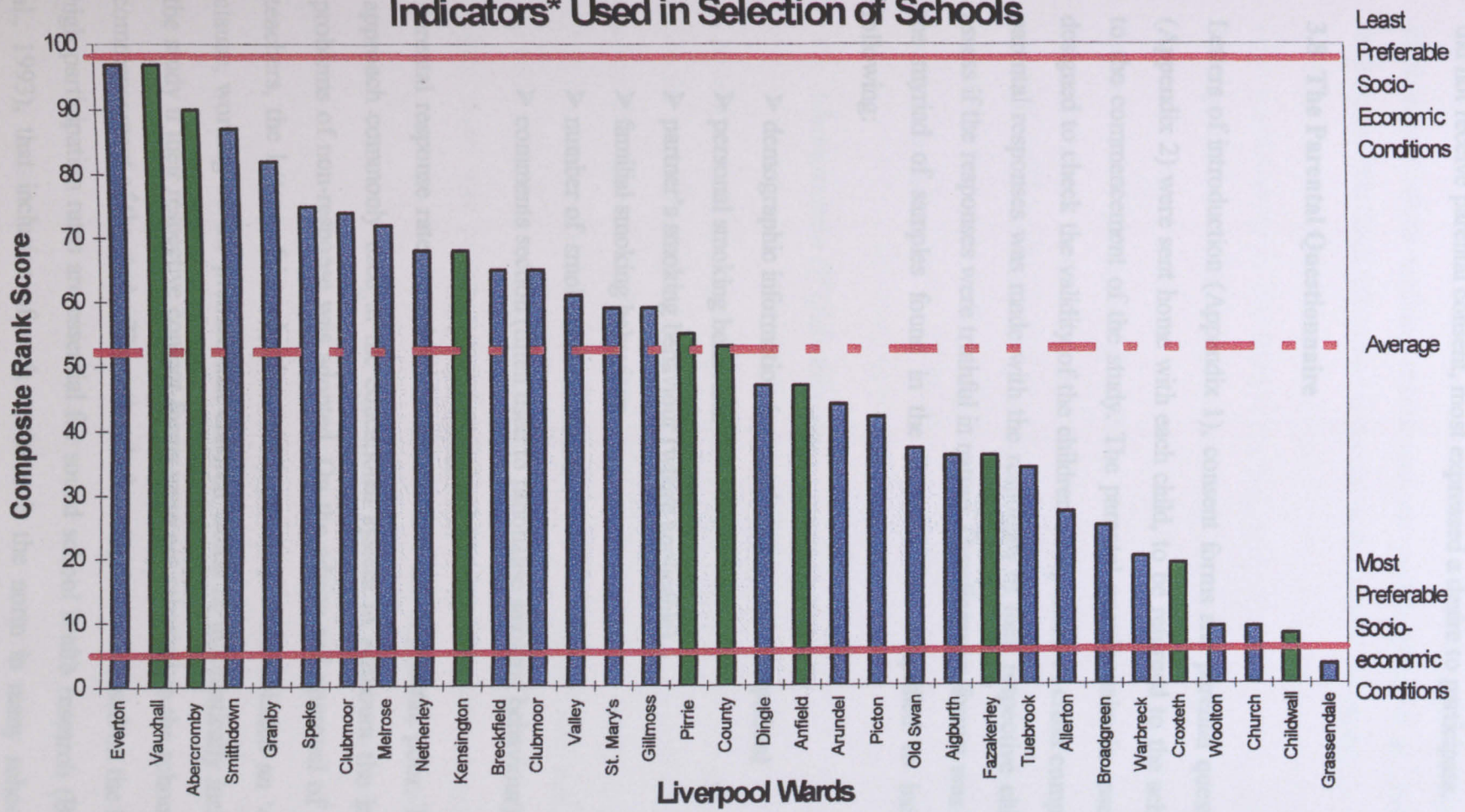
3.7.2 *Ethical Considerations*

Meetings were arranged with each school to discuss the project in detail. Given the nature of the research, the following **ethical considerations** were addressed:

- the necessity of codes to maintain school and pupil confidentiality
- the importance of safeguarding children against any psychological harm
- the provision of adequate counselling in the event of distress
- the ownership of data collected
- the necessity of informed consent

Permission was initially obtained from head teachers, then parents and finally, the children themselves. Of the children who were given parental consent, control

FIGURE 6. Composite Score of Ranks from Three Socio-Economic Indicators* Used in Selection of Schools



***Socio-economic Indicators:** Lung Cancer SMR's, rate of unemployment, Index of Wellbeing

Schools located in these wards

over the decision to partake in the study rested with the subjects themselves and at each stage, consent to continue was requested. Of the minority of children who did not receive parental consent, most expressed a desire to participate.

3.8 The Parental Questionnaire

Letters of introduction (Appendix 1), consent forms and parental questionnaires (Appendix 2) were sent home with each child, to be returned to the school prior to the commencement of the study. The parental questionnaire in essence, was designed to check the validity of the children's responses. A cross comparison of parental responses was made with the responses of their respective children, to assess if the responses were truthful in nature. Questionnaire format was based on the myriad of samples found in the literature and simplified to include the following:

- demographic information (parental status, sex, occupation)
- personal smoking behaviour
- partner's smoking behaviour (where applicable)
- familial smoking behaviour
- number of smokers in the house
- comments section (often used to rationalise smoking behaviour)

Parental response rates to school-based activities are in general, poor. Thus, an approach commonly used in the educational system to surmount the inevitable problems of non-response was adopted. On the advice and approval of all head teachers, the letters of introduction sent home to parents included an 'opt out' clause, working on the premise that children would be automatically included in the study if their respective consent forms were not returned to the school before commencement of the study. The rationale for adoption was based on the fact that high participation rates are essential for sound school health research (Belzer et al., 1993), that inclusion of such a clause is the norm in many school-based activities, that some of the methodology was designed as a whole class activity,

that smoking is a topic that can be discussed as part of the health education curriculum and ultimately, to avoid a sampling bias as previous research has illustrated that children without consent are more likely to originate from a family environment where smoking experiences are prolific (Best et al., 1988). The inclusion of this 'high risk group' is central to the core of this study.

3.9 Application of Research Tools

To maintain a high degree of reliability, the principle researcher organised and conducted all the research involved in the study. Assistants were recruited and trained to help administer the questionnaires and to act as scribes for the Draw and Write Technique. After analysis of all the data, each school was given feedback on the results.

3.9.1 *Administration Of Questionnaire*

A developmentally appropriate questionnaire (see Appendix 3) was created, based upon the review findings of previous research on older children as to the different factors that appear to influence the smoking behaviour of children (Christie, 1987; Charlton and Blair, 1989; Eiser et al., 1991; Goddard, 1992) and research methods in child development (Mussen, 1960; Walker, 1973). The aim of the questionnaire was to amass baseline information on children's experience of smoking and their belief about and intention to smoke, in the context of the smoking behaviour of significant others. Short dichotomous or tricotomous-response questions were used to collect the following information:

- demographic variables (age, sex, geographic location)
- personal smoking behaviour
- parental, sibling and peer smoking behaviour
- current and future intention to smoke
- beliefs about smoking

The inclusion of questions about 'intention' to smoke and 'belief about smoking' were done so on the basis that each play a role in the concept of attitude. Of the three components that are said to make up an attitude (Figure 2), beliefs are part of the cognitive element and behavioural intentions, the conative element. Beliefs, as the base component of all attitudes (Halloran, 1967) and behavioural intention, as the single best predictor of future smoking behaviour (Eckhardt et al., 1994) merit consideration in the study of young children and smoking. These two concepts were revisited during the qualitative phase of the study, along with the third component of attitudes - the affective element, which was explored in great detail.

The questionnaire was subjected to extensive piloting, to establish the existence of content validity. The revised version was administered to 1701 children in 12 schools (all those present on the day of administration). Each of the twelve questions on the questionnaire were read aloud to children in groups of two, who were asked to tick the box that best described what they believed to be the correct answer. Accuracy and confidentiality were stressed. All questionnaire responses were coded to allow for quantitative analysis. The data was entered onto a computer database, using SPSS (Statistical Package for the Social Sciences). As the data was nominal in nature, descriptive statistics (frequency distributions and crosstabulations with two dimensional tables) were generally used, in conjunction with chi square tests.

3.9.2 *Administration Of Draw and Write Technique*

The Draw and Write Technique (Williams et al., 1989) which requires children to draw pictures and write a response in accordance to specific invitations read aloud in the classroom, by the researcher was conducted with 976 children in half of the schools involved in the questionnaire administration. These 6 schools were selected on the basis of their socio-economic ranking in Figure 6., the type of school, the size of the school and overall suitability to the research design.

The smoking specific investigation used in the study (see Appendix 4) is a shorter version of the technique devised by Noreen Wetton (1990) from the Health Education Unit at the University of Southampton for the Somerset Health Authority and Somerset Education Consultants with the Best of Health Project (1994). Abridgement of the tool was necessary because the scope of the original format was not exclusively on attitudes, beliefs and perceptions of smoking. Four different invitations were employed. Scribes were provided to assist any children who had difficulty writing.

After administration, coding categories were developed for use in analysing the responses which were based on frequency of responses. Many of the initial coding categories were derived from the Health Education Unit at the University of Southampton for the Somerset Health Authority and Somerset Education Consultants with the Best of Health Project (1994) but others were added or deleted as was necessitated by the children's responses.

3.9.3 *Administration Of Semi-structured Interviews*

A subsample of 50 children, randomly selected from the 6 schools were asked to participate in semi-structured, confidential interviews which delved into the underlying attitudes and beliefs children have about smoking. Children were asked to comment on various pictures, respond to several questions and give their opinion on a multitude of smoking related statements. The foundation for the interviews came from previous smoking research on children of different ages with particular reliance on the seminal work of Fidler and Lambert (1994). The outcomes of the Draw and Write technique were also used to develop the protocol for the semi-structured interviews. In addition, the children's own drawings from the 'Draw and Write' exercise were incorporated into the process, as part of the introduction, to establish rapport with the children and to facilitate ease, allowing them to deal with something they were familiar with and could easily comment on. The drawings in effect, were 'the way in' (Williams et al., 1989) to the underlying attitudes that the children had about smoking.

Each interview, approximately half an hour in length, was tape-recorded and subsequently transcribed by the researcher. Content analysis was conducted and themes indicating trends in the attitudes, beliefs and perceptions children of varying ages have about smoking were identified.

3.10 Pilot Study

The pilot study (N=100) was conducted in one school, representative of average socio-economic conditions and amenable to the idea of testing the suitability of the questionnaire, the feasibility of utilising the Draw and Write Technique with such a young, large sample and the appropriateness of the interview questions in the school. The study illuminated some potential problems with the original design and appropriate adjustments were made to the following:

Question format:

In the original format, some questions were divided into subsections and although each subsection had its own large check box, it became evident that children found this set-up very confusing. Hence, all subsections became questions in their own right and a number was assigned to each respectively, thereby giving children a point of reference for each inquiry.

Questionnaire administration:

At the onset, the questionnaire was to be administered to the whole class but this proved to be unfeasible. Noise levels, discipline problems, and copying were rife in the classroom environment and threatened the validity of the results. Henceforth, the administration of the questionnaire was completed individually or at most, in groups of two.

Time allotment:

All three methods took much longer to administer than was expected. Moreover, the necessity of working around the time constraints of the school itself (scheduling of play time and lunch) needed to be taken into consideration.

The number of scribes required for the Draw and Write Technique:

During the pilot, it became evident that a tremendous amount of time and human resources are required to administer 'Draw and Write' properly. This was particularly noticeable in classes with younger children who all needed assistance in some form or another. In addition, the pilot study highlighted the necessity of having all the materials pre-coded and readily available to facilitate the administration process.

Content-wording:

The question regarding 'future intention to smoke' did not allow children who were interested in trying to smoke occasionally, for curiosity's sake to accurately express their view point. As such, a question addressing the issue of wanting to experiment with cigarettes was incorporated into the questionnaire.

3.11 Summary of Research Design:

The creation of an innovative research design for this study was necessitated by the lack of comparative work in the literature on smoking. In order to best attain the diverse aims of the research, a triangulated format was adopted. The convergence of three techniques is unique with this particular age group as the obstacles to overcome are monumental. As such, the construction of the research design for this study was very much experiential in nature and in essence, very much an integral part of the project's subliminal objective; the need to find viable research methods for the investigation of attitudes and beliefs in young children. Findings from the triangulated methods will be presented in the next chapter.

CHAPTER FOUR

THE CROSS SECTIONAL STUDY

4.1 Chapter Overview

This chapter describes in detail, the sample and the subsequent findings from the cross sectional study. The results from the questionnaire are subdivided into three sections: smoking behaviour, beliefs about smoking and intention to smoke. Both the 'Draw and Write' results and the findings from the semi-structured interviews are classified by thematic trends. A summary of the results of all three techniques are found in the discussion which aims to draw together pertinent and common conclusions from all the methods, as well as highlighting the important issues that need further investigation.

4.2 Sample: The Children

Table 1: Distribution of Sample By Research Methods

Methods	Schools Participating	Subjects Involved
Questionnaires	**12**	**1701**
Draw and Write	**6 of 12**	**976**
Interviews	**6 of 12**	**50**

Table 1 outlines the number of children who were involved in the study. All of the children from the 12 participating schools who were present on the day the questionnaires were administered completed the questionnaire. Six of the twelve

schools, two from each of the three socio-economic conditions identified were subsequently selected to participate in the Draw and Write Technique which was conducted on a 'whole class' basis and a subsample of 50 children from these six schools were asked to partake in the semi-structured interviews.

Details of the sample by gender and year group is shown in Table 2 below. The sample was fairly evenly distributed; each year group comprised approximately one quarter of the total sample. There were more boys than girls. The subjects ranged in age from 4 to 8 years, with an average age for each year group: Reception (mean age = 5 years; Year 1 (mean age = 6 years); Year 2 (mean age = 7 years) and Year 3 (mean age = 8 years). The discrepancy of ages within each year group can be attributed to such factors as children celebrating a birthday after the conclusion of the study, and children detained or advanced to another year based on scholastic ability.

Table 2. Distribution of Sample By Gender and Year Group

YEAR GROUP	GENDER		AGE	
	GIRLS	BOYS	YEARS	(N)
RECEPTION N= 430 (24%)	208	222	4 5	113 317
YEAR ONE N= 438 (25%)	214	224	5 6 7	109 325 4
YEAR TWO N= 461 (26%)	204	257	6 7 8	105 355 1
YEAR THREE N= 446 (25%)	210	236	6 7 8	1 95 350
TOTAL N= 1775 (100%)	836	939		1775

4.3 Sample: The Parents

Total Number of Parental Responses	**N = 823**
Parental Consent Given	**N = 806**
Parental Consent Declined	**N = 17**

4.4 The Matched Sample

Both the children and the parents in the sample were asked similar questions about familial smoking habits. The parental responses were subsequently matched with that of their children and this was used to test for congruency between the answers.

- Matched responses for mother's smoking habit — 86%
  613 of 718 cases

- Matched responses for father's smoking habit — 80%
  480 of 599 cases

- Overall congruence — **83%**

An overall congruency of 83% implied a high degree of consistency between the responses of the children and the parents in the study. This level of congruency allowed for the inference that the answers given by the children were relatively truthful in nature. Non congruence can be attributed to several reasons ranging from the fact that some parents hid their smoking habit from their children and some parents smoked before their children were born to the diversity of the family unit where children's mothers and fathers were not necessarily the partners or spouse of the parents who responded to the questionnaire.

Table 3. and Table 4. illustrate the employment details and smoking habits of parents who responded to the questionnaire sent home with each child. This information was necessary to establish that the proven link between social class and rates of smoking existed within the sample population. Some parents who returned the questionnaire did not answer the question pertaining to employment which accounts for the incomplete data section found on the tables.

Table 3. Distribution Of Father's Smoking Behaviour By Social Class

OCCUPATION BY SOCIAL CLASS*	Distribution of Employment		FATHER'S SMOKING HABIT					
			Smokes		Does Not		Used to	
	N	(%)	N	(%)	N	(%)	N	(%)
No Employment	74	9.7	42	24	24	10	8	14
I Professional	29	3.8	1	1	23	9	5	9
II Intermediate	89	11.7	26	15	45	18	18	32
III(N) Skilled	45	5.9	8	5	30	12	7	13
III(M) Skilled manual	171	22.4	65	37	93	37	13	23
IV Partly Skilled	52	6.8	25	14	24	10	3	5
V Unskilled	13	1.7	5	3	8	3	0	0
Homemaker	0	0	0	0	0	0	0	0
Student	6	.8	2	1	2	1	2	4
Incomplete	284	37.2	–	–	–	–	–	–
Total	763	100	174	100	249	100	56	100

*Based on OPCS Standard Occupational Classification

The parental sample spanned the whole range of occupations, reflecting the current economic climate in the city of Liverpool. From Table 3., it is clear that the majority of fathers worked in the lower end of the occupational hierarchy,

generally as manual labourers (N=171). Ten percent of fathers were unemployed (N=74) whilst fewer than 5% had professional lines of work. The percentage of male smokers followed a pattern similar to the occupational distribution. The highest proportion of smokers was found among fathers who worked in low paid jobs or did not work at all whereas only 1% of smokers were from a professional background. No statistically significant associations were found between the children's smoking behaviour, their belief about smoking, their intention to smoke and paternal social class.

Table 4. Distribution Of Mother's Smoking Behaviour By Social Class

OCCUPATION BY SOCIAL CLASS*	Distribution of Employment		MOTHER'S SMOKING HABIT					
			Smokes		Does Not		Used To	
	N	(%)	N	(%)	N	(%)	N	(%)
No Employment	37	4.9	22	11	12	4	3	5
I Professional	7	1	0	0	7	2	0	0
II Intermediate	48	6.4	7	3.5	39	12	2	3
III(N) Skilled	120	15.9	22	11	86	26	12	20
III(M) Skilled manual	18	2.4	4	2	11	3	3	5
IV Partly Skilled	37	4.9	6	3	26	8	5	8
V Unskilled	10	1.3	2	1	8	2	0	0
Homemaker	306	40.7	132	65	140	42	34	57
Student	14	2	7	3.5	6	1	1	2
Incomplete	154	20.5	–	–	–	–	–	–
TOTAL	751	100	202	100	335	100	60	100

*Based on OPCS Standard Occupational Classification

Table 4. shows that the highest proportion of mothers in our sample were homemakers (40.7%) and these women comprised the majority of smokers in the group (65%) as well. There were no reported smokers among professional women who represented a mere one percent of the female population. Smoking rates were evenly distributed (11% respectively) between mothers without employment (4.9%) and those who worked in skilled occupations (15.9%). No statistically significant associations were found between the children's smoking behaviour, their belief about smoking, their intention to smoke and maternal social class.

4.5 Questionnaire Results

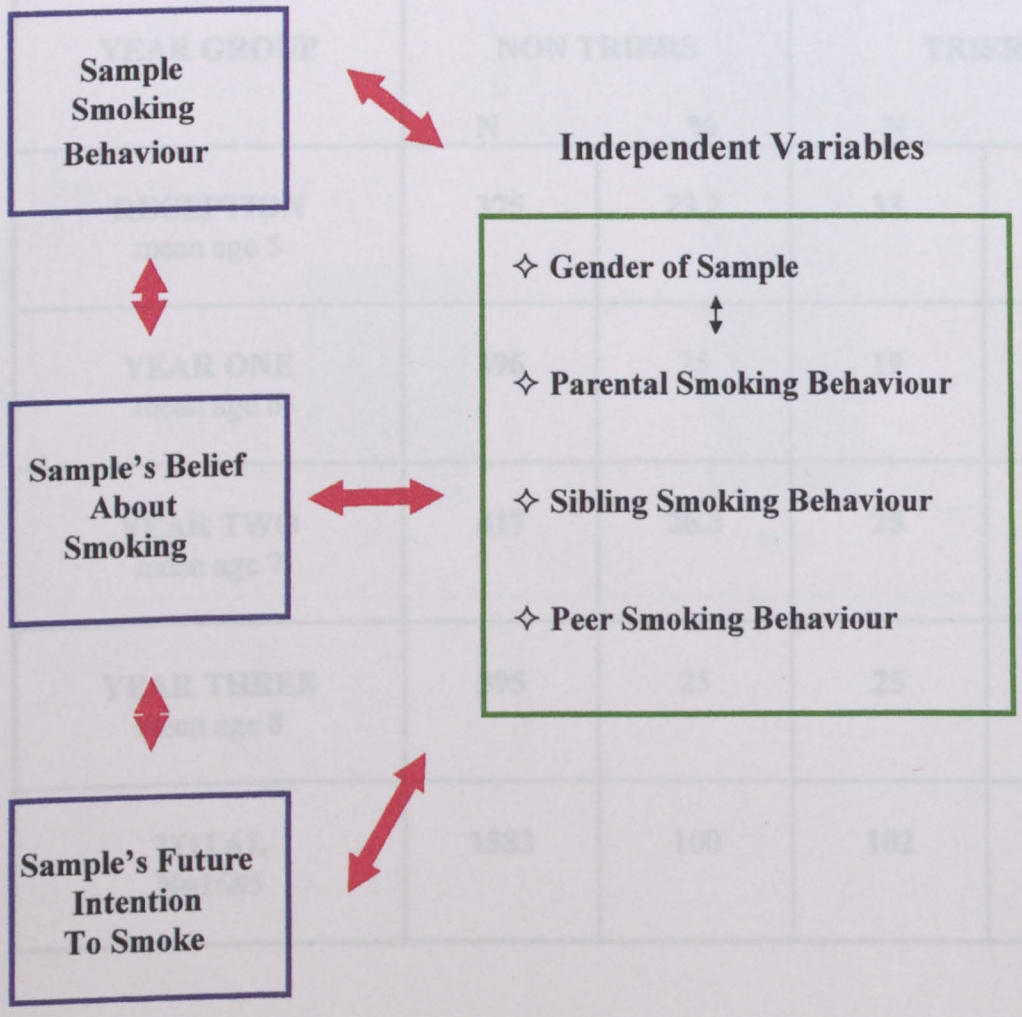
The aim of this research was to uncover the perspectives that children in their early years have about smoking; in essence to discover what their attitudes were about this particular subject. Rather than utilise traditional attitudinal measures such as scales or surveys, this study took an unorthodox approach and used multiple methods to assess attitudes, in the larger framework of triangulation, to gain a more holistic view of the perspectives that this sample had about smoking.

Such a deviation from the 'methodological' norm was fostered by the age of the subjects involved in the study, the 'inappropriateness' of standard attitudinal measures for this population and the lack of any other alternatives, coupled with the philosophical underpinnings of the research itself which needed to be 'child-centred' and participatory in nature. Although by definition, questionnaires are neither 'child-centred' nor participatory, the administration of the tool, in a one-to-one or two-to-one ratio emulated a structured interview and thus, did involve the children in the research process. Further, any additional comments that the children made whilst filling in the questionnaire were also documented.

The questionnaire itself was not meant to 'stand only' as a complete measure of this sample's attitudes about smoking. It was designed to be used in conjunction with the other methods. Its purpose, primarily, was to provide some baseline

information and to give an indication of what children's beliefs and intention that inform their attitudes about the habit were, in the context of the smoking habits of significant others. Such information provided further direction for, and a foundation on which to structure, the interviews. Results from the questionnaire were the outcome of the analysis of the relationships highlighted in the model below.

Figure 7. A Model of the Relationships Investigated In the Cross Sectional Study



4.5.1 *Sample Smoking Behaviour*

The subjects were asked if they had ever tried to smoke a cigarette, even just one puff. The responses from the total sample indicated that 1583 children (94%) had never tried to smoke a cigarette. These children were classified as non triers. One hundred and two of the children (6%) had tried at least one puff of a cigarette and were labelled as triers. Table 5 shows that the non-triers were fairly evenly distributed throughout each year group. The greatest proportion of children (32.4%) who had tried to smoke a cigarette were from Reception (N=33).

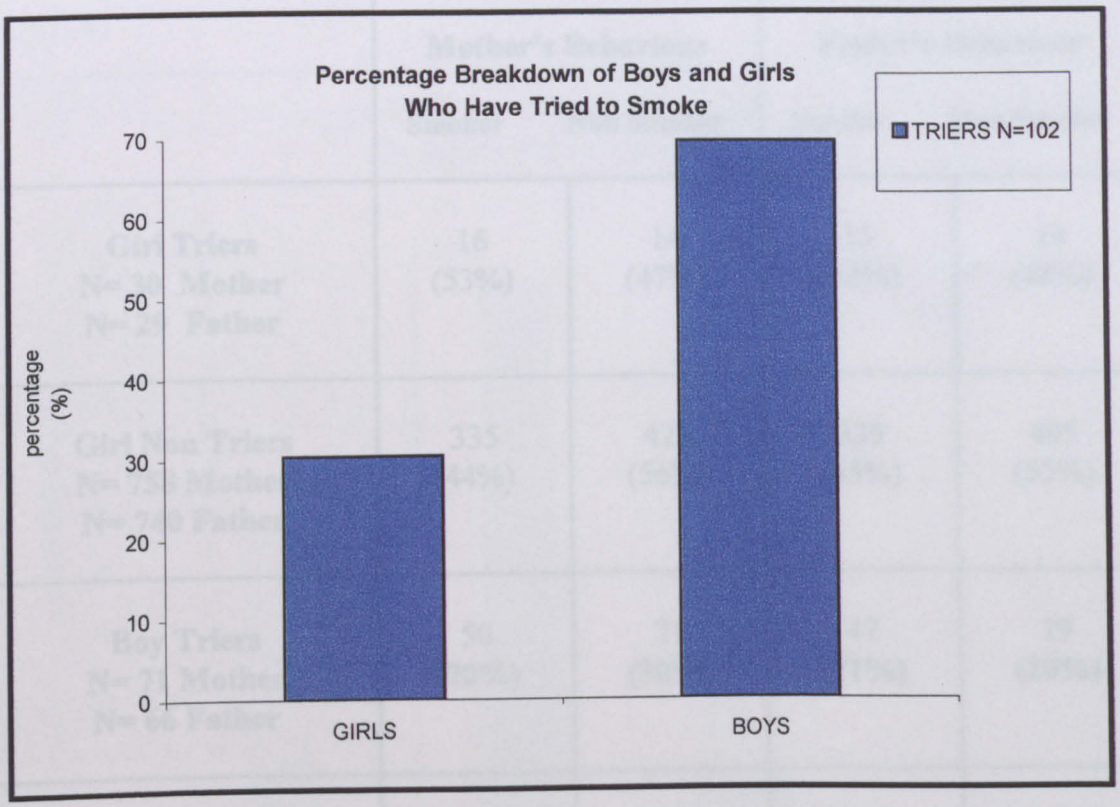
Table 5. Sample Smoking Behaviour By Year Group

YEAR GROUP	NON TRIERS		TRIERS	
	N	%	N	%
RECEPTION mean age 5	**375**	23.7	**33**	32.4
YEAR ONE mean age 6	**396**	25	**19**	18.6
YEAR TWO mean age 7	**417**	26.3	**25**	24.5
YEAR THREE mean age 8	**395**	25	**25**	24.5
TOTAL N=1685	**1583**	100	**102**	100

Sample Smoking Behaviour - Gender as a Variable

Figure 8. illustrates the finding that a large number of triers (n=70) were boys ($p<.001$). This statistical significance suggested a gender bias in the smoking experiences of the children in this sample.

Figure 8.



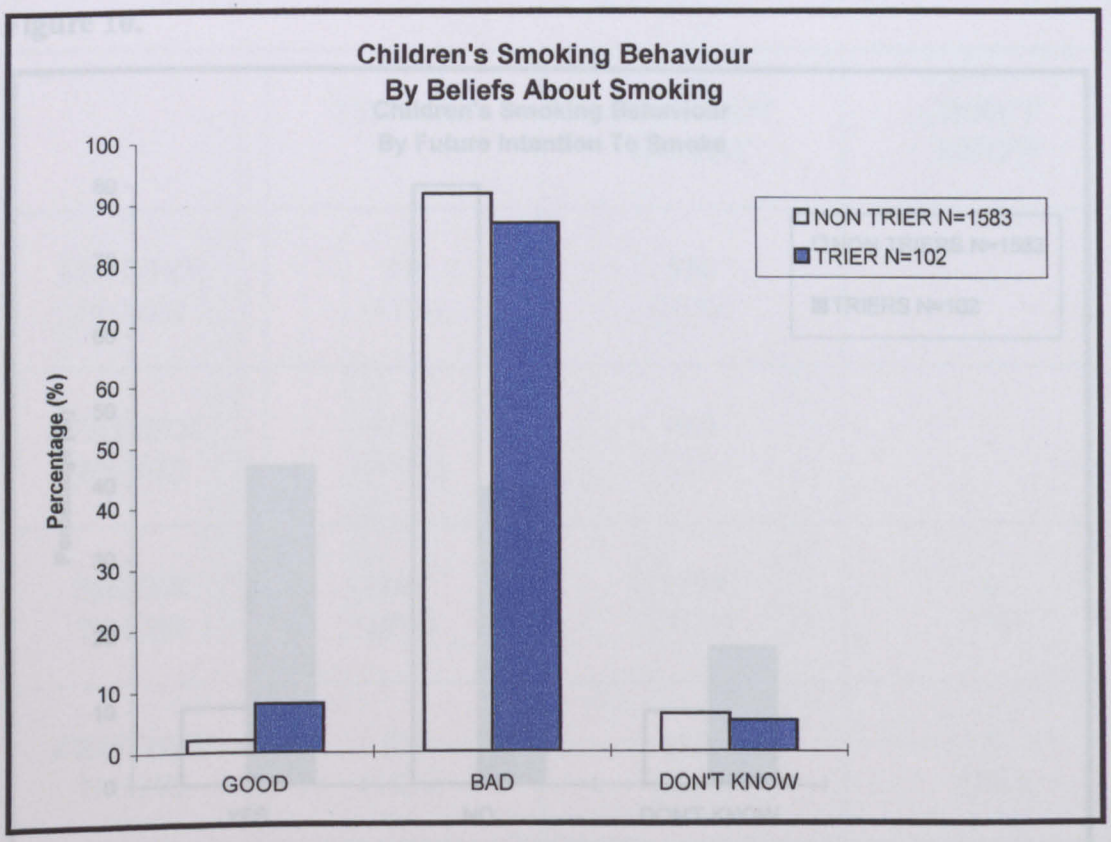
This gender bias was even more pronounced when sample smoking behaviour was looked at in relation to parental smoking behaviour, as documented in Table 6 below. A statistically significant association ($p < .05$) was apparent in the smoking behaviour of the boys. Of those boys who reported trying to smoke a cigarette, 70% had mothers who smoked and 71% had fathers who smoked.

Table 6. Sample Smoking Behaviour By Gender and Parental Smoking Behaviour

	Mother's Behaviour		**Father's Behaviour**	
	Smoker	**Non Smoker**	**Smoker**	**Non Smoker**
Girl Triers N= 30 Mother N= 29 Father	16 (53%)	14 (47%)	15 (52%)	14 (48%)
Girl Non Triers N= 758 Mother N= 740 Father	335 (44%)	423 (56%)	335 (45%)	405 (55%)
Boy Triers N= 71 Mother N= 66 Father	50 **(70%)**	21 **(30%)**	47 **(71%)**	19 **(29%)**
Boy Non Triers N= 807 N= 775	375 **(47%)**	431 **(53%)**	370 **(48%)**	405 **(52%)**

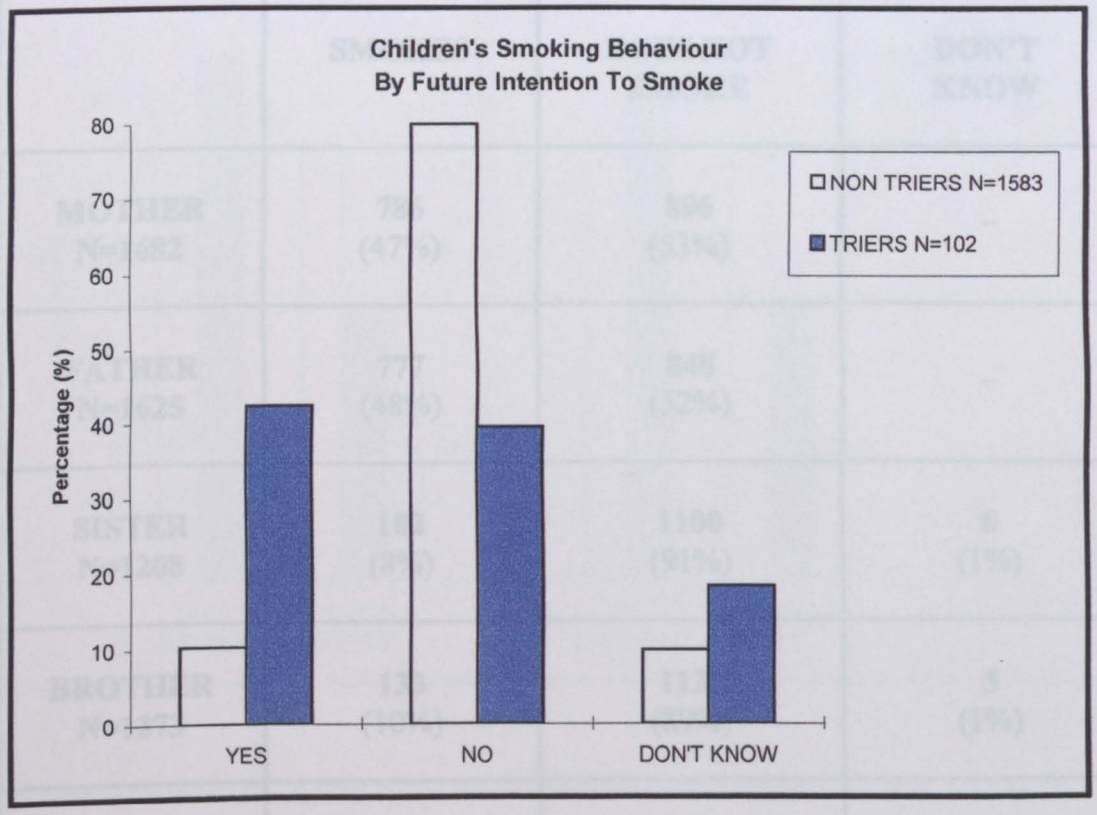
As can be seen in Figure 9, the majority of the children in the sample, both non triers and triers reported that smoking was bad for people. A small but statistically significant ($p<.001$) difference existed in that 8% of the triers had positive beliefs about smoking whereas only 2% of the non triers believed smoking to be good for people.

Figure 9.



An additional means of gauging children's attitude about smoking was garnered via responses to the question '*Do you want to smoke when you grow up?'* In Figure 10., it is evident that the vast majority (80%) of non triers (N=1260) had stated they had no intention of smoking in the future as opposed to a minority of 10 percent (N=156) who said yes. Within the small group of children who had tried to smoke, the trend was different, such that relatively equal numbers of subjects had said both yes (N=42) and no (N=39) with respect to wanting to smoke when grown up.

Figure 10.



Sample Smoking Behaviour- Smoking Behaviour of Significant Others

All the children in the study were asked questions about the smoking behaviour of their parents, their siblings and their peers. Table 7. is a summation of the responses. It is apparent that almost half the parents in our sample were smokers whereas few (less than 10% respectively) brothers, sisters and friends were reputed to smoke. The proportion of parents who smoked is fairly evenly distributed (circa 50%) throughout each year group.

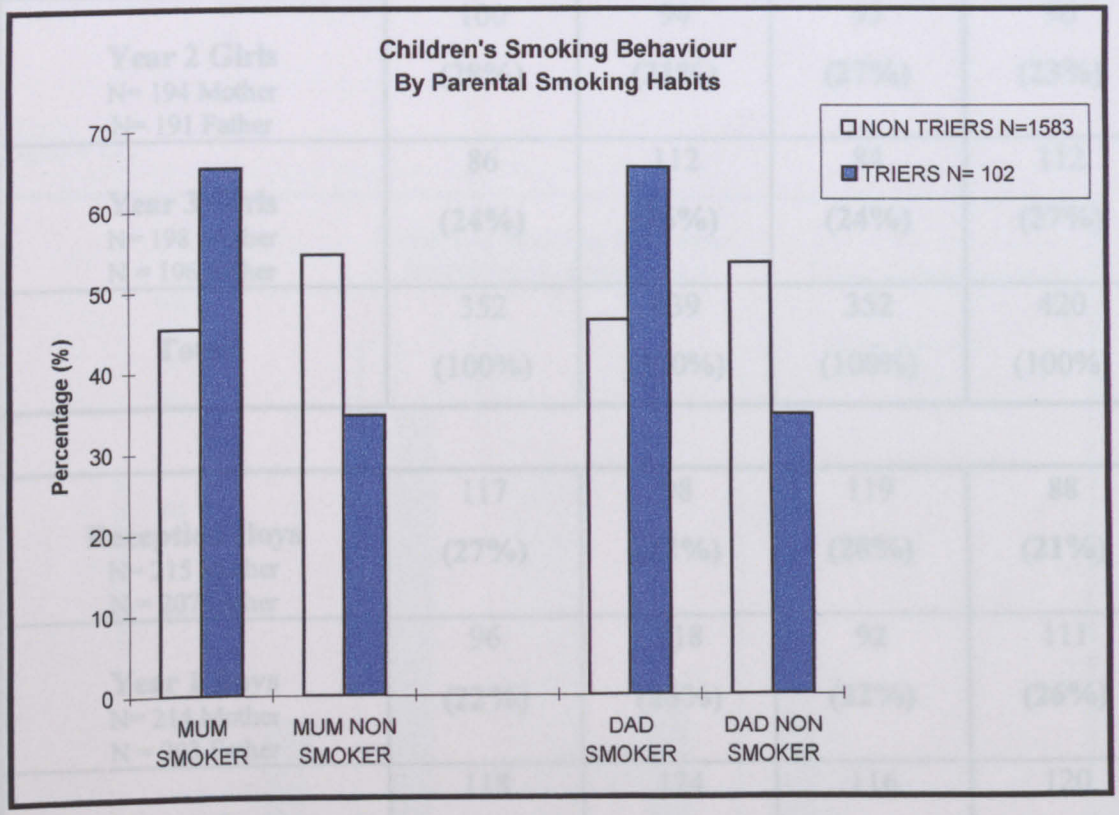
Table 7. Smoking Behaviour Of Significant Others

	SMOKES	DOES NOT SMOKE	DON'T KNOW
MOTHER N=1682	**786** (47%)	**896** (53%)	–
FATHER N=1625	**777** (48%)	**848** (52%)	–
SISTER N=1208	**102** (8%)	**1100** (91%)	**6** (1%)
BROTHER N=1273	**133** (10%)	**1135** (89%)	**5** (1%)
PEER N=1667	**85** (5%)	**1122** (67%)	**460** (28%)

Sample Smoking Behaviour -Smoking Behaviour of Parents

Similar statistically significant trends ($p<.001$) existed in the relationship between children's smoking behaviour and the smoking behaviour of parents as depicted in Figure 11. With regards to mothers and fathers, for both comparisons, 65% of triers had parents who smoked in contrast to the 26% of triers who had non smoking mothers and fathers.

Figure 11.



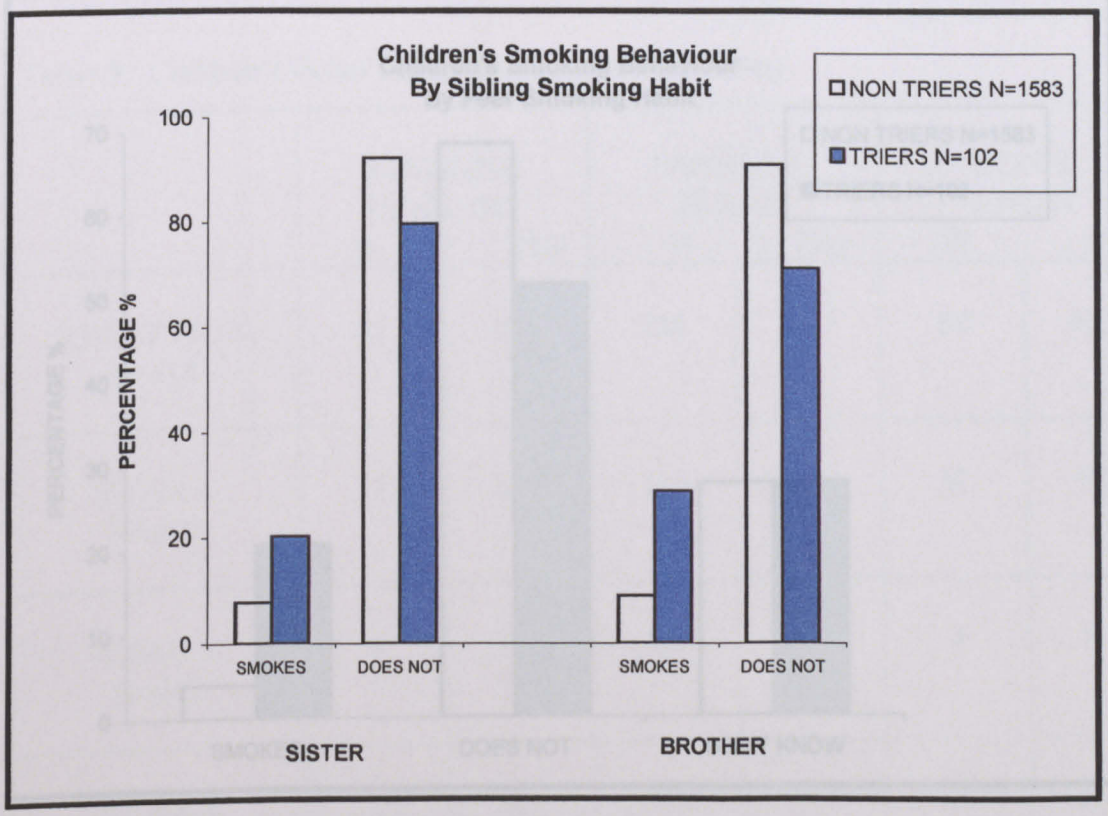
When parental smoking behaviour was broken down by gender and year group, it is evident from Table 8. below that their ensuing patterns of behaviour were fairly evenly distributed. For mothers and fathers who smoked, about one quarter came from each year group, regardless of gender. A similar pattern unfolded for non smoking parents. A slight, statistically insignificant deviation was found for boys in Reception and all children in Year 2 where a somewhat larger percentage (27%) of all parents who smoked were found.

Table 8. Parental Smoking Behaviour By Gender and Year Group

	Mother		Father	
	Smoker	**Non Smoker**	**Smoker**	**Non Smoker**
Reception Girls N= 198 Mother N= 195 Father	90 (26%)	108 (25%)	92 (26%)	103 (26%)
Year 1 Girls N= 201 Mother N= 190 Father	76 (22%)	125 (28%)	81 (23%)	109 (26%)
Year 2 Girls N= 194 Mother N= 191 Father	100 (28%)	94 (21%)	95 (27%)	96 (23%)
Year 3 Girls N= 198 Mother N = 196 Father	86 (24%)	112 (26%)	84 (24%)	112 (27%)
Total	352 (100%)	439 (100%)	352 (100%)	420 (100%)
Reception Boys N= 215 Mother N = 207 Father	117 (27%)	98 (22%)	119 (28%)	88 (21%)
Year 1 Boys N= 214 Mother N = 203 Father	96 (22%)	118 (26%)	92 (22%)	111 (26%)
Year 2 Boys N= 242 Mother N = 236 Father	118 (27%)	124 (27%)	116 (27%)	120 (28%)
Year 3 Boys N= 219 Mother N = 207 Father	102 (24%)	116 (25%)	98 (23%)	109 (25%)
Total	433 (100%)	456 (100%)	425 (100%)	428 (100%)

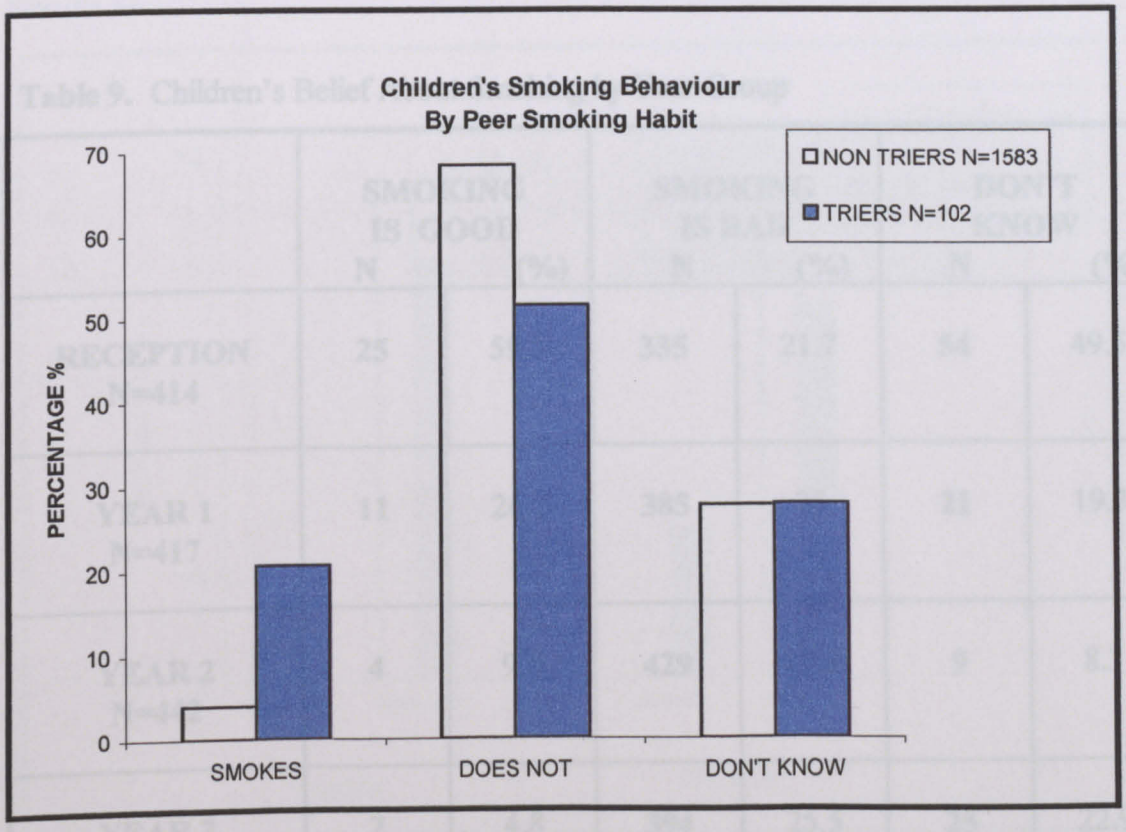
A significant relationship ($p<.001$) between children's usage of cigarettes and the smoking habits of their brothers and sisters is illustrated in Figure 12. In contrast to parents, a major portion of triers (over 70%) noted that their siblings were non smokers. The non triers reported that at least 90% of their brothers and sisters did not smoke. It would seem however, that children whose sisters (N=14) and brothers (N=23) smoked were at least twice as likely to have tried a cigarette than those children whose siblings were non smokers. Because the number of siblings who smoked was low, generalisations based on the results must be interpreted with some caution.

Figure 12.



In reference to the question regarding the smoking habits of friends, Figure 13 shows that 20% of children who had tried a cigarette had peers who smoked compared to only 4% of children who had never smoked before. Generally, the majority of children whether they be non triers or triers had peers who did not smoke (N=1115). In a like manner to sibling smoking behaviour, very few subjects had peers who smoked, thus assumptions about this influence on the children's own smoking behaviour, their beliefs and intentions to smoke will be difficult to determine accurately.

Figure 13.



4.5.2 *Sample Belief About Smoking*

To assess belief about smoking, the subjects were asked if they thought smoking was good or bad for people. The term 'people' was recommended by Wendy Fidler (personal communication, 1994), on the basis of pilot work from her smoking study with pre-school children (Fidler and Lambert, 1994). The response from the total sample revealed that 1543 children (91%) had negative feelings about smoking and believed it to be bad for people. Less than 3% of the children felt that smoking was good for people (N=42) and twice as many (6%) did not know whether smoking was good or bad. As evidenced in Figure 9., three quarters of the children who believed smoking to be good for people had tried to smoke a cigarette and according to Table 9. were principally in the youngest year group ($p<.001$).

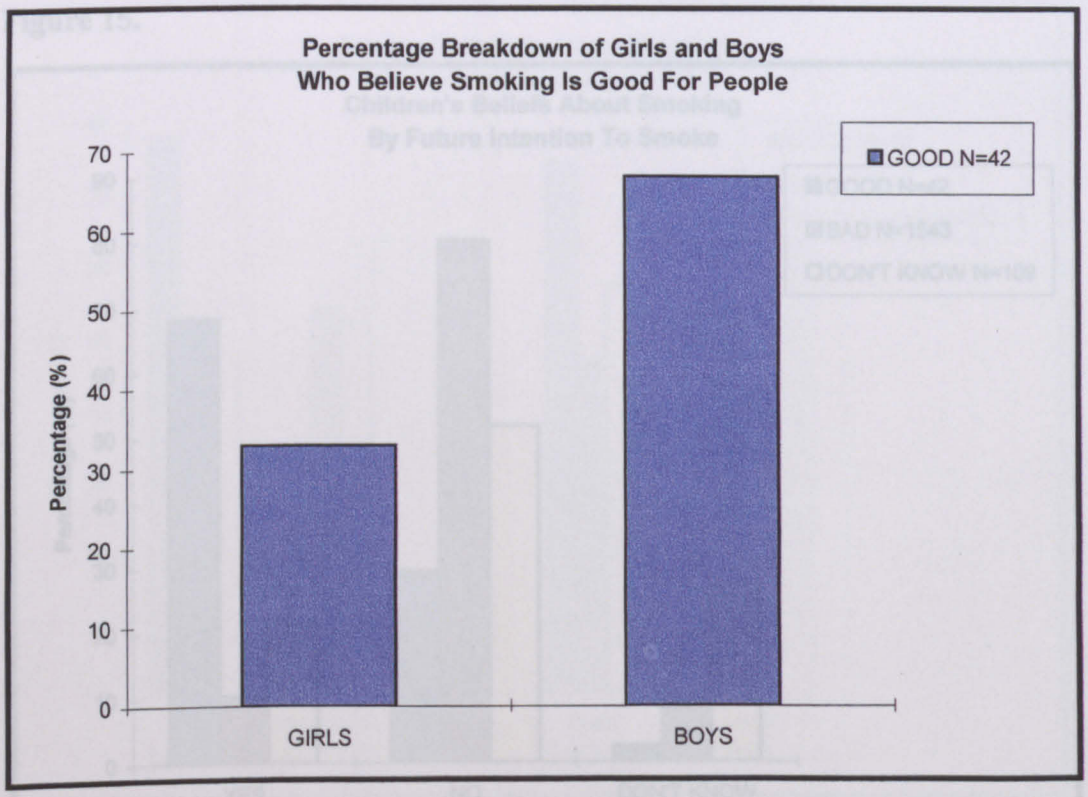
Table 9. Children's Belief About Smoking by Year Group

	SMOKING IS GOOD		SMOKING IS BAD		DON'T KNOW	
	N	(%)	N	(%)	N	(%)
RECEPTION N=414	**25**	59.5	**335**	21.7	**54**	49.5
YEAR 1 N=417	**11**	26.2	**385**	25	**21**	19.3
YEAR 2 N=442	**4**	9.5	**429**	27.8	**9**	8.3
YEAR 3 N=421	**2**	4.8	**394**	25.5	**25**	22.9
TOTAL N=1694	**42**	100	**1543**	100	**109**	100

Sample Belief About Smoking - Gender as a Variable

Figure 14. aptly demonstrates the fact that the gender bias evident in children's incidence of cigarette experimentation was also significant ($p<.05$) in beliefs as well. In concurrence with the findings for children who had tried to smoke, twice as many boys (N=28) than girls (N=14) had positive beliefs about smoking.

Figure 14.



Sample Belief About Smoking - Intention to Smoke

As revealed in Figure 15, there was a statistically significant association ($p<.001$) between belief and intention. Twenty-eight children (68%) who believed smoking was good for people wanted to smoke when they grew up as compared to twelve children (29%) who said they did not intend to smoke in the future. Most children (N=1234) had negative beliefs about smoking and stated they have no prospective desire to smoke.

Figure 15.

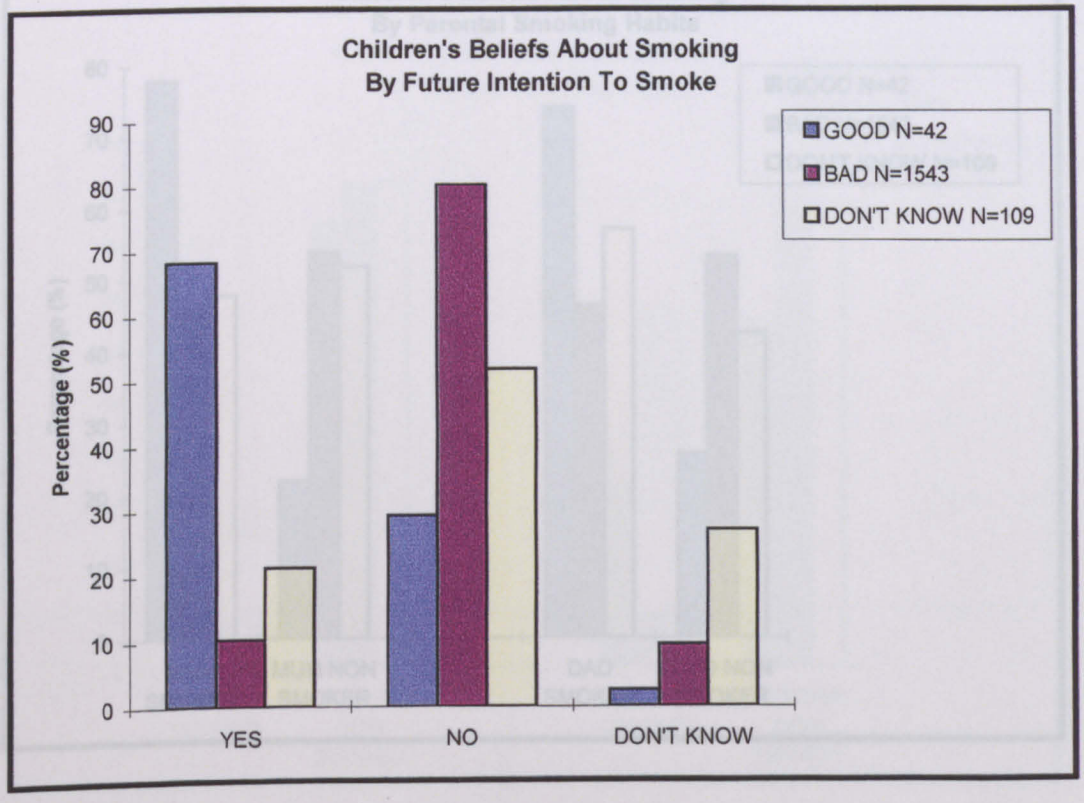
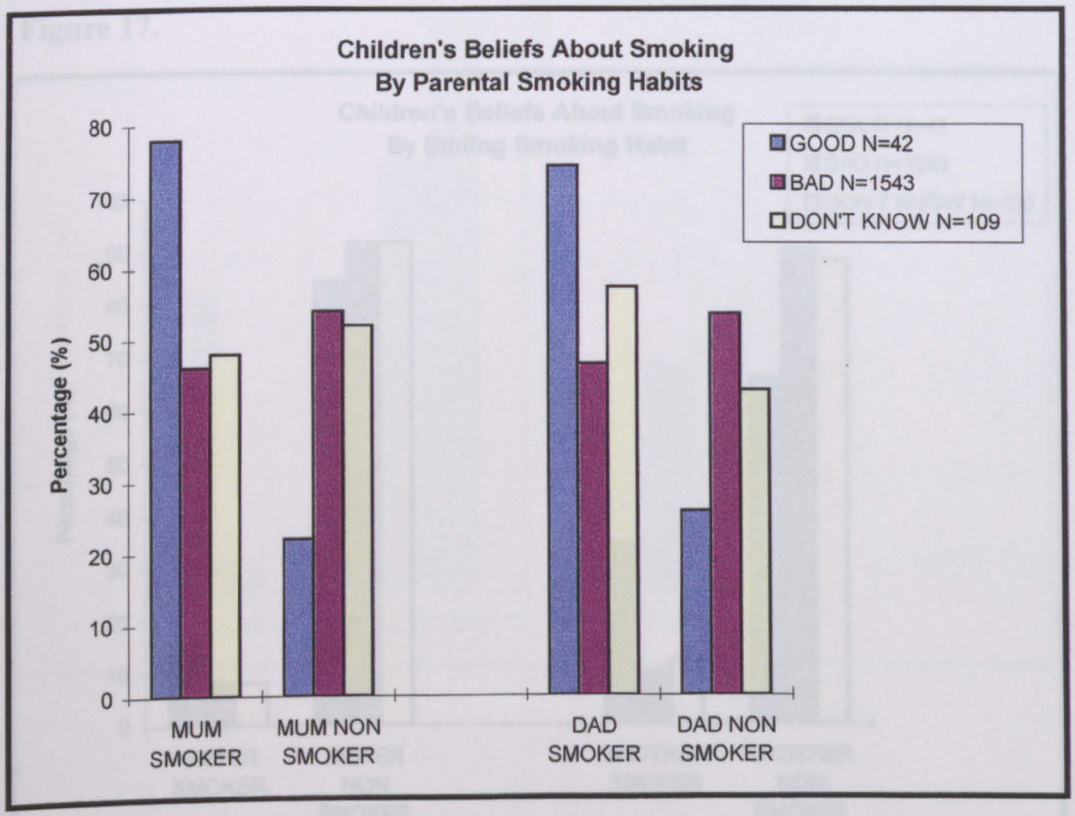


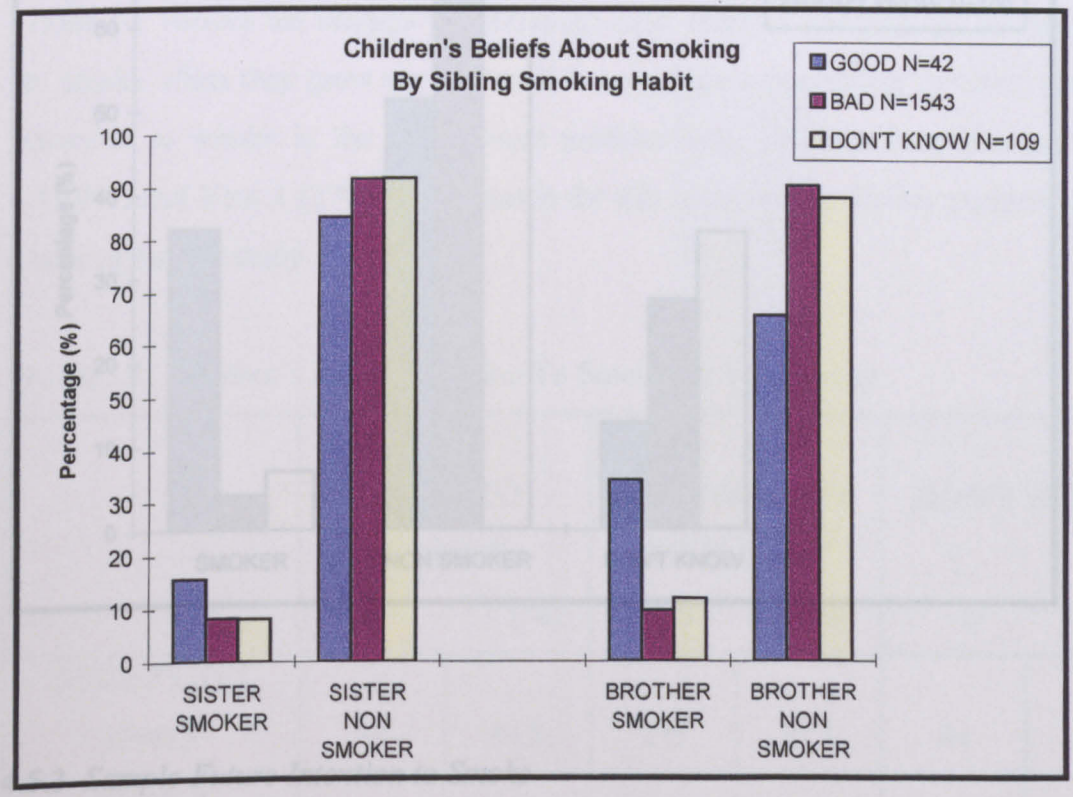
Figure 16. illustrates the statistically significant ($p<.05$) patterns in the relationship between children's beliefs about smoking and parental smoking habits. Of the children who believed smoking was good for people, over 70% had mothers (N=32) and fathers (N=29) who smoked. By contrast, less than 50% of children with negative beliefs about smoking had parents who smoked.

Figure 16.



It is obvious from Figure 17 that sister's smoking habits did not influence children's beliefs about smoking ($p = .593$). However, significant differences ($p < .001$) were evident in relation to brother's smoking habits. Of the children who thought smoking was good, 34% had brothers who smoked whilst less than 10% of children with negative beliefs about smoking had brothers who smoked.

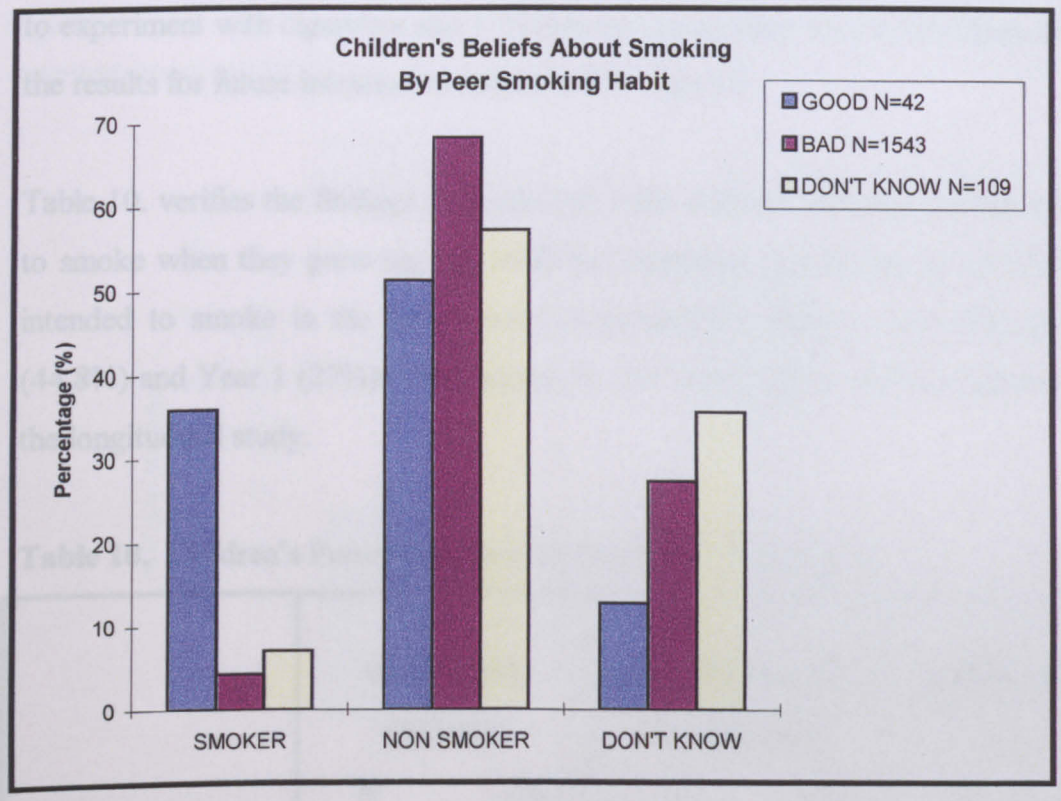
Figure 17.



Beliefs About Smoking- Smoking Behaviour of Peers

Regardless of belief about smoking, most children maintained that their friends were non smokers as seen in Figure 18. Of the minority of subjects with friends who smoked, 36% were mainly children who believed that smoking was good for people whereas only 4% thought that it was bad to smoke.

Figure 18.



4.5.3 *Sample Future Intention to Smoke*

As previously stated, an additional means of drawing out children's ideas about smoking was accomplished by asking the subjects if they thought they would smoke when they grew up. Of the 1690 responses, 77% of the children (N=1305) did not think that they would smoke in the future, 10% of the children did not know (N=175) and 13% intended to smoke when they grew up (N=210). It would appear that those children who wanted to smoke when they grew up were

for the most part, the children who had experimented with cigarettes and harboured the belief that smoking was good for people.

During the pilot study, some children expressed a desire to try a cigarette but did not intend to smoke when they grew up. Consequently to differentiate curiosity from intention, the subjects were asked if they wanted to try a cigarette, even just one puff. Responses were comparable to those for future intention. 81% of children (N=1375) expressed no desire to try a cigarette, 7.6% conveyed a wish to experiment with cigarettes and 11% denoted uncertainty and on this basis, only the results for future intention to smoke will be reported.

Table 10. verifies the findings that although most children said they did not want to smoke when they grew up, the small but significant percentage ($p<.001$) that intended to smoke in the future were predominantly children from Reception (44.8%) and Year 1 (27%). The reason for this trend will be further explored in the longitudinal study.

Table 10. Children's Future Intention To Smoke By Year Group

	WANT TO SMOKE		**DO NOT WANT TO SMOKE**		**DON'T KNOW**	
	N	**(%)**	**N**	**(%)**	**N**	**(%)**
RECEPTION N=413	**94**	44.8	**275**	21.1	**44**	25.1
YEAR 1 N=415	**57**	27.1	**320**	24.5	**38**	21.7
YEAR 2 N=442	**29**	13.8	**370**	28.3	**43**	24.6
YEAR 3 N=420	**30**	14.3	**340**	26.1	**50**	28.6
TOTAL N=1690	**210**	100	**1305**	100	**175**	100

Boys (N=143) according to Figure 19. were twice as likely to indicate intention to smoke when they grew up than girls (N=67) which was in keeping with the statistically significant gender bias ($p<.001$) found throughout the data in this study.

Figure 19.

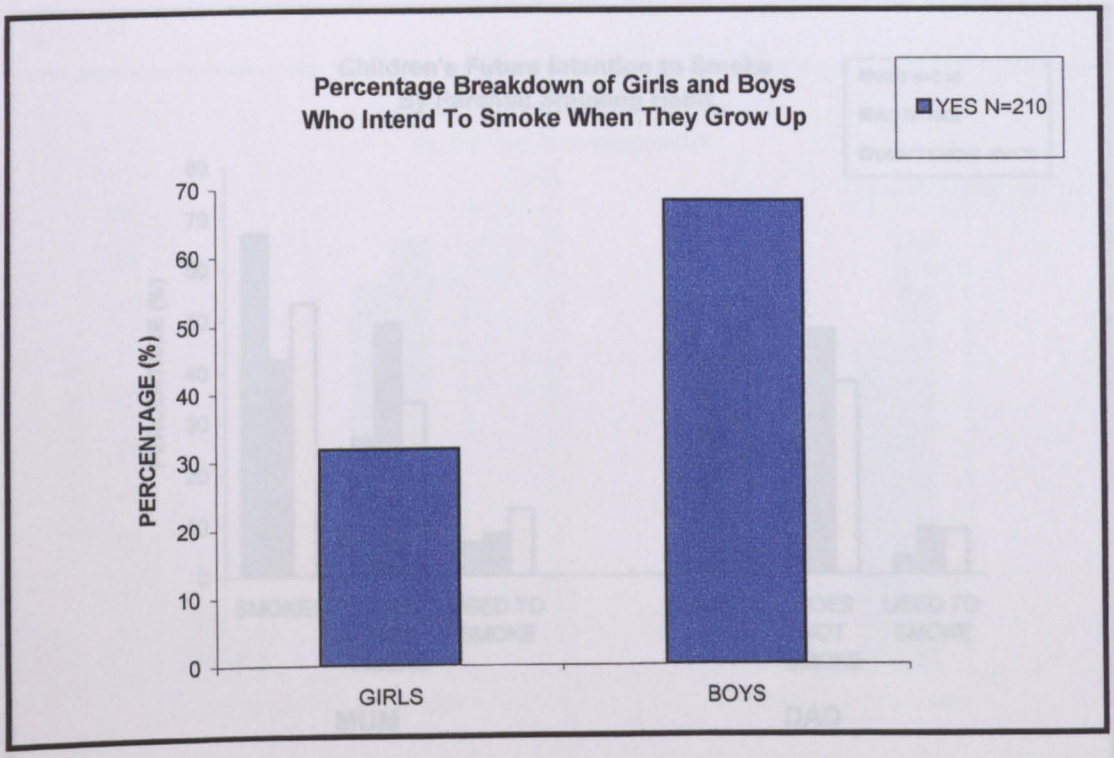
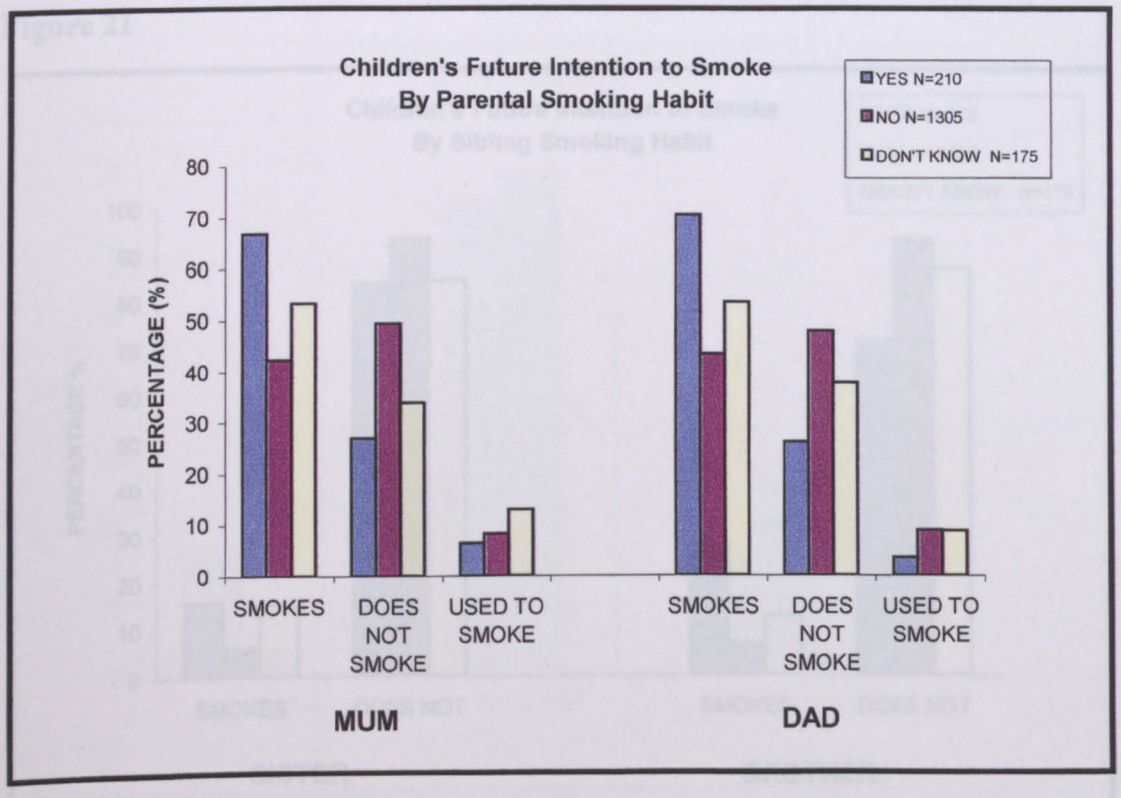


Figure 20. depicts the existence of a significant relationship ($p<.001$) between children's inclination to smoke when older and the smoking habits of parents. Of the children who wanted to smoke when they grew up, 66% had mothers who smoked and 70% had fathers who smoked compared with 26% whose parents were non smokers.

Figure 20.



Analogous patterns of statistical significance ($p<.001$) were also apparent in the association between future intention to smoke and sibling smoking habits depicted in Figure 21. The children who stated that they wanted to smoke when they grew up were twice as likely to have had a sister (16% compared to 6%) and four times more likely to have had a brother (28% compared to 7%) who smoked.

Figure 21

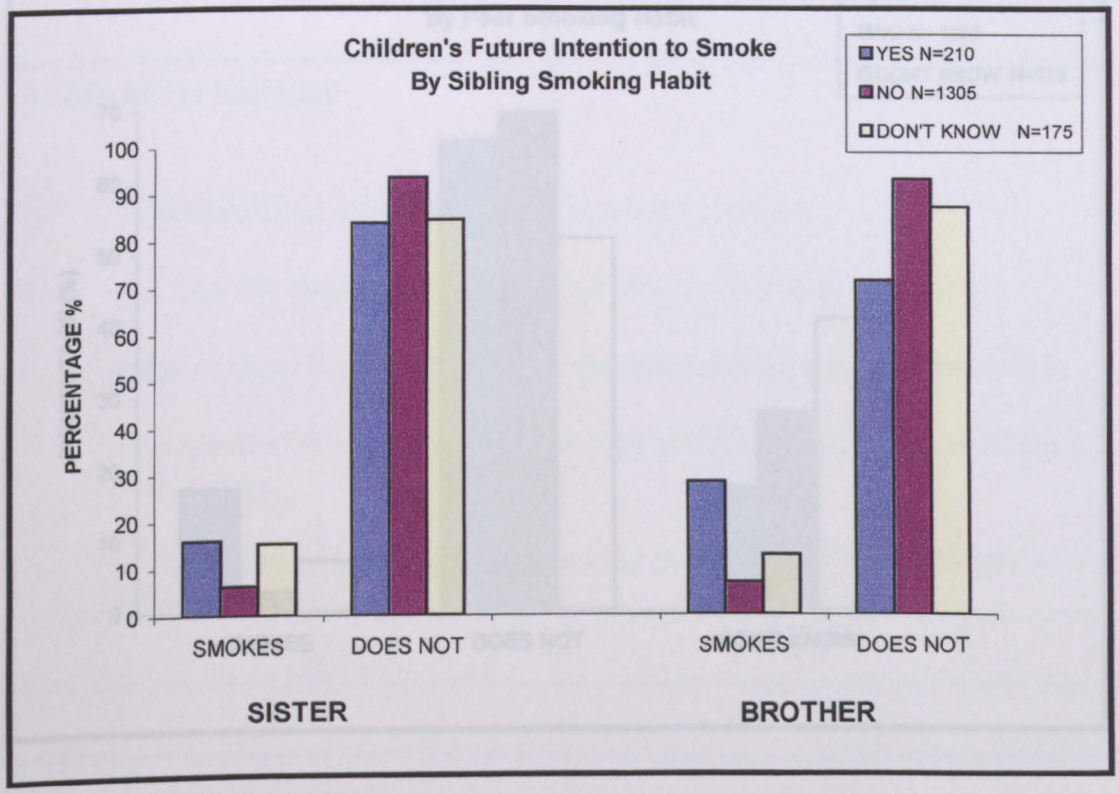
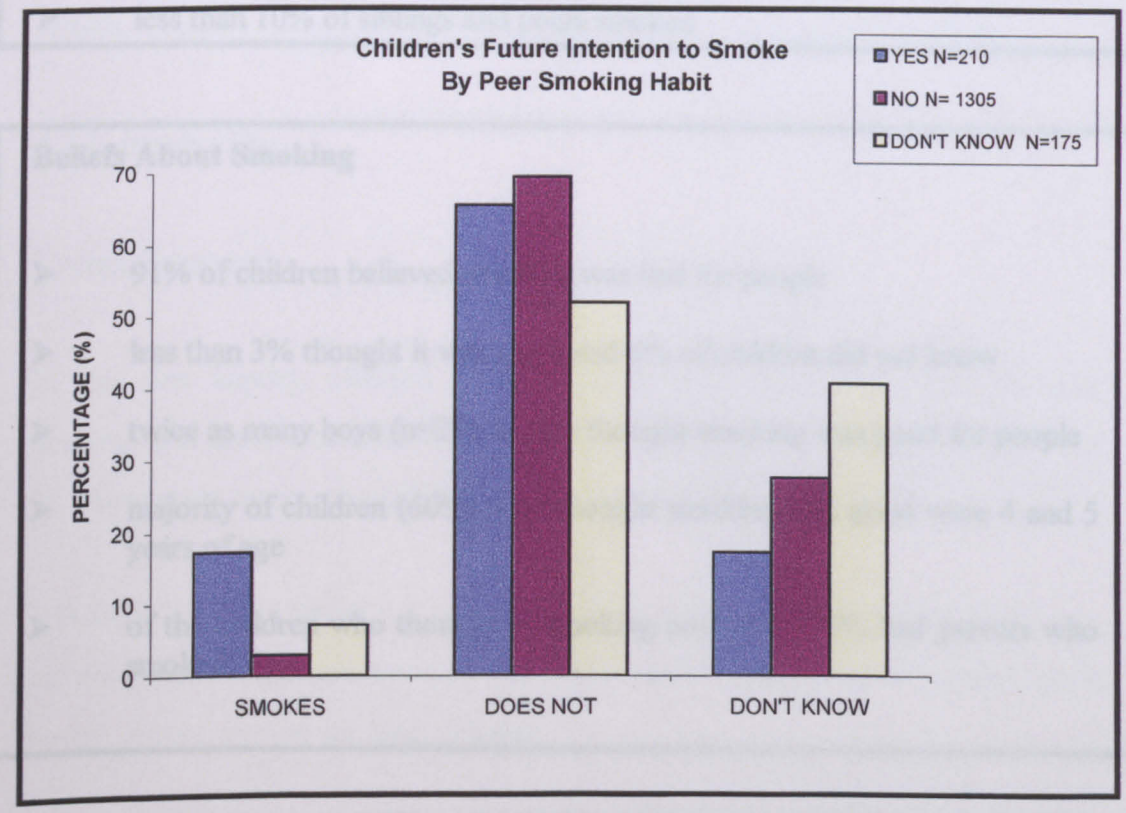


Figure 22 clearly indicates that the majority of the children in the sample had peers who were non smokers. However, of the children with friends who smoked, 17 % wanted to smoke when they grew as compared to only 3% who expressed no desire to take up the habit later on in life.

Figure 22



4.6 Summary of Questionnaire Results

Smoking Behaviour

- 94% of children had never tried a cigarette
- 102 children (6%) tried at least one puff of a cigarette
- over 60% of 'triers' had parents who smoked and over 70% were boys
- 47% of mothers and 48% of fathers smoked
- less than 10% of siblings and peers smoked

Beliefs About Smoking

- 91% of children believed smoking was bad for people
- less than 3% thought it was good and 6% of children did not know
- twice as many boys (n=28) as girls thought smoking was good for people
- majority of children (60%) who thought smoking was good were 4 and 5 years of age
- of the children who thought of smoking positively, 70% had parents who smoked

Future Intention To Smoke

- 77% of children did not think they would smoke when they grew up
- 10% were uncertain about their future smoking habits
- of the 13% who intended to smoke, the majority were from Reception and Year 1
- boys were twice as likely to want to smoke in the future than girls
- at least 60% of the children who expected to smoke when older had parents who smoked

4.7 Draw and Write Technique Results

Analysis of draw and write was done by means of coding categories developed for each inquiry. Only the children's actual written work was subjected to this analysis. The main coding categories for each inquiry were adapted from the Somerset Report (1994) and are listed below. Each inquiry also had a 'no data' category in the event that children did not write any comments in conjunction with their drawing. All results from the Draw and Write Technique were based on the frequency of responses found in Appendix 5. Following is a summary of those results. Children could give more than one answer to each question asked.

4.7.1 *Inquiry One*

Coding Categories

In this first inquiry, children were asked to think about and draw someone smoking and answer the following questions: 1) How does your person feel? and 2) Where does the smoke go? The coding categories are as follows:

- POSITIVE FEELINGS

anything written that presented smoking in a positive manner such as good, cool, happy, strong, grown up, glad, relaxed

- NEGATIVE FEELINGS

anything written that conveyed smoking in a negative manner like sick, sad, naughty, terrible, unhappy, stressed, bad

- BOTH - OTHER

any comments that were neither positive or negative or ones that included both as in funny, normal, smoky or happy and sad

Coding categories for Question 2

• SMOKE in OTHER PLACES

observable environmental cues as to where the smoke went: up, in the air, to town, to heaven, outside, in the ashtray, out the window, chimney

• SMOKE IN THE BODY

the mentioning of general body parts in response to where the smoke went: mouth, eyes, throat, belly, nose, chest, hair, face, ribs, head

• LUNGS and HEART

the mentioning of these specific terms as organs that the smoke infiltrated

• CANCER - DEATH - DISEASE - ASTHMA

any comments that included a reference to these health implications

•TAR - NICOTINE - ADDICTION - POLLUTION

inferences to the meaning of these words, for example: 'He wants to stop smoking but it is hard to stop smoking'

Thematic Trends

Inquiry 1 - Reception

- twice as many children wrote negative rather than positive comments about smokers
- 2 children mentioned death
- only 1% of the boys and girls (N=3) cited lungs, 1 acknowledged the heart and no one wrote about cancer
- about a quarter of the children (N=64) alluded to smoke entering the body whereas 70% believed the smoke went 'up to the sky'

Inquiry 1 - Year One

- over 60% in this age group mentioned negative things about smoking
- 2 children thought their smoker felt both good and bad
- no references were made about nicotine, addiction, cancer or pollution
- 6% of the sample (N=16) mentioned lungs whereas less than 1% referred to the heart
- death was brought up by 3 children
- the majority of children (72%) thought the smoke dissipated into the environment

Inquiry 1 - Year Two

- the majority of children (over 70%) associated negative connotations to smoking
- less than 1% of children included the heart but 13% talked about lungs
- cancer and pollution were not mentioned but inferences about nicotine and addiction were made by 2 children
- most children (70%) still thought the smoke went into the air but more links with the body and specific internal organs were evident

Inquiry 1 - Year Three

- over half the children wrote negative rather than positive things about smokers
- 8 children felt smokers could have both positive and negative feelings
- 2% of boys and girls in this group mentioned pollution
- lungs were specified by 74 children and 7 referenced the heart
- smoke going into the atmosphere was mentioned by less than 45% of children

When comparing the results for Inquiry One across the different age groups, it is obvious from Figure 23. that the children's responses were fairly evenly distributed with the majority (60%) of the children in the sample associating smoking with negativity whilst only a minority (less than 30%) felt it had positive characteristics.

Figure 23.

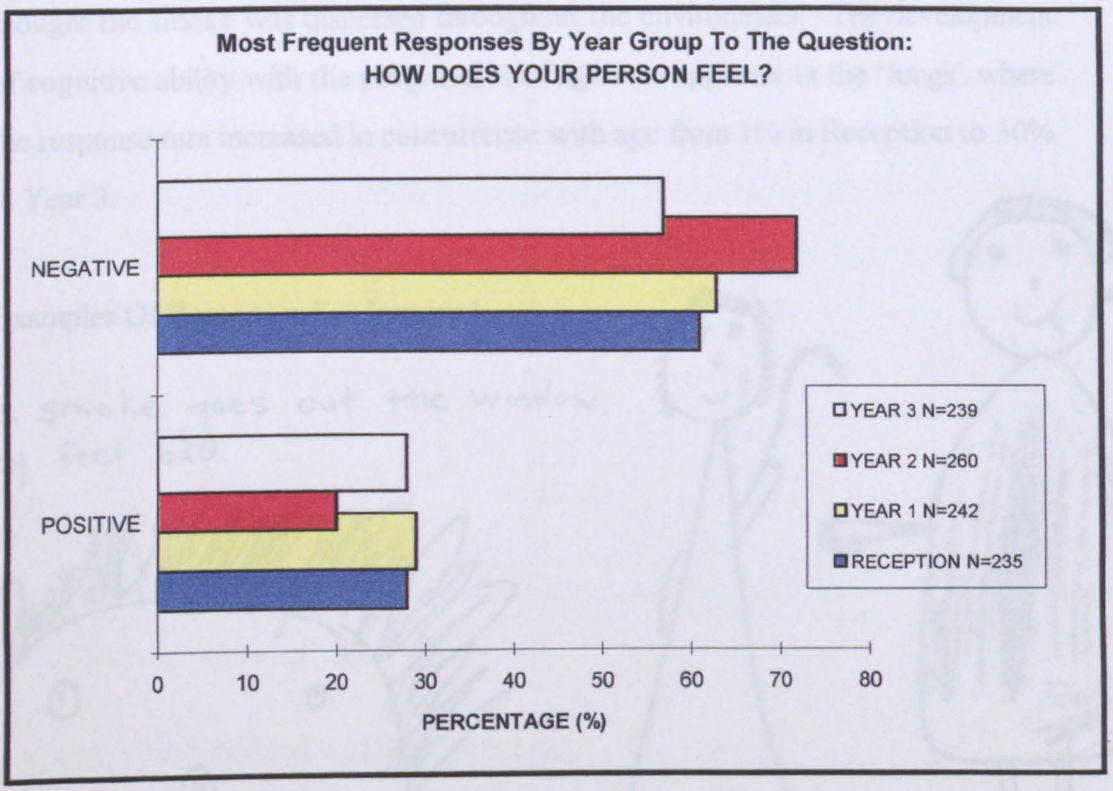


Figure 24.

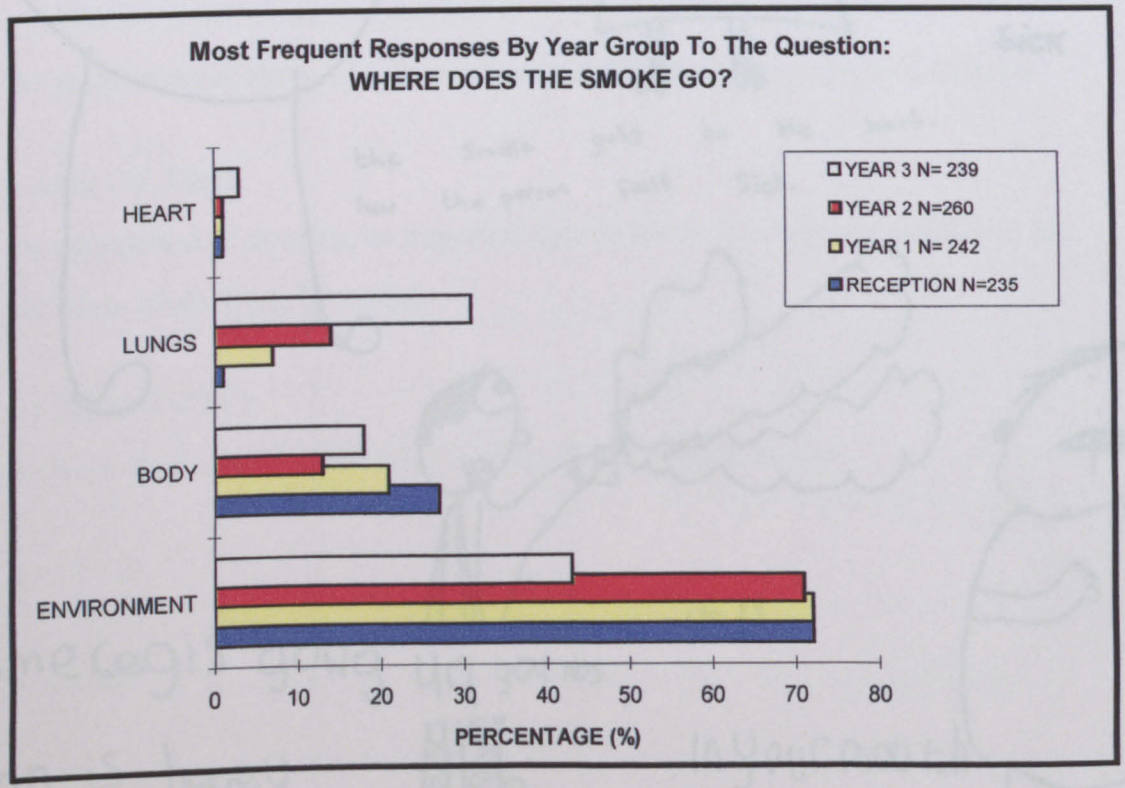
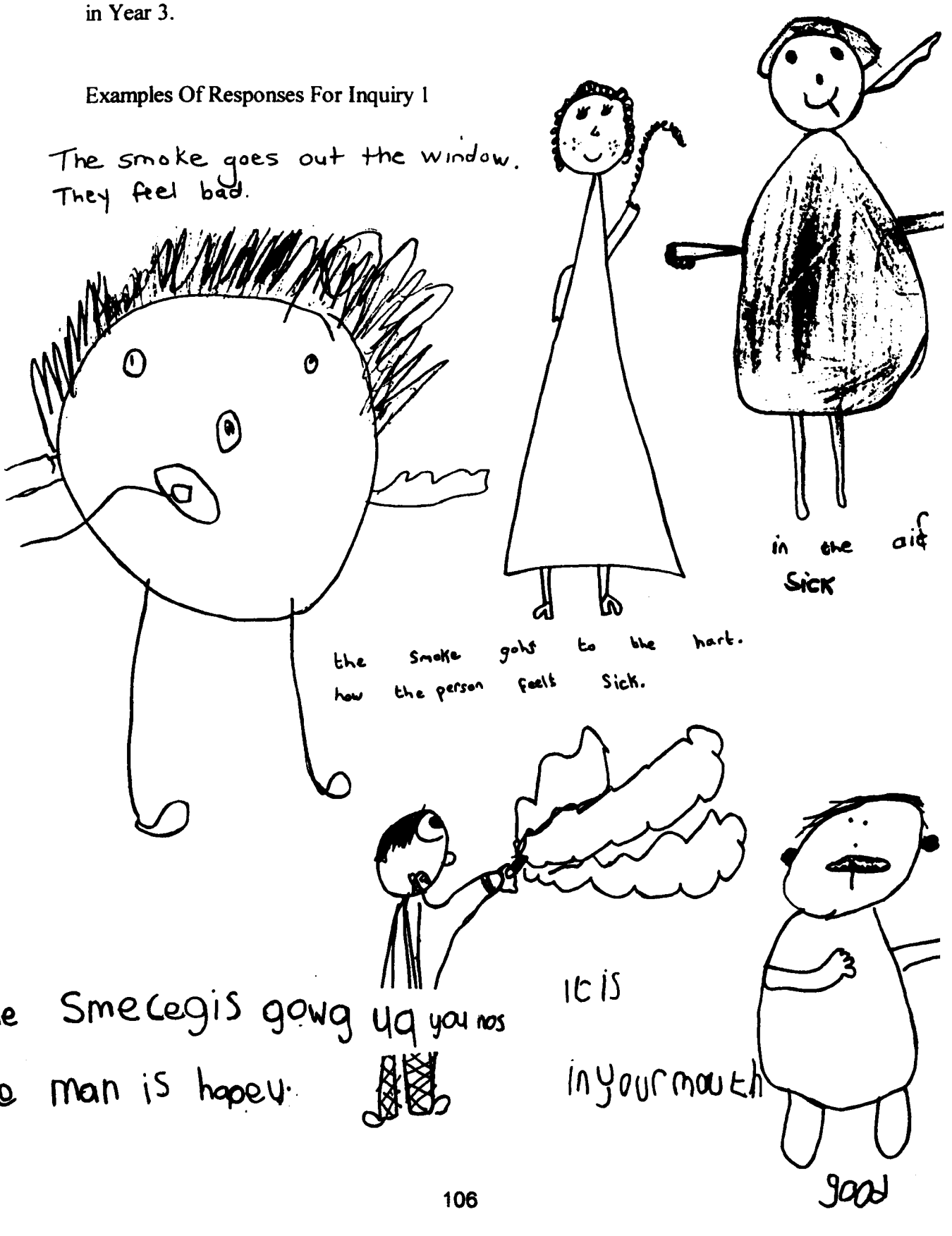


Figure 24. clearly shows that young children in particular relied on visual cues to inform their thought processes. Over 70% of children from Reception to Year 2 thought the smoke was dispersed throughout the environment. The development of cognitive ability with the progression of age was apparent in the 'lungs' where the response rate increased in concurrence with age from 1% in Reception to 30% in Year 3.

Examples Of Responses For Inquiry 1



4.7.2 *Inquiry Two*

In Inquiry Two, the subjects were requested to draw a person who had been smoking for a long, long time and write how they could tell from the inside of the body that this person had been smoking for a long time. Of the four inquiries, this one proved to be the most difficult to answer, in particular for the young children who had difficulty understanding the concept of 'inside the body', a ramification of their limited cognitive abilities.

Coding Categories

- PHYSICAL APPEARANCE

observable characteristics of poor health like coughing, asthma, wrinkles, weak, sick, dizzy, tummy ache, tired

- EXTERNAL OBSERVABLE FACTORS

visible signs in the surroundings: smoke everywhere, see lots of cigarettes, smelly ashtray

- INTERNAL PHYSICAL FACTORS

the mentioning of internal body parts such as kidneys, bones, ribs, throat, veins

- AGE OR TIME

the association of smoking to a specific time in life or to a specific individual: big, old, Nan, Mum, Dad, Granddad

- PERSONALITY

personal attributes of individuals: smiling, like it, want it, happy

- LUNGS

- HEART

- DEATH

- CANCER

- ADDICTION, TAR, NICOTINE

Thematic Trends

Inquiry 2 - Reception

- responses based on easily observable signs were cited most often as means of recognising a smoker
- twice as many children (N=22) alluded to physical appearance rather than internal body parts
- 18% of boys and girls identified long time smokers by their persona
- specific mention of internal organs was made by less than 3% of the children

Inquiry 2 - Year One

- 53% of the children relied on physical appearance to recognise smokers
- 41 children mentioned vital internal organs and 3 brought up cancer
- 8% identified smokers by their personality (happy, smiling)
- addiction was cited twice and death was noted 7 times
- 10% of children equated smokers with adulthood and mentioned specific individuals

Inquiry 2 - Year Two

- 137 of the children (52%) used observable signs to recognise smokers
- the effect of smoking on the lungs (N=54) and heart (N=16) was reported more often than for the younger year group
- cancer is mentioned 3 times, addiction once and tar appears for the first time

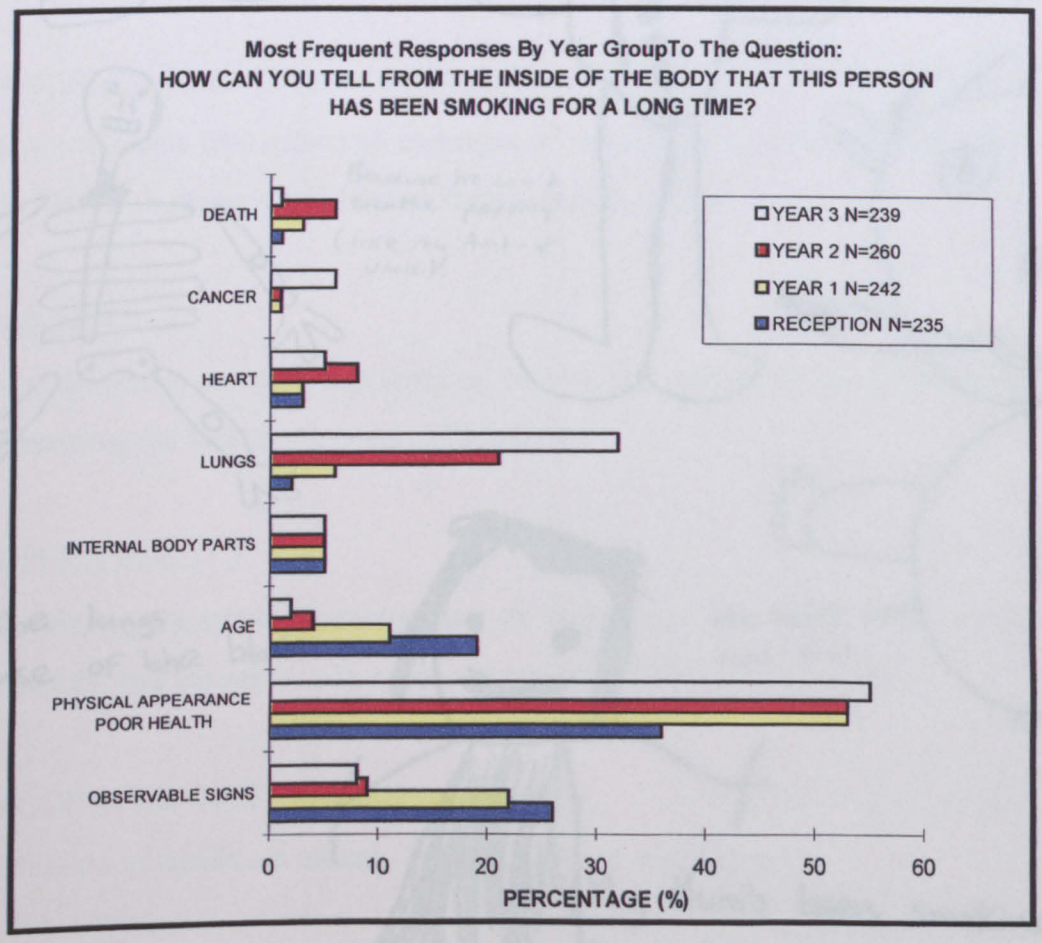
Inquiry 2 - Year Three

- almost 55% of children used physical appearance as an index for identifying smokers
- cancer was mentioned by 6% of children and death by 1%

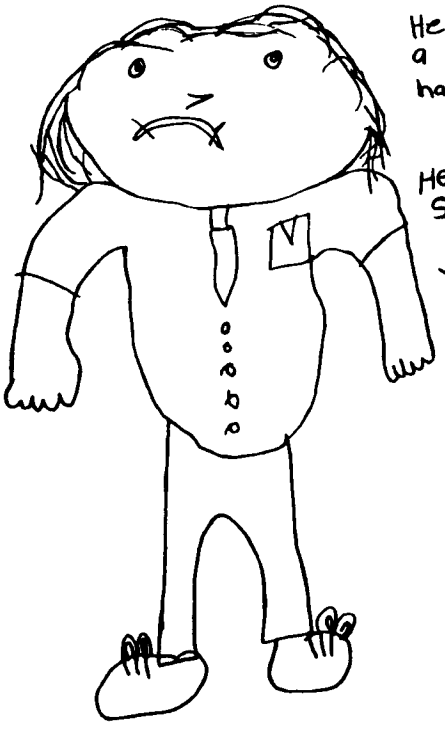
- damage to the lungs was reported by 75 children and to the heart by 12 children
- addiction, tar and nicotine were cited 9 times in total

Figure 25. depicts apparent age-related differences in the response rates to Inquiry 2. Because children relied heavily on what they saw, answers revolving around what was discernible were most common. However, a negative trend was visible with respect to such factors as age and lungs. Young children were most likely to identify smokers by their persona whereas older children were less apt to respond in this manner. An inverse relationship existed with respect to the lungs in that Year 3 children referred to lungs 15 times more often than children in Reception and 5 times more often than Year 1 children.

Figure 25.



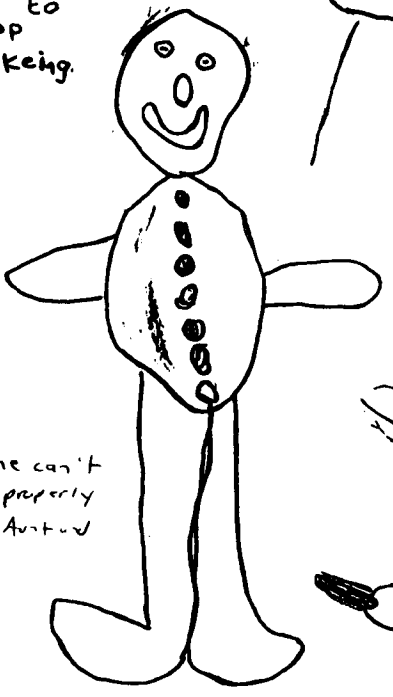
Examples Of Responses For Inquiry 2



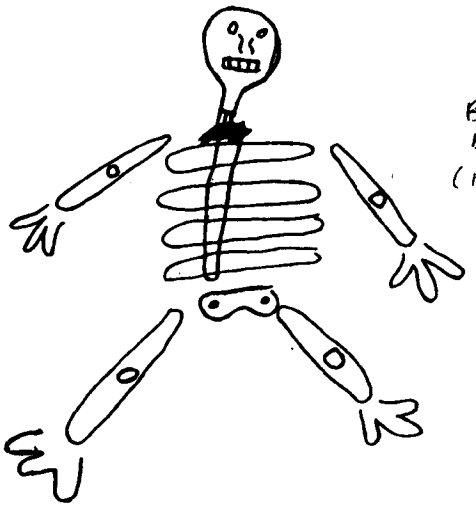
He has got a very Bad hart.

He looks very Sad He ~~was~~ wants to Stop Smokeing But it is hard to Stop Smokeing.

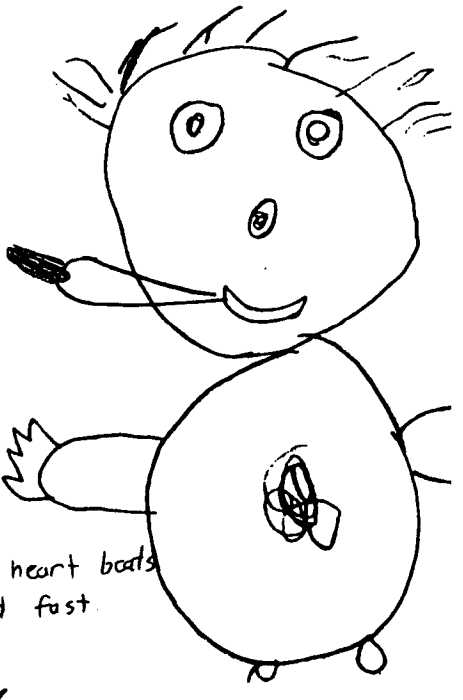
has a patch on his arm my dad went to doctor because could not stop sm and he got a pa



Because he can't breathe properly (like my Auntuv Uncle)



by the lungs because of the black.



the heart beats dead fast

My Mum's been smoking for a time but now she can't cos sh having a baby.

4.7.3 *Inquiry Three*

In Inquiry 3, the children were asked to draw a young person who just started to smoke and write the answer to three questions: 1) How old do you think this person is? 2) Why does this young person want to smoke? and 3) Where did this young person learn to smoke?

Coding Categories For Question 1:

- AGE RANGES

age was categorised into 3 groups: under 10, 11-20 years and over 21

Coding Categories For Question 2:

- DESIRE - PLEASURE - CURIOSITY

any comments that conveyed messages of wanting to try smoking, because they feel like it, because it makes them happy, out of interest

- IMAGE

any references denoting that smoking is cool, big, grown up, good, fun clever or conveying the idea that it is part of adulthood

- PERSONALITY

mentioning negative characteristics of someone's personality such as being naughty, bad tempered, silly or wanting to be bad or to ignore parents

- COPY PARENTS - MATES - OTHERS

imitation of significant others - to be like dad, to feel like mum

- PRESSURE FROM OTHERS

references to being told to smoke, shown how to smoke, peer pressure

• TO DIE

statements in reference to smoking as a means of dying

Coding Categories For Question 3:

• FAMILIAL REFERENCES

any mention of mother, father, both parents, family, house, home, siblings, grand parents, aunts, uncles and cousins

• PEOPLE

a universal term referring to anyone in the general population

• FRIENDS

references to mates and peers

• SCHOOL - COLLEGE

specific mention of these educational institutions

• PLACE - SHOP

specification of locations such as the park, the entry, the pub, in town, on the bus

• TV

Thematic Trends

Inquiry 3 - Reception

- children cited a familial reference 40% of the time when asked where people learn to smoke
- 37 children specifically mentioned parents as the source of learning
- the shop, the park and the street were seen as places to learn to smoke by 26%
- peers and television played a minimal role for this age group
- almost half the children labelled their young smoker under 10 years of age

- 'because they want to' was given as the main reason why people smoke by 42% of children
- 36 children felt that imitation was the basis for individuals starting to smoke

Inquiry 3 -Year One

- 49% of the sample mentioned familial references in conjunction with learning to smoke- parents made up over half the responses
- other people was cited by 36 children whilst various places like the shop was stated by 33 boys and girls
- friends and school played a slightly more significant role (11.5%) and tv was mentioned 9 times
- 35% of the children felt their smoker was between 11 and 20 years of age
- curiosity and pleasure were the most significant factors given as to why people smoke (30%) but seeing others (parents, peers, others) smoke was reported with equal frequency

Inquiry 3 - Year Two

- familial references were mentioned by 44% of the subjects- the majority (37%) attributing the learning process to parents
- other people accounted for 20%, friends 11%, school 6% and tv a mere 2%
- the majority of children believed young smokers were between 11-20 years of age
- one quarter of the group (N=66) thought desire and pleasure influenced the uptake of smoking, another quarter (N=62) reckoned that self image was the catalyst whilst the remainder generally attributed it to imitation

Inquiry 3 -Year Three

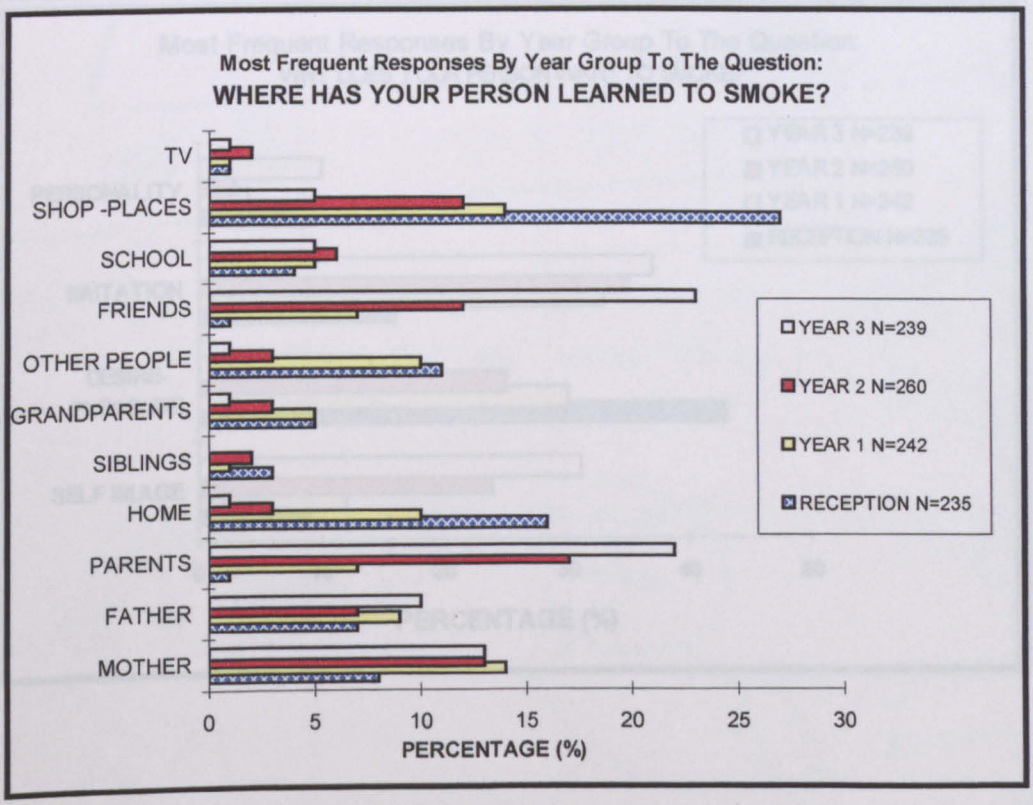
- although 46% of boys and girls thought family was where people learned to smoke, a proportion (28%) mentioned friends and school as well as learning from other people (18%)
- for the most part, young smokers were thought to be between 11-20 years of age

- in contrast to the younger children, this age group viewed self image (31%) almost as important an impetus to starting to smoke as copying others (37%).

Of the children who mentioned imitation (N=90), half referred to the peer group

Figure 26. gives details about children's perceptions of smoking acquisition across year group. Familial references accounted for at least 40% of the responses regardless of age. By contrast, the peer group played a minimal role in the eyes of the four and five year olds (less than 1%) whereas it was one the most frequent responses given by those children in Year 3.

Figure 26.

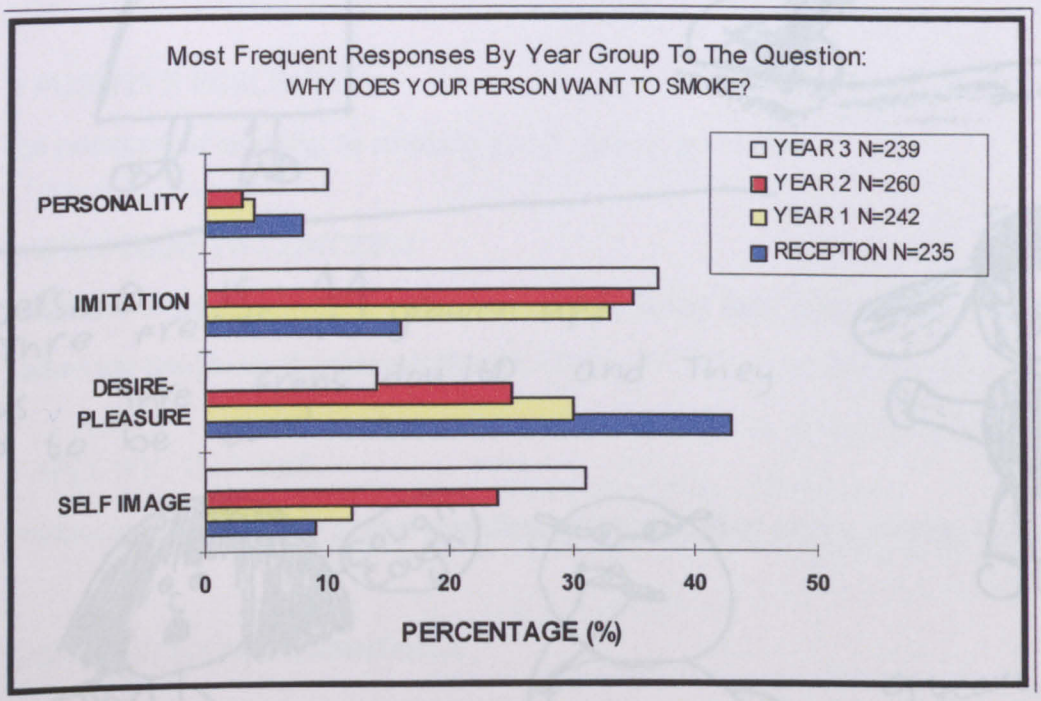


Another major point of difference that existed between the youngest children in the sample and the oldest was based on linguistics. Children in Year 3 tended to refer specifically to both mother and father when mentioning a familial reference. In comparison, children in Reception used the more universal term of home to convey the same notion. Furthermore, the youngsters had interpreted the question 'where has your young person learned to smoke?' literally thereby citing 'shops

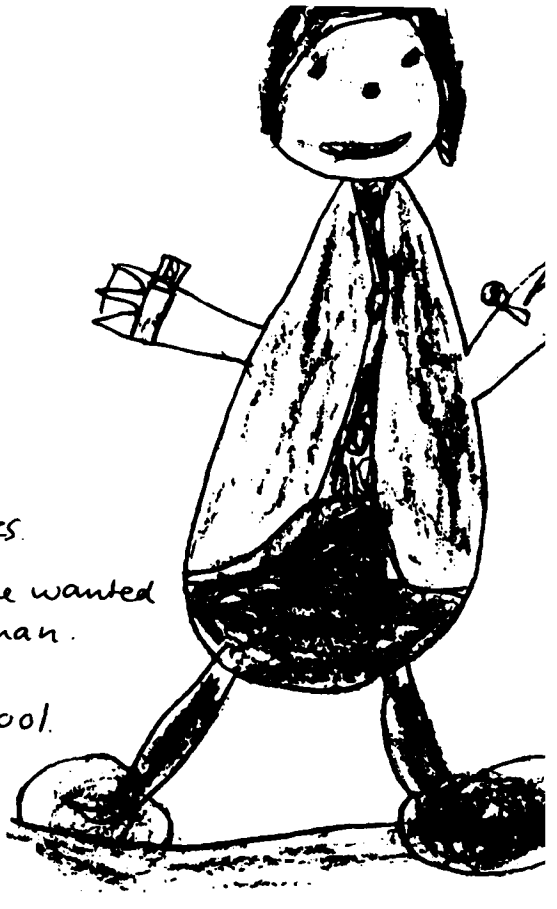
and places' with a much higher frequency (26%) than their older counterparts (4%).

The significance of age is also apparent in Figure 27. Children in Reception were most likely to give the response 'because they want to' or 'because they like it' as the rationale for young people wanting to smoke whereas significantly fewer 7 and 8 year olds coined those phrases. Inversely, the sample from Year 3 were more apt to cite self image and copying others, particularly friends as the reason. Such responses declined in frequency with the regression of age.

Figure 27.



Examples Of Responses For Inquiry 3



10 years
because he wanted to be a man.

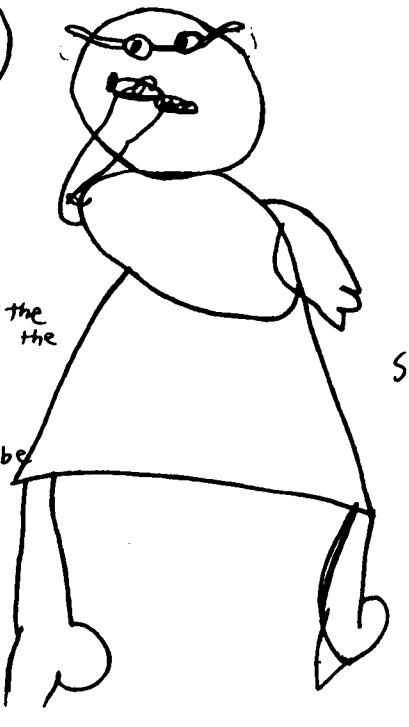
in school

This persan is 14 from Thre frends and growen ups becoous Thre frens dou it and They wonted to be cuw'

9 years.
because she wante cou
she copied of her sisters.

He learned in the pub where all the people used to smoke.

He wants to be like the big people.



15 years of age
from thre mum or dad
to look good old, tough,
and attack boys.

4.7.4 *Inquiry Four*

In Inquiry Four, the subjects were instructed to draw themselves in a room full of smokers and write about 1) how they feel and 2) what they would say? The coding categories were organised as follows:

Coding Categories For Question 1:

- NEGATIVE FEELINGS

emotions and well being that conveyed negative sentiments: awful, sad, unhappy, scared, upset, angry, worried, sick, weak, tired, ill

- POSITIVE FEELINGS

the portrayal of smoking as smoking good: happy, good, fine

- OWN HEALTH CONCERN

reference to health effects on self: smoke goes in my face, eyes, mouth, lungs; it makes me cough, choke, get asmtha

- SPECIFIC ILLNESS

mentioning of vital body organs and diseases: lungs, heart attack, cancer, death

Coding Categories For Question 2:

- REQUEST OR COMMAND

a direct order to stop smoking, quit, give it up, get out, leave

- DISLIKE or LIKE

negative comments or positive comments

- QUESTION

asking why people smoke, why they don't quit, what's it like

•DEFIANCE

negative responses to being asked to stop smoking like 'Please stop smoking' – 'No'

• ACTION

personal action in some fashion: leave the room, hit the individual

• SCOLD

reprimanded the smokers: naughty, disgusting, wrong, bad for you

• SILENCE

said nothing, be ignored, uncertain of what to say

Thematic Trends

Inquiry 4 - Reception

- almost three quarters of the children felt bad or ill in a room full of smokers
- 12 children were concerned about the effects of smoking on their own health
- most (70%) expressed a request or command to stop, quit or leave
- 4 wrote they would leave whilst 2 thought they would say nothing at all
- 7 children reported that they liked being near smokers

Inquiry 4 - Year One

- over 200 children (83%) mentioned negative feelings in the presence of smokers
- some (N=23) were worried about their own health, others (N=10) mentioned internal organs and cancer
- the majority of children (70%) would tell a smoker to stop it or get out, 19 children would reprimand the smoker, 7 would question them and 3 would take some sort of action

Inquiry 4 - Year Two

- 76% expressed negative feelings and emotions about smoke
- most children (N=194) would say stop smoking or go away to a smoker
- 10 children would ask questions about why they are smoking
- 8 children depicted a scenario whereby the smokers refused to stop smoking
- 2% of children would say nothing to the smokers

Inquiry 4 - Year Three

- most of the subjects (85%) expressed negative sentiments about being in a room full of smokers
- 11% cited concerns about personal health whilst 9% referred to smoking related illness and damage to internal organs
- over three quarters of the children would ask the smokers to stop or leave
- there were 13 cases where smokers defied the children's requests to stop smoking
- 14% would question smokers, 7% would reproach them and 10% would leave the room themselves

Responses to Inquiry Four by year group are illustrated in Figure 28. and Figure 29. Invariably, almost the entire sample denoted feelings of negativity in the presence of individuals who smoke as shown in Figure 28. However, of the children who felt good around smokers, the majority were children from Reception.

According to Figure 29. asking a smoker to stop or leave or quit was obviously the most popular response by all the children despite age to Inquiry Four. A response linked to the progression of age was evident in the questioning of someone who was smoking in the presence of a child. The frequency with which the children would query the smokers increased proportionally with age. Four children in reception implied they would ask why the person was smoking or why they did not quit as opposed to 14 in Year 3.

Figure 28.

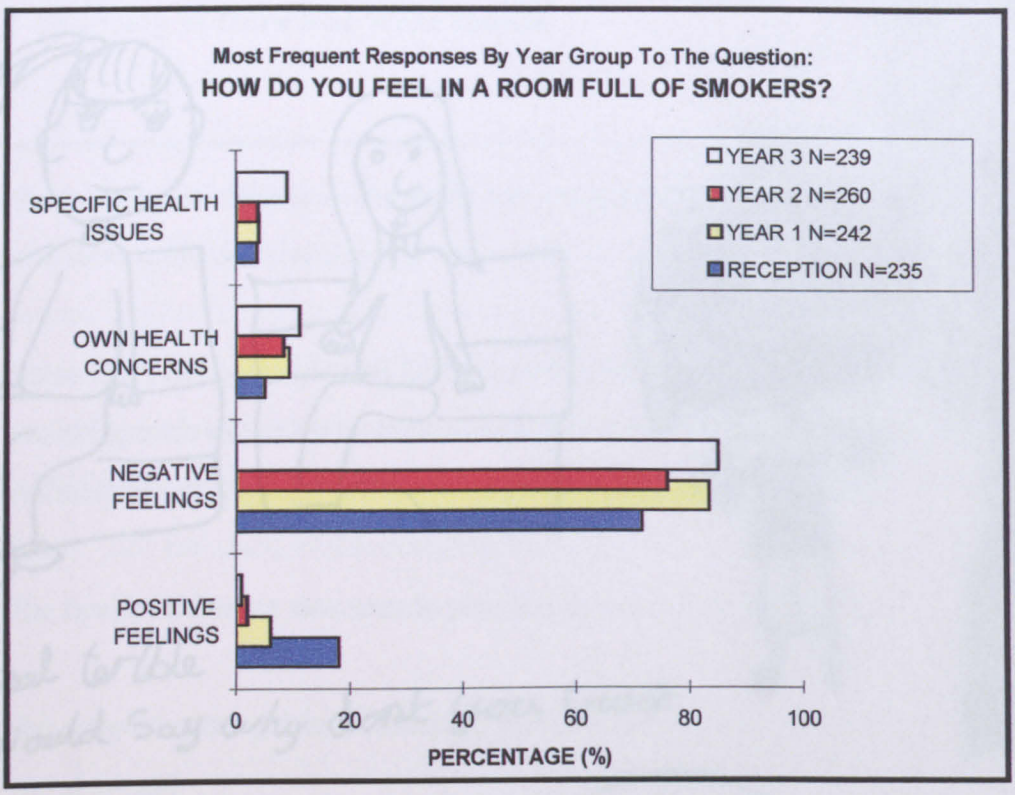
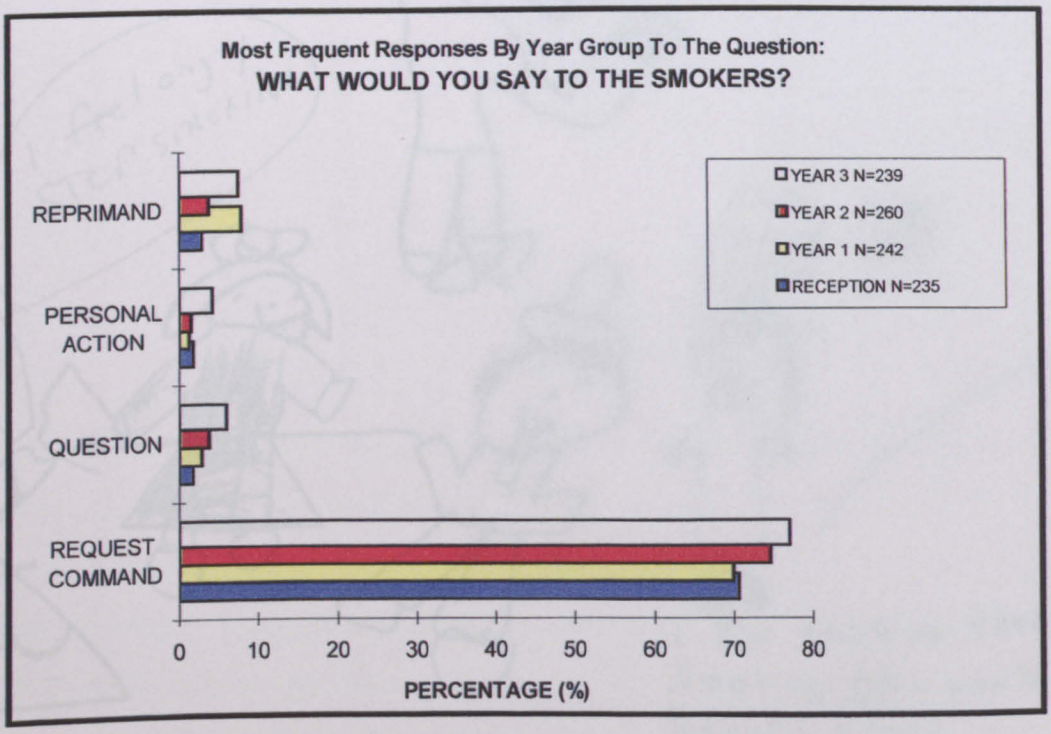
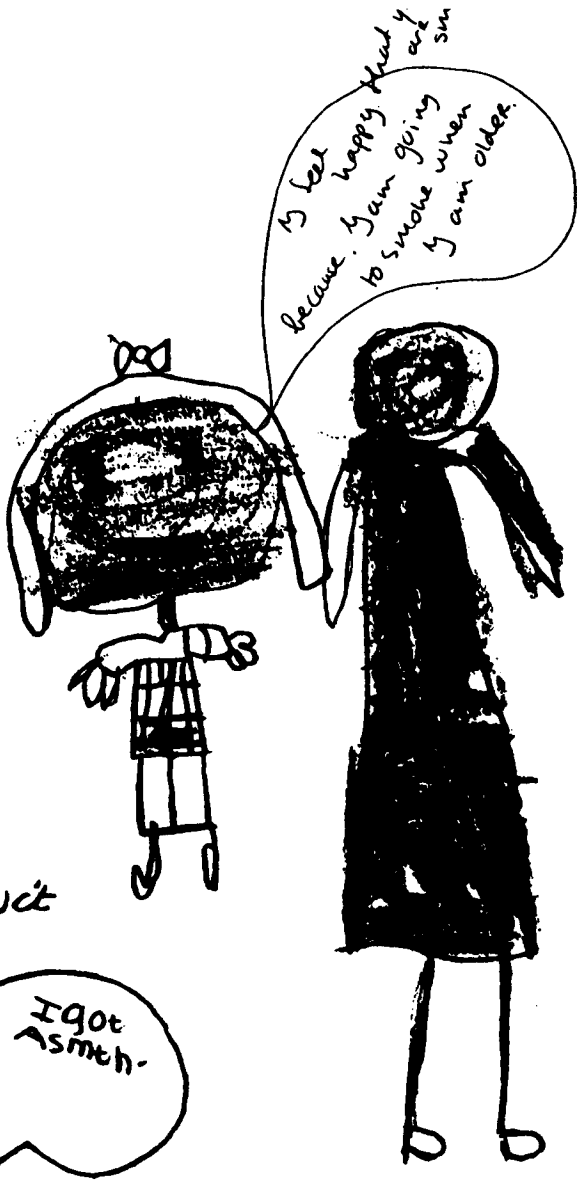


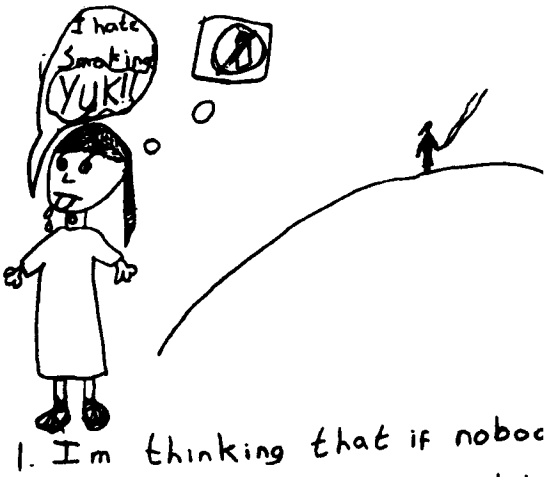
Figure 29.



Examples Of Responses For Inquiry 4



1 I feal terible
2 I would say why dont you cwit



1. Im thinking that if noboc Smoking the world would better place.
2. I would say 'Yuk!'

4.8 Summary of Draw and Write Results

- the majority of children in the study had a negative outlook about smoking and were quite emotive about it

- these children appeared to be fairly knowledgeable about many aspects of smoking such as the health implications, the motivation behind smoking and influential role models; this knowledge tended to increase with age

- the familial influence was seen to play an important role in smoking

- the sample's perceptions of smoking were often dictated by cognitive development

4.9 Interview Results

4.9.1 *The Subjects*

Interviews were conducted in a semi structured format on 50 randomly selected subjects from 6 schools. Each interview, approximately half an hour in length was tape recorded and transcribed. Content analysis was applied to identify themes which indicate trends in the attitudes, beliefs and perceptions children of varying ages have about smoking. As demonstrated in Table 11 below, slightly more girls than boys were involved and a greater number of the interviewees came from the younger year groups, to compensate for the brevity of their interviews.

Table 11. Interview Subjects Profile

	RECEPTION	YEAR ONE	YEAR TWO	YEAR THREE	TOTAL
GIRLS	7	6	4	10	27
BOYS	7	8	6	2	23
TOTAL	14	14	10	12	50

Based on findings from the questionnaire and Draw and Write technique, the interview schedule was developed (Appendix 6) to provide further insight into children's perspective on smoking. To accommodate the short attention spans characteristic in young children, the schedule was organised to include visual aids (Appendix 7) in conjunction with the verbal dialogue. The following results section highlights the main themes that emerged from the interview data. Some of the ideas from the themes are distinct but many merge with one another.

4.9.2 *Visual Preferences*

To begin with, subjects were asked to comment on a series of photographs. Each pair of pictures (one female, one male) were identical in nature except that one depicted the individual with a cigarette and the other without (Fidler and Lambert, 1994). Children were asked to denote their preference for each pair and state reasons for it. Frequency of responses for each picture are detailed below.

PICTURES OF FEMALE	**PICTURES OF MALE**
<u>By Habit:</u>	
88% - the non smoker	88% - the non smoker
12% - the smoker	12% - the smoker
<u>By Gender:</u>	
100% of girls - the non smoker	92.6% of girls - the non smoker
73.9% of boys - the non smoker	82.6% of boys - the non smoker
<u>By Year Group:</u>	
85.7% of Reception - the non smoker	71.4% of Reception - the non smoker
78.6% of Year 1 - the non smoker	92.9% of Year 1 - the non smoker
90% of Year 2 -the non smoker	100% of Year 2 - the non smoker
100% of Year 3 - the non smoker	91.7% of Year 3 - the non smoker

Reasons for those selecting the photograph of the smokers varied from points about their physical appearance ***'because the person is smiling'*** and ***'she's not got many spots'*** to comments based on personal experiences ***'because me dad***

smokes and there is a picture of that one smoking' and ***'cause he'll think it's all right if he goes in the kitchen and I'm in the living room.'***

4.9.3 *Negative Attitudes About Smoking*

This negative disposition towards smoking was a dominant theme throughout the study and corroborated repeatedly in the interviews. All the subjects emphatically stated that smoking was bad for people and could not think of any benefits for indulging in the habit although one boy in Reception remarked that ***'you might not die and you might not hurt your lungs.'*** Some additional comments made were that ***'it makes you dead'*** (reception), ***'you might die and only a little you might die without smoking'*** (year 1) and ***'I just don't think anybody should smoke really because it is bad for them and they should have the sense to know that it is bad for you, not the sense to think it is good for you because that is rather silly*** (year 3).

Negativity was also present in perceptions about the social desirability of young smokers. Most of the sample was inclined to believe that children who smoke would not have many friends. These ***'naughty'*** or ***'bad'*** children would be peerless because ***'their breathe would smell horrible and they'd stink of ciggys'*** and ***'their friends who used to be their friends might not like smoking.'*** The coercive nature of peer pressure also came to light in such comments as ***'they try and get you to smoke'*** and ***'I wouldn't want to be friends with that one miss cause she looks sort of like she'd make me smoke...'*** In contrast however, a few subjects were of the opinion that young smokers would attract mates ***'cause all the people in the school want to smoke and they can do it so they'll want to be their friends'***

4.9.4 *Familial Influences*

A significant number of children in the older age group were of the attitude that young smokers would originate from families where smoking was prevalent. For

example, a girl in Year 3 hypothesised that *'they couldn't have bought the ciggys from the shop so they might have got them off their mum.'* A similarly aged boy remarked that *'seeing their mum smoke or seeing someone in their family smoking and they think it is good so they have done it.'* Although half of the younger subjects were in agreement, based on comments like *'because big ones usually always smoke'* and *'if they did have mums and dads to smoke, they might copy off them'*, the other half did not presume the existence of a relationship between the smoking habits of parents and their children. In fact, one child went as far as to say that *'their mum and dads might get a ciggy and learn them how to smoke without no smoking.'*

The premise that one learns to smoke *'from their family'* was central to the core of children's beliefs about smoking. In the opinion of most of the subjects in the study, parents occupied the role of primary educator with regards to smoking acquisition and are not seen to relinquish the position until parental influence gives way to peer influence with the progression of age. This transition from family to friend was also evident in children's perceptions of why people want to smoke.

The rationale given by the youngest children for people smoking was based simply on desire: *'cause they want to smoke'* ,*'cause they like smoking'*, *'cause they want to try.'* Although subjects in Year 1 also cited wants and needs, the issue of *'cause they like to copy'* parents was often mentioned. Whilst, imitation, curiosity and peer pressure were popular reasons amongst the Year 2 children, responses from the third year generally referred to self image and perceptions of 'adulthood'. Examples included *'cause to calm their nerves'*, *'cause they want to look better-so they would look older'*, *'cause they think its' a laugh'* and *'just because it thinks them look really so cool.'*

4.9.5 *Knowledge About Smoking*

An aspect that became obvious from the analysis of Draw and Write and which was recurrent throughout the interviews, was the fact that this sample had well informed perceptions of smoking founded in a comprehensive knowledge base.

Resources and Regulations

When instructed to describe what they saw in a picture, the entire sample was able to identify both the activity (smoking) and the paraphernalia (cigarettes). All knew that cigarettes were purchased at a shop and a large percentage were aware of a minimum age of purchase. Younger children often generalised it to ***'my mum and dad's age'*** whereas Year 2 and 3 children largely specified ***'16' or '18'*** years of age. Every child had witnessed individuals smoking and could name at least one place where people smoked, usually a location of familiarity. Several of the Year 3 subjects remarked that smokers would go ***'somewhere where hardly anybody goes because they wouldn't want people to catch them smoking....'***

Some interesting comments arose with regards to places where people never smoke. Answers varied from police stations, hospitals, and prisons to churches, buses, and the Queen's palace. Some subjects alluded to places where the no smoking sign was on display whilst others mentioned their own homes.

Longevity

Almost without exception, the children believed that non-smokers would live longer because ***'they won't get the cancers that you can get', 'no smoke gets in your heart'*** and ***'they won't get damage in their lungs because they're not smoking.'*** One child thought that the smokers ***'will die with the chemicals in the ciggys'*** and others based their thoughts on physical appearance, ***'I think the women because she looks more healthier', 'she's just standing still and smiling'*** and ***'he's not got as many spots on his chin'***. Only a few of the

younger children associated longevity with the smokers ***'cause they might live in the same house'*** and ***'because he's a bit older.'***

Health Implications

In discussing the habit of smoking, the notion of health implications arose. Reception children were very dramatic in their replies and almost universally said ***'they can die'***. Several were quoted as saying ***'you'll get sick'*** and one boy revealed that ***'he'll have a heart attack because he's been smoking too much.'*** Although many of the subjects in Year One also referred to sickness and death, some physiological points were mentioned.. ***'you might go in a coma'***, ***'they can get lung problems like my nan did'*** and two children reported that ***'it can kill your babies'***. Year 2 and Year 3 children displayed a greater degree of specialised knowledge about medical matters. Cancer came into the picture quite frequently as did damage to the lungs, heart attacks and asthma. Allusions to ***'tar blocked up inside you'*** were also made by a pair of Year 3 subjects.

A pattern apparent in all age groups was the allusion to smoking as a mode of death.

Reception: ***'They won't live forever cause they are going to die.'***
Year 1: ***'They want to smoke because they want to kill themselves.'***
Year 2: ***'Cause I think they want to kill themselves.'***
Year 3: ***'Maybe because they don't like living.'***

Information Sources

According to the majority of children in the sample, parents were the main source of information regarding health consequences of smoking. Mothers in particular were mentioned as the fount of knowledge across the different age ranges.

'My Mum learned me that. She said if you smoke you die and God looks after you.'

'Cause me mum tells me about smoking. She says when you grow up, don't smoke because I'll get very, very sick.'
'My mum. She smokes and she says never smoke.'

Interestingly, school and television were mentioned only on the odd occasion as were books and relatives. Some children *'just knew'* and one boy from reception remarked that *'my computer showed me that when you drink and that and smoking all the time, it tells me that that it's dangerous. It is a doctor game.'*

Parental Beliefs

Children's perceptions of what their parents thought about the smoking habit appeared to be limited generally to expressions of *'me mum thinks it is bad and so does me dad'* or *'they think it's good because they told me.'* Children often mentioned the activity as opposed to the attitude, *'my dad doesn't smoke or my mum'* presumably to indicate feelings of dislike for the habit. The adjectives *'terrible'*, *'horrible*, and *'naughty'* were often used by children in Reception to describe parental smoking attitudes whereas those in the older year groups were more apt to give explanations.

'He says if you smoke you might hurt your lungs and you might die so if I do it I might die but my uncle's already died. Don't use it because you have to pack up so you don't get killed.'

'Don't do it! When I was a little baby I got one of me nan's cigarettes. She never told me nothing about smoking I know I am not going to smoke when I grow up cause I don't want to kill myself.'

'They say its not good for you and they don't want you to grow up doing it the same as they done.'

'She says don't smoke cause it is bad for your heart and you can get cancer and when I said to her once, Mum what's it like smoking and she said you don't want to know...'

Gender Patterns

The notions children in the sample harbour about smoking often stemmed from their own personal experiences or from the attitudes and beliefs of the significant others in their lives. A prime example emerged from their thoughts on gender patterns in smokers. Twice as many 5 year olds thought that men smoked more than women because *'they can smoke better'* , *'because women smoke slow...my mum told me'*, *'cause I see my dad smoking.'*

The responses for the Year 1 group demonstrated greater variation. *'Men probably because they think it makes them look really cool and try and impress their friends'*, *'women cause women go out with their friends for drinks and they always take cigarettes'* and *'I seen mostly women smoking cause men work more.'*

Responses of the subjects in Year 2 and 3 were based on the same premise of exposure to the practises and principles of other people as seen below.

'Women cause they just always smoke'.
'There is only one person in my family who doesn't smoke out of the girls'.
'Men because they are taller and older'.
'Men because they are mostly the ones that go to the pub and they might have a gang or meeting'.
'They start smoking and they think it is good'.
'I think more women smoke than men because I see more women smoking than men in the streets and all around the place.'

Addiction

Another area explored during the interviews that clearly highlighted the fact that children had a broad awareness of the nature of smoking centred around the issue of addiction and smoking cessation. Although the expression addiction and cessation were never used, most subjects made comments that implied an understanding of the concepts. Even subjects as young as 4 and 5 years felt that it would be hard to give up smoking. According to one boy, ***'if you smoke, you'll have to stay smoking forever.'*** More sophisticated responses based on the ***'...habit of smoking'*** came from the older children; one of whom alluded to the addictive effects of nicotine when she stated that giving up smoking was ***'hard because it is like something that's inside it that just gets onto your blood and if you stop it is still running in your blood and you can't stop it'.***

Several of the responses were based on personal experiences that the children had been privy to:

'Hard cause my nanny tried to stop and as soon as she sees cigarettes in the shop, she just dives at them and buys them even when she was trying to stop.'

'No its like me auntie cause when she stopped smoking, she couldn't handle it so she tried chewies and it worked.'

'When my dad was smoking he couldn't stop giving up. He just likes smoking and he couldn't stop.'

Smoking Cessation

With respect to the topic of smoking cessation, subjects had some interesting ideas as ways of getting people to stop smoking. Children in Reception thought one would need to ***'break the machines what make them', 'play'*** or ***to 'take your mind off it, talk'*** to stop smoking. Quite a few of the subjects in the older

groups obviously saw the need for external assistance as the range of measures they suggested included '***get one of them patches on your arm'***, ***'see a doctor, get some tablets'***, ***'buy chocolate ones'***, ***'get the Clorets...you chew them'***, and finally, '***phone the people who stop them smoking.***' Some also felt smokers should adhere to the power of self control and recommended that they '***just say no to yourself and if you do, ask somebody to take them away from you.***'

Passive Smoking

Despite of the fact that the actual term passive smoking was not uttered once by any of the subjects, the idea behind the word was broached by most when asked how they felt in the presence of cigarette smoke. As seen below, a negative response was given by most children primarily founded on personal health concerns. Only one 5 year old boy responded positively saying '***I like the smell of the smoke.***'

Reception:

'it will make me smell ***'it makes me have asthma*** ***'I'll have to cough'***

Year 1:

'it goes in your mouth and it might go into your lungs' ***'I can't breathe then'***

Year 2:

'it makes my asthma a little bit worse' ***'it makes my heart beat fast'***

Year 3:

'it could get to our chest' ***'all the smoke goes in my face and eyes and it stings'***

4.9.6 *Age Related Differences*

Although the attitudes, beliefs and perceptions children hold about smoking were generally sound, they did have some misconceptions about the habit which emanated, it would seem, from their belief that smoking was an adult activity. Questions probing the appropriateness of smoking in relation to age revealed that

a significant proportion of the sample thought it was ***'OK'*** to smoke ***'when you're at adult age because adults are bigger than kids.'*** Some children felt it was not problematic to smoke when ***'you are old enough to buy cigarettes'*** because ***'18 or over...their lungs have grown a bit bigger.'*** Some of the subjects were of the opinion that ***'only big grown ups smoke and little ones can't'*** basing their reasoning on the assumption that ***'probably because it could kill children because they haven't got as big lungs'***, ***' because it is really dangerous for children, because children are only little, we don't understand'.***

This conception of smoking as an age related activity was evidenced in the comments children said they would make to young smokers. Remarks such as ***'You shouldn't be smoking cause you're too young'***, ***'I'd say stop smoking cause you're not old enough'*** and ***'It's naughty and you shouldn't really do it at your age'*** were fairly common place.

4.10 Summary of Interview Results

- the children in this sample had a negative disposition toward smoking
- these children demonstrated significant understanding of the nature of smoking
- these children were aware of the influence family members can have on attitudes, beliefs and future smoking behaviour of young children
- the children in this sample thought that smoking was bad for them but generally believed that it was acceptable for adults to smoke

4.11 Discussion Of The Results

The results of this triangulated study strongly supported the work of previous researchers who have investigated the attitudes, beliefs and smoking behaviour of older children. The present study showed that children 4 to 8 years of age had a negative disposition toward smoking in conjunction with a fairly sophisticated understanding of the nature of smoking.

Findings from the questionnaire indicated that the majority of children in the sample had never tried to smoke a cigarette before, thus supporting the postulation from Oei and Burton (1990) that smoking behaviour was generally not established in young children. The results also showed that primary school children had distinctly negative attitudes toward smoking which became significantly more negative with the progression of age. This increasing pattern of negativity was in accordance with the findings of Somerset's Draw and Write study (1994) on children's changing perceptions of smoking which found trends similar to the current study, in that the youngest children (age 5) thought smokers looked and felt good more so than older children who tended to portray smokers in a negative manner.

The propensity however, for attitudes to become more rather than less negative with age was not in keeping with the findings of Schneider and Vanmastright (1974) who found that older children (13-14 years of age) expressed less negative attitudes about smoking or Bhatia et al (1993) who observed surprisingly little change in attitude between different age groups. The reasons for these differences in findings are not apparent at this point in time but will be discussed at length in Chapter 7, as results from the longitudinal cohort study shed some light on why this trend emerged.

The questionnaire findings supported Young and Foulk's (1985) contention that most children had no expectation of future use. Findings from the present research indicated that future intention to smoke actually decreased with age. This trend is

perhaps best explained by the development of moral reasoning as discussed in Chapter 2. Children, with maturity, become aware of societal expectations of what is right and wrong. Smoking in the context of childhood has very negative connotations and in attempts to obey authority, avoid punishment and reap the benefits of responding in a morally correct manner, the children may give the appropriate answer (***No - I don't want to smoke when I grow up***) rather than the honest answer which may be less morally or socially acceptable.

This supposition sheds some light on the limitations of conducting research with young children and provides substantiation for adopting a multi-method approach to data collection. The enduring query which perpetually arises with regards to this research study centres around the question of '*how do you know that the children are telling you the truth and not what they think you want to hear?*' The problem was combated methodologically via triangulation. By asking the same questions a number of different ways, using a variety of tools, and finding similarities between the responses, validity was strengthened thereby inspiring confidence that the results were accurate reflections of children's perspectives on smoking.

At face value, the finding that intention to smoke decreased with age can be construed as a positive indicator in the light of Fishbein's (1966) theory that behavioural intention can be seen as a determinant of an individual's future behaviour. However, the reality of the situation is that by the age of 11, more than one third of these children will be experimenting with cigarettes and this begs the question of whether intention can actually be considered as a reliable indicator of future behaviour.

The current prevalence rate of smoking among adults is around 26% (HEA, 1997) and the combined percentage of children in the sample who intend to smoke or who do not know if they will smoke when older is somewhat akin, at 23%. This similarity may well illustrate that intention can determine future behaviour if these subjects all go on to smoke. Such conjecture requires further investigation and provides the rationale for conducting a longitudinal tracking

study that follows these children beyond the stage of smoking experimentation and into the stage of regular smoking .

This sentiment also highlights the fact that the children who are uncertain about their future actions are as important a group to target as those who want to smoke. It may be that the percentage of the sample (10%) who are indecisive about their future smoking habits; the largest proportion coming from the 8 year olds, are those most likely to be influenced by the power of persuasion. The mediating factor could possibly be 'accessibility' - who gets to them first, the tobacco advertisers or health educators? Such speculation not only supports the notion of early intervention but strengthens the case for a complete ban on tobacco advertising as well.

It is interesting to note that of the minority of children who had tried to smoke, who intended to smoke in the future and who believed smoking to have beneficial qualities, the majority came from Reception, the youngest year group. Although the rationale for this pattern is not understood and the differences in children's responses based on year group is not significant, these results lend credence to those individuals who believe that smoking intervention strategies should be implemented much earlier in the school curriculum, prior to the manifestation of the habit.

A finding of particular interest in the study was the consistency of gender bias across diverse variables. According to the results, boys were twice as likely as girls to have experimented with cigarettes, to have positive attitudes about smoking and to have expectations of future use. These results complement information recently published by the Health Education Authority (Walters and Whent, 1995) on current smoking patterns in the young which indicate that boys generally experiment with cigarettes before girls. This trend is also in keeping with the smoking literature which suggests that there is consistency between children's attitude toward smoking and their smoking behaviour (Oei and Burton 1990). Since boys are more apt to approve of smoking, it is therefore understandable that they are more likely to indulge in the habit.

Interpretation of the questionnaire results also showed that children who reported having parents who smoke, siblings who smoke and friends who smoke were more likely to have tried a cigarette, more likely to want to smoke in the future and more likely to think that smoking was good rather than bad. This was consistent with the findings of Shute et al. (1981) who found that parents and siblings exert a powerful effect on the behaviour and desires of pre-school and first grade children. In concurrence with these findings were those of Fidler and Lambert (1994) who examined the influence of the adult role model on children aged 3-5 years of age and found that parents who smoked do influence their children's total perception of smoking. Furthermore, Oei, Fae and Silva (1990) also found a highly significant relationship between the smoking habits of children and their parents in their study on the smoking behaviour of nine year old children as did Charlton (1996) on her work about children, smoking and the family circle.

In light of the influential nature of familial relationships, it was somewhat distressing to note that over half of the children in the study lived in a home with at least one or more smokers as compared to 47.5% of children who lived in a house where no one smoked at all. This knowledge brings home the message that any health promotion measures must stretch beyond the confines of the school, must 'bridge the interface between school and home' if attempts are to be even remotely effective. Smoking intervention models must be developed to help dispel the incongruence children experience with regard to what they perceive to be true, that smoking is bad and the reality they encounter at home; parents smoking and enjoying it.

In brief, the results of the questionnaire led to the conclusion that children 4-8 years of age generally have negative attitudes and beliefs about smoking and for the most part had yet to establish regular patterns of smoking behaviour. Because this study utilised a triangular methodology, it is possible, through the subsequent evaluation of the qualitative methods: Draw and Write Investigative Technique and the semi-structured interviews not only to substantiate the outcomes of the questionnaire but also to expand on them as well. Triangulation enables, us to

discover what perceptions and knowledge are informing the subject's attitudes and beliefs about smoking and thus shed some light on why children respond and act accordingly.

The disdain for smoking and smokers was a predominant theme in both Draw and Write and the interviews and was in accordance with the findings from the questionnaire. Additionally, there was noteworthy consistency with the results from the Somerset study (1994) upon which the Draw and Write inquiries were based. Such similarity of findings suggests that this methodology is valid for assessing children's perceptions about smoking.

The pattern of negativity that dominated the research findings can be seen in the manner in which the subjects perceived smokers. Despite age, children in the sample were almost twice as likely to express negative feelings about individuals who smoke (60% as compared to 30%). Comments attesting to the ***'stupidity'*** of smokers ***'because it's not good for you'*** were paramount. Moreover, children interviewed realised that smokers generally made less than favourable friends because of the negative connotations attached to the smoking habit.

Interestingly, a significant number of the children who felt good being in the presence of individuals who smoke were from Reception. This trend was analogous to that of the questionnaire which found that the 4 and 5 year olds had the least negative disposition toward smoking of all the sample. Furthermore, it confirmed the results of the Somerset smoking study (1994) which documented a similar pattern.

The significant gender bias found in the questionnaire, indicating that boys were more likely to view smoking as good rather than bad was also apparent in the interview data. Once again, it was the male subjects who displayed an inclination towards seeing smoking in a positive light by selecting photographs of smokers to a greater degree than the girls in the study. A further point of interest regarding gender centres around the finding that children 4 and 5 years of age were twice as

likely to believe that men smoked more than women. It is difficult to understand the foundation of this perception in light of the fact that parental smoking habits were fairly evenly balanced by gender across all four year groups. Because gender was not well explored in the context of the Draw and Write activity and in light of such inconclusive evidence, it will have more of a focal point in longitudinal phase of the study.

The depth and breadth of children's perspectives about smoking were alluded to in the questionnaire and certainly highlighted in the analysis of the Draw and Write Technique and the semi-structured interviews. Patterns of importance that have emerged from the qualitative tools to give greater insight into what children think about smoking included:

- the knowledge about diverse aspects of the habit such as where one buys cigarettes, where one can and cannot smoke and the laws governing the purchase of cigarettes.

- the inferences made about addiction, smoking cessation and passive smoking which demonstrate a good understanding of the different concepts.

- the opinions about why people smoke, where they learned to smoke and whether they should or should not take up the smoking habit.

- the evidence, via negative comments about smokers in the context of a command to leave, stop or quit smoking in conjunction with statements such as ***'me mum and dad usually go somewhere else and smoke not in the room me and me little baby sister are if they don't want us to get lung cancer'***, of an awareness about the environmental and social unacceptability of smoking.

- the repeated reference to cancer, the lungs, the heart and various other internal body parts that indicated that children, some as young as 5, can recognise the physiological effects of smoking and have understood that it is health threatening.

Children it seems also have grasped the idea that smoking affects life span. Such informed remarks about the health implications of smoking are apparently associated with the cognitive capacity of the children and their own personal experiences; in other words, their exposure to people who smoke in the environs of their social world. This awareness of the hazards of smoking accords with the findings of diverse research with children both younger and older than the current sample (Shute et al, 1981; Bhatia et al, 1993).

• the influence of the family. As previously confirmed in the questionnaire, the family played an integral role in the smoking perceptions of young children. Parents in particular, were accorded special significance by children, seen by them as the main source of information with regard to health related behaviours. Tennant's study (1979) on pre-school children concurred, although his results indicated that television was also a primary source of knowledge, a finding without basis in the current study where the television played a nominal role at best.

• the belief that mothers and fathers were one of the primary inspirations for young people wanting to smoke is pervasive in the study. This viewpoint was very enlightening as it revealed the significance of the familial relationship in the eyes of the children themselves. Of their own accord, the subjects were able to establish a connection between the smoking habits of family and those of children by making the assumption that children who smoke probably have parents who smoke.

• the perception of smoking as adult activity was not particularly obvious in the evaluation of the Draw and Write Technique although, it did emerge with some consistency during the interviews. For the most part, children fervently believed that smoking was bad for people. However, an appreciable number of children believed that it was fine to smoke once grown up because the body was strong enough to tolerate the health implications associated with the habit. This particular finding was unique and significant to this study and certainly merits

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further consideration as the reason for it is not clear at this point in time. Perhaps the misconception stems from the fact that half of the children in the study live with at least one adult smoker who presumably enjoys smoking and does not suffer any visible ill effects. This perspective supports the research conducted by Fidler and Lambert (1994) who found that one quarter of the 3 to 5 year olds in her study perceived smoking to be a 'grown up' behaviour.

• the notion of death which cropped up to a limited extent in Draw and Write but was much more dramatically expressed during interviews where children seemed to harbour a perception that young smokers wanted ***'to kill themselves'***. One can speculate that perhaps this salient idea emerges from an ideology that most children in the sample upheld, that smoking was bad for children, much worse than it was for adults. If children know this to be true, then they assume others do as well, a repercussion of egocentrism presumably and by this association thus believe, that those children who do indulge in the habit are doing so knowingly and that they, as children will be adversely affected by the consequences and as such are smoking because they want to die. This hypothesis warrants additional research.

• the influence of age. It is apparent that many of the responses given by the children were in effect, shaped by their cognitive development. The frequency with which the physiological effects of smoking was reported is in direct relation to age. Hence as children get older, the reference to the lungs, the heart and cancer increased. Age-related responses were also evident in children's reasons for why people smoked and where they learned to smoke. These findings have profound implications for the manner in which anti-smoking interventions are developed and administered.

• cohort differences in the findings of the questionnaire in particular also seemed to be a function of age. Children from Reception accounted for the greatest proportion of subjects who reported that they had tried to smoke, who intended to smoke in the future and who viewed smoking positively. Reasons for this age-

related disparity can potentially be attributed to the development of moral reasoning, to a lack of conceptual understanding of the questions being asked, to dishonesty on the part of the subjects or to the residual influence of parents, as children in Reception are the latest recruits into the educational system. Such speculation merits further investigation.

The results of this cross-sectional study have been published in an interim research report entitled **Attitudes, Beliefs and Smoking Behaviour in Liverpool Primary Schoolchildren** (Porcellato et al., 1996) by The Institute For Health at Liverpool John Moores University. This study also provided the foundation for a journal article on **Primary Schoolchildren's Perceptions of Smoking: Implications for Health Education** (Porcellato et al., 1999), in Health Education Research.

4.12 Overall Summary

The overall findings of this research study demonstrated that primary schoolchildren in Liverpool, aged four to eight years generally had a negative disposition about smoking, had as yet to establish regular patterns of smoking behaviour and had a fairly comprehensive understanding of the nature of smoking. Because the findings from each individual tool closely paralleled the other, the belief that the selected method of data collection had in effect, enabled the extraction of an accurate account of children's perspectives about the habit, was reinforced. This suggested that the research design, a triangulation of 'child-centred' approaches was a feasible means of conducting research with children in their early years.

The main findings from the cross-sectional study were:

- the majority of children in this study had yet to experiment with cigarettes and did not express any intention to smoke in the future
- most children in the sample had negative attitudes toward smoking
- children most likely to view smoking positively were in Reception and Year One (4 to 5 years of age), boys and children whose parents were smokers
- almost half of all parents were smokers
- parental smoking habits appeared to influence the perceptions, attitudes, beliefs and smoking behaviour of this sample
- the four to eight year old children in this study had a broad understanding of the nature of smoking
- they perceived smoking to be an unacceptable activity for themselves but believed it to be acceptable for grown ups and associated the habit with adulthood
- cognitive development played a significant role in children's ideas about smoking

CHAPTER FIVE

THE LONGITUDINAL COHORT STUDY

5.1 Chapter Overview

Because of the magnitude of the longitudinal cohort study, the work will be presented in the next three chapters. This particular chapter will outline the rationale for conducting a cohort study longitudinally, as well as defining the aims and objectives of the investigation. The target population will be identified and research design will be addressed, with specific attention paid to changes or refinement of the methods used in the cross sectional study. Lastly, focus group interviews will be introduced and its role within the framework of the study will be discussed. The results of the longitudinal cohort study will be presented in Chapter Six. This chapter will document the relevant findings from the multiple methods used in triangulation: the questionnaire, the Draw and Write Technique, the interviews and the focus groups. The subsequent discussion of these results and a reflection on the salient ideas that emerge will comprise the core of Chapter Seven.

5.2 Rationale For Study

The initial study on Liverpool primary schoolchildren's perspectives on smoking, served to give insight about the underlying processes involved in the primary stages of smoking acquisition (see Figure 1) by identifying their knowledge, attitudes, beliefs, intentions and perceptions about the habit.

Justification for the need to carry out a longitudinal cohort study was provided by some of the more interesting and less understood findings of the cross sectional study. For instance, the finding that four and five year olds, accounted for the greatest proportion of subjects who reported they had tried to smoke, who

intended to smoke in the future and who viewed smoking most positively, meant that the children from Reception were identified as most 'at risk' of engaging in the habit in the future and in turn, became an important cohort to investigate.

Consideration must also be given to the finding that cognitive development shaped children's perspectives of smoking because the necessity of developmental appropriateness with regards to children's health education programming is pervasive in the literature (Natapoff, 1982; Meltzer et al., 1984; Green and Bird, 1986). It is imperative that cognitive ability be correlated with age levels and this can best be done in the context of developmental research, in the form of a longitudinal cohort study.

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The gender bias that permeated the questionnaire segment of the cross sectional study but was not taken into account during The Draw and Write Technique, and did not emerge as significant in the interviews, also warrants further scrutiny, particularly in light of Waldron's conclusions (in Batten et al., 1993:185) that '... *programs to prevent smoking adoption ... may be more effective if these programs take into account gender differences in the factors that influence smoking adoption* ...'. The fact that boys were the ones who were most likely to have tried to smoke, intended to smoke and to equated smoking with positive perceptions, is in keeping with the results from studies of older children (Baugh et al., 1982; Oei et al., 1987; Cohen et al., 1990; Bellow et al., 1991) which suggest that boys tend to indulge in such risk behaviour before girls. This fact however, appears to diminish over time.

The reality today is that adolescent females, although slower to adopt smoking eventually surpass the number of males who take up the habit (Swan et al., 1989). Prevalence trends by age and sex reveal that prior to 1984, the percentage of boys and girls who smoked regularly between the ages of 11-15 in England were relatively equal (around 10%). However, since then, more girls have smoked than boys. This phenomena has been subjected to intensive research (Swan et al., 1989; Cohen et al., 1990; Oakley et al., 1992; Graham, 1994; Sutton, 1995) but to date, few adequate explanations have surfaced to account for the gender trends. The

longitudinal study affords the opportunity to track the perspectives of both boys and girls, as they approach the age of experimentation when the transition from a principally male to female-oriented practice commences thus, any understanding gained from this could perhaps shed some light on this enigma.

Lastly, attention must also be given to what was *not* found in the results, in effect what was expected but did not materialise. According to the *Model For The Major Influences On Stages Of Smoking Behaviour* (Figure 1), socio-economic status is considered a key influence in the early stages of smoking via its impact on family and friends. The correlation between smoking and social class was firmly established in the parental sample of the cross sectional study but no statistically significant associations were found in the children's beliefs and behaviour toward smoking, based on social class. In itself, this is not surprising as several studies of note have revealed similar findings (Oakley et al., 1992; Glendinning et al., 1994) but there also exists some studies like the W.H.O. Cross National Survey which do report differences in smoking behaviour between socio-economic groups (Nutbeam et al., 1989).

The debate on the relevance of social class to young smokers persists. In light of the knowledge that parental smoking habits can influence the future smoking behaviour of children (Charlton and Blair, 1989; W.H.O and Chollat-Traquet, 1992), and that adult smoking prevalence is linked to deprivation (Marsh and McCay, 1994), it can be assumed that, at the very least, social class is an important intervening variable which can indirectly shape children's perspectives on smoking. This relationship merits further investigation and the research design of the longitudinal study affords the opportunity to do so. As such, consideration will be given to assessing children's attitudes about smoking on the basis of the socio-economic condition of the school they attend. Any significant social class differences that may arise would dictate the orientation of the subsequent smoking intervention developed, as the wider community, along with the individual and social groups need to be taken into deliberation (Nutbeam et al., 1989).

5.3 School Socio-economic Status

In the cross sectional study, school selection was done by ward, based on a range of indicators that spanned the gamut of socio-economic conditions in Liverpool. Although schools generally reflect the socio-economic status of the ward they are located within, there are exceptions. Border schools for instance, that are situated close to the perimeter of other wards (see Figure 5) and accept children for enrolment from the surrounding areas are often not representative of the socio-economic environment within the rest of the ward. Similarly, pockets of deprivation within economically strong wards or areas of prosperity located in disadvantaged wards can skew the socio-economic state that generally epitomises the ward.

For a more precise measure of socio-economic status, social class ranking derived from parental employment data, collected in the cross sectional study, was used. This data, based on the *OPCS Standard Occupational Classification* (1991) was broken down by school, into classifications of high, medium and low socio-economic status. Those parents classified in Class I (Professional) and Class II (Managerial) were considered high, those in Class 111 (Skilled) were medium and those in Class IV (Partly Skilled), Class V (Unskilled) and the unemployed were labelled as low. Homemakers, students and those who did not complete the employment information on the questionnaire were excluded from this classification.

Table 12. illustrates that more than 55% of parents in School One and Two fell into the low income bracket, more than 50% of parents in School Three and Four fell into the middle income bracket and almost 60% of parents from School Five fell into the high income range. When compared to Figure 6. (Composite Score of Ranks from Three socio-economic Indicators Used in School Selection) in the cross sectional study, it is apparent that these schools truly reflected the socio-economic conditions prevalent in their respective wards. School Six however appeared to be an anomaly. The school itself, although situated in a ward characterised by preferable socio-economic conditions, borders wards of

moderate socio-economic status and is located in a deprived neighbourhood. As a result, half the parents were classified in the low income range, half in the middle income range and hardly any were found in the highest rank. This particular breakdown of social class by occupation mirrors that found in the *Liverpool Community Atlas* (Shepton, 1994), a summary of ward profiles from the 1991 Census. For the purposes of the this study, School Six like School One and Two represented the least preferable socio-economic conditions, School Three and Four moderate socio-economic conditions and School Five, the most preferable socio-economic conditions.

Table 12. Distribution of School Socio-economic Status of Based on Parental Occupation By Social Class* (OPCS Standard Occupational Classification)

Parental Occupation Classified By Social Class *	Low socio-economic Status Class IV -V Unemployed	Medium socio-economic Status Class III	High socio-economic Status Class I - II
School One Vauxhall	56% of parents	39% of parents	6% of parents
School Two Abercromby	60% of parents	26% of parents	15% of parents
School Three Pirrie	30% of parents	52% of parents	19% of parents
School Four Anfield	27% of parents	61% of parents	13% of parents
School Five Childwall	3% of parents	40% of parents	57% of parents
School Six Fazakerly	46% of parents	47% of parents	7% of parents

Table 13. outlines the breakdown of the sample by gender and school socio-economic status. The largest percentage of the children (41%) involved in the cohort study attended schools that reflected a moderate socio-economic climate whilst almost a quarter (23%) attended a school located in an economically prosperous area and the rest (36%) were in schools of low socio-economic status.

Table 13. Distribution of Sample by Gender and School Socio-economic Status

	Low SES Schools (1, 2 and 6)	**Medium SES Schools (3 and 4)**	**High SES School (5)**
Girls N= 78	**29** (37%)	**30** (38%)	**19** (24%)
Boys N=67	**23** (34%)	**29** (43%)	**15** (22%)
Total N=145	**52** (36%)	**59** (41%)	**34** (23%)

The relationship between social class and gender was, where possible, also examined. This was because these two variables often emerged in the literature as important to the developmental process of smoking (Johnson et al., 1985; Green et al., 1991, Glendinning et al., 1994). In a comprehensive study about the associations between drinking and smoking behaviour of parents and their children, it was concluded by Green and colleagues (1991:745) that gender and social class needed to be taken into account *'since it may influence whether or not there is an association between the behaviour of young people and that of their parents, and it may influence young people's behaviour in addition to influences from parental behaviour'*. Hence, the need to account for gender, social class and year group differences in the context of how primary schoolchildren's perspectives on tobacco smoke develop with the progression of time, in essence provided both the rationale and the direction of the research for the longitudinal cohort study.

Because the original research study was cross sectional in nature, it did not effectively provide an accurate understanding of how the developmental process of smoking unfolds. This was somewhat problematic in light of the fact that '*Without a full understanding of [the acquisition] process, plus an equally full understanding of behaviour change processes in general, it is impossible to design very effective prevention programs*' (Flay, 1993: 372). However, what the cross sectional study did furnish was a birth cohort and an appropriate framework within which the concept of time and the changes that occur with its passage, could easily be incorporated into the research design, via the implementation of a longitudinal study (Achenbach, 1978). Further endorsement for undertaking longitudinal research came from Parcel et al. (1984) who recommended the use of comparison groups and longitudinal studies of young children, to accurately assess such concepts as the origins of smoking intention.

5.4 Aim Of the Longitudinal Cohort Study

The purpose of this longitudinal cohort research study was to develop a comprehensive understanding of the overall perspective that a representative sample of primary schoolchildren in Liverpool (age 5 onward) had about smoking; by examining the beliefs, knowledge, perceptions and behavioural intentions that informed their attitude about the habit, over time.

5.5 Objectives:

- To test the replicablilty of the innovative methodology (between-methods triangulation of questionnaires, Draw and Write and interviews) created for the cross sectional study and to explore the feasibility of other participatory methods

- To explore further the significant gender bias that emerged in facets of the cross sectional study

- To examine the perceived influence of social class on perspectives of smoking

- To provide greater understanding for the development of a smoking intervention model for the effective promotion of health in local primary schools

5.6 Research Design

In view of the fact that the findings of the cross sectional study highlighted one particular cohort, namely the children in Reception; coupled with the need to adopt a developmental approach, this research was designed as a longitudinal cohort study. This type of prospective investigation enables the continual collection of information from individuals and allows for the analysis of data at both the individual and group level.

There are other significant advantages to conducting cohort research longitudinally; one of which is the fact that its strengths are the weakness of cross sectional studies. According to Cohen and Manion (1994), the methodology has the capacity to identify typical patterns of development and highlight determinants operating on a sample which would possibly evade other research design. Moreover, this type of research can accommodate the accumulation of additional variables or the integration of new variables as they arise over time, which in turn allows for greater opportunity to observe trends and distinguish real changes in the population under study.

On the downside, this method of research is rather expensive, very time consuming, can only accommodate limited numbers and has the potential to suffer from organisational problems. Attrition or subject mortality can also be

problematic, in addition to 'control effect', the possibility that repeated measuring can potentially influence a sample (Cohen and Manion, 1994).

To test the viability of the multi-method approach adopted in the cross sectional study, the longitudinal cohort study was structured to emulate the between-methods triangulation of the original research design. The methodology as such was comprised of the questionnaire, the Draw and Write Investigative Technique and the semi-structured interviews and was administered to the Reception birth cohort from the 6 core schools identified in the cross sectional study; when they were in Year 1 and then again in Year 2 of their scholastic careers. In addition, focus groups interviews, another research method largely underdeveloped in child studies was added to the methodological agenda in Year 2.

The study design has the capacity to investigate individual change over time which is important when one considers that certain researchers believe that the way forward in smoking prevention is to address the needs of the individual, rather than mass inoculation of anti-smoking strategies (Charlton, 1998). Although the original intention of the longitudinal cohort study was to examine individual change and data were collected in such a manner as to facilitate this process, the decision to look instead, at overall cohort change was made primarily on the basis of the questionnaire results which showed insignificant changes within the cohort for each consecutive year. Analysis of the qualitative methods used in the study was thus done on a cohort basis; and the findings documenting little change within the cohort, substantiates the decision to explore group rather than individuals, over time.

The framework for the assessment of individual change is in place however, and it is envisaged that access to such information will be vital for future research on this population, in particular as the children approach the age of experimentation when some will chose to take up smoking and others will not. The triggers that induce the choice of behaviour are as yet, not well understood and perhaps, one can speculate, might be attributable to individual differences which potentially could be explored within the framework of this longitudinal cohort study.

5.7 Research Methods

5.7.1 *The Questionnaire*

The questionnaire in the cross sectional study was comprised of 12 questions generally based on the research findings in the literature on smoking for older children. However, the need for some slight amendments to the original format were required to accommodate salient themes that emerged from the results, namely the perception that children in the sample had regarding the fact that smoking is inappropriate for children but perceived as an intrinsic part of adulthood.

Originally, children's beliefs about smoking were assessed by asking them if they thought smoking was good or bad for people. In light of the above mentioned results, it was decided that the original question was too broad, thus it was divided into 2 questions, one pertaining to adults smoking and one to children smoking. This was done to discover if this 'two-tiered' belief about smoking would present itself in the quantitative analysis as well. The amendment therefore limits the scope of comparative analysis about beliefs to Year 1 and Year 2 of the sample. Also modified were the questions about sibling smoking habits. It was necessary to clarify which children had brothers and sisters and which did not before asking whether their siblings were smokers or not, as it became apparent during the cross sectional study that the children often responded to the question of sibling smoking habit on the basis of whether they had a brother or sister or not (Appendix 8).

The data from the questionnaire was entered onto a computer database for analysis, using SPSS (Statistical Package for the Social Sciences). Because the type of measurement scale was nominal or categorical in nature, it was necessary to use non parametric tests. Appropriate non parametric tests for bivariate analysis of differences and relationships between pairs of variables include contingency table analysis (the cross-tabulation of two variables) in conjunction with chi square as a test of statistical significance and Cramer's V to test for

strength of association. Levels of significance are stated where relevant, that is, at or below the $p = 0.05$ level.

Cramer's V, an approach to examining relationships is infrequently found in the literature. It provides a measure of strength of the relationship between 2 variables from a large contingency table, that is greater than 2 x 2. This test, derived mainly from chi square, provides results which vary from 0 to +1. The closer the resultant coefficient is to +1, the stronger the relationship between the two variables. Utilising Cramer's V in conjunction with chi-square emulates a direct significance test (Bryman and Cramer, 1994).

Because the cohort study comprised a within-subjects design, that is the repeated measurement of the same variables on three related samples, it afforded the opportunity to investigate differences between dependent groups. The most suitable test for this type of analysis is the Cochran Q test, or in the situation where there are only two related samples (belief questions for Year 1 and Year 2), the McNemar test. Both are particularly useful non parametric tools for measuring changes in frequencies or proportions across time.

The Cochran Q test is in fact, an extension of McNemar's Chi-square test which has the capacity to test for changes in proportion at different times in the same sample as well as to test whether several matched frequencies or proportions differ significantly among themselves. If the probability level is greater than .05, then the assumption is that there are no significant differences in the responses over time (Bryman and Cramer, 1994).

The multifariousness of the social sciences dictates that data are collected on a myriad of variables and that the examination of two variables at a time, although imperative is also inadequate. Consequently, multivariate analysis, the exploration of differences and relationships among 3 or more variables although complex is essential. In this particular study, multivariate analysis was limited to the effects of gender and social class on children's beliefs about smoking and their intentions to smoke.

Data analysis of these variables can be conducted via cross tabulation and the results can be summarised in a multi-way contingency table. It is known however that log linear analysis is a more sophisticated technique and thus, a logical choice for the conduction of multivariate analysis. Unfortunately this test, as with most, have basic assumptions that must be met in order to have accurate results. One such requirement in loglinear analysis is that expected frequencies need to be sufficiently large in number. According to Tabachnick and Fidell (1996), expected cell frequencies need to be greater than one and no more than 20% should be less than five because inadequate expected frequencies can lead to such loss in power that the results would be meaningless.

The two conditions in research which produce small expected frequencies are a small sample size with too many variables or rare events (Tabachnick and Fidell, 1996), The cohort study under investigation was plagued by diminutive expected frequencies. This insufficiency it seemed, was a consequence of the fact that there were too few children in the sample who smoked, who believed that smoking was good and who intended to smoke during the study period. It resulted in marginal frequencies not evenly distributed among the various levels of the variable. As a consequence, log linear analysis was not applicable and multivariate analysis conducted was done via contingency tables.

5.7.2 *The Draw and Write Technique*

The format and composition of the inquiries used for the Draw and Write Technique in the cross sectional study were replicated in the longitudinal one. To recapitulate, the Draw and Write Investigative Technique (Wetton, 1990), requires children to draw pictures and write responses in accordance to questions read aloud by the researcher in the host classroom. Scribes are provided to assist any children who have difficulty writing; their necessity decreasing as the sample ages. This particular methodology, adapted from a study conducted by The Somerset Health Education Authority and colleagues in 1994 uses four diverse scenario to discover what perceptions children have about smoking.

Draw and Write is essentially a qualitative method and the coding categories, developed for the purpose of analysing the results, based on frequency of responses are constructed purely from the written statements that accompany each child's drawing. For the cross sectional study, many of the categories were derived from those set up in The Somerset Health Education Authority et al. (1994) study. However, as the need arose, other categories were included or omitted to fit the profile of this specific sample. In the end, the main categories remained constant for the duration of the study, an indicator that very little change in the perceptions and knowledge and beliefs of the sample occurred over the three year span. A few categories were reorganised to maintain an appropriate level of consistency needed to conduct a comparative analysis of all three year groups.

5.7.3 *The semi-structured interviews*

Once again, the format used in the cross sectional study was copied for the semi-structured interviews. The taped interviews were approximately 20-30 minutes in length for each child using a variety of visual aids (pictures of people smoking) on which questions and comments were based. All interviews were transcribed and analysed by the researcher conducting the initial interviews.

Of the 14 children who were interviewed in Reception, 11 participated in Year 1. At this point, an additional 17 children were recruited from the same birth cohort to counterbalance any attrition that might occur in the ensuing years and to provide a more comprehensive picture of six year olds perspectives on smoking. Only 3 of the 28 children were not available for the interviews in Year 2. As a consequence, it was possible to conduct a content analysis of the transcriptions for a fairly homogeneous population which allows for an accurate depiction of developmental change in perceptions and knowledge across time.

Although the base questions of the interview remained consistent across the years, additional questions were incorporated or subsequent concepts expanded on as a

result of the findings from the cross sectional study. The variables of gender and social class were also taken into account but for the most part, neither appeared to play any great role at this stage. This is principally because there was such consistency in the answers across the sample that any differentiation was virtually impossible to perceive. As such, only in the exceptions where gender or social class differences do emerge is any reference made. On the whole, the inference is that there are no discernible gender or social class effects in the responses of this sample across time.

5.7.4 *Focus Group Interviews*

Focus groups as defined by Krueger (1986 as cited in Vaughn et al, 1996: 4) are '*organised group discussion which are focused around a single theme'*. One of the primary functions of these group interviews is to ascertain people's point of view; namely what their attitudes, beliefs and perceptions are.

> *Through the process of group dynamics, we are able to gather true expressions of individual values and peer relationships along with attitudes and feelings toward many subjects and products that we otherwise might not be able to learn about or understand* (Forcade, 1996:2).

Focus group interviews, a product of market research has a relatively short history as a qualitative methodological tool but has been appropriated with immense intensity by social scientists because of its adaptability (Morgan, 1997).

Focus groups have a variety of applications in social science research. They can be used as the primary or secondary source of data collection, or as in this case, used in multi-method studies to add to the data collected by other methods, thus contributing *'... something unique to the researcher's understanding of the phenomenon under study'* (Morgan, 1997:3). Despite the current popularity of this tool, it would appear that focus group interviews involving special populations such as young children are relatively uncommon, in particular in the

realm of smoking research. Although credence and value is now being accorded to children because *'... we have found that the insights of students of all ages can add an interesting dimension to our understanding of what happens ...'* (Vaughn et al. 1997:130), the whole notion of children's lay perspectives is largely untouched and underdeveloped.

A literature search conducted on Medline, Pschylit and Cinhal did not reveal any studies in the field of health that utilised 'the lay perspective' approach with a young sample despite the fact that lay concepts of health have been a focal point in research over the last two decades (for a review: see Blaxter, 1990). This dearth is serious if one considers that *'... understanding the complexity of lay beliefs could be important for making health promotion initiatives relevant in their approach to the language and concepts that are used by those they wish to reach'* (Thorogood, 1992:49).

The strengths of the focus group interview goes beyond an in-depth understanding of individual's perspectives. As it is set in the 'social context' of a group, culturally- specific concepts that emerge can be clarified and expanded upon (Vaughn et al., 1997). However, there are also some difficulties associated with conducting group interviews with a young sample. Problems of conformity and repetition arise as do cases of over exaggeration in attempts to 'out do' the responses of the other children. Additionally, the dynamics of being in a group setting where there is safety in numbers can foster some anti-social behaviour in children, especially with boys. Consequently effective group management is crucial, to create and maintain an ambience conducive to conversation and interaction.

When conducting focus group interviews with children, certain recommendations should be adhered to, to ensure effective results. The variation in children's cognitive development needs to accommodated and children should be in similar age ranges. The group needs to be small in number (less than 6) and should be composed of single sex participants. The length of the interview should be approximately 45 minutes for children under age 10 and take place in a locale that

is appropriate for the nature of the group. Although researchers also suggest that focus groups are better if comprised of strangers, this becomes difficult when operating in a 'school' setting. Whenever possible, participants were selected from different class rooms, to diminish moderated effects but that option was not available in small schools (Vaughn et al., 1997).

A moderator's guide was prepared (Appendix 9) and piloted at a local school. It became apparent that a greater degree of guidance and interaction was required on the part of moderator, as well as the necessity of including visual aids and a writing activity to keep the children interested. Same sex participants in groups of 4 or 5 were involved in the focus group interviews. Two group interviews, one for the boys and one for the girls were conducted at each of the six schools. The children themselves were asked to give consent to partake in the group interviews and reminded that although the interview was taped, it was confidential. The process of the focus group interview was explained and the importance of honest, individual and accurate answers was stressed. In addition, the children were told that it was not a test but an inquiry into their perceptions and beliefs about smoking.

Focus group interviewing was included principally as a feasibility study in this research. The technique is in keeping with the 'bottom-up, child-centred approach' that underpins this research and was included to enhance and complement the findings of the triangulated methodology as well as provide further insight into children's thinking about smoking. However, the utilisation of this method with a sample as young as seven, on a contentious topic such as smoking is unprecedented. Therefore to test its viability as an appropriate tool, discussion was centred on topics that would best demonstrate the depth and breadth of children's attitudes on smoking. None of children who were involved in the interview process participated in the focus group interviews.

The focus group interview for this study also went beyond testing for methodological suitability. It was an exercise in exploration as well. The discussions were meant to delve into the children's own ideas about how, when

and by whom anti-smoking strategies should be administered at the primary school level. Allowing children the opportunity to define important concepts in proactive health promotion initiatives for themselves engenders the notion of empowerment which in turn, should foster the development of a more effective strategy (Kalnins, et al., 1992).

Main areas discussed in the group were:

- Knowledge about smoking
- View points on grown ups smoking
- View points on children smoking
- View points on smoking education

The focus group interviews were transcribed in full by the researcher and analysed for salient themes.

5.8 Sample: The Children

Table 14. provides details of the subjects who participated in the longitudinal cohort study. This sample does not appear to suffer from attrition as the numbers remain fairly consistent over the 3 years and thus, are large enough for appropriate analysis. In this study, there are slightly more girls represented than boys but as this too is constant in each year group, for each method, it is not problematic.

Table 14. Distribution of Sample By Research Methods

Year Group	Reception 1995 Age 4-5	Year One 1996 Age 5-6	Year Two 1997 Age 6-7
Questionnaires	**N = 237** *Girls* 120 *Boys* 117	**N= 218** *Girls* 117 *Boys* 101	**N= 216** *Girls* 115 *Boys* 101
Draw and Write	**N = 235** *No Gender Data*	**N= 222** *Girls* 109 *Boys* 107	**N=219** *Girls* 118 *Boys* 101
Interviews	**N = 14** *Girls* 7 *Boys* 7	**N = 28** *Girls* 17 *Boys* 11	**N = 25** *Girls* 15 *Boys* 10
Focus Group Interviews			**N = 50** *Girls* 25 *Boys* 25

To analyse change over time properly, statistical protocol dictates that only those children who filled in three questionnaires consecutively can be included in the analysis. Consequently, the repeated measure sample for the questionnaires was reduced to 145 subjects (78 girls and 67 boys). Reasons for the reduction in sample size range from children being absent on one of the test days throughout the 3 year period, children changing schools in the duration and the exclusion of children from split grade classrooms at the request of one school, to minimise disruption and inconvenience. The resultant sample (65% of total sample) is sufficiently large enough to accommodate statistical analysis and reflects similar patterns to those found in the original sample.

Data for the Reception Year Group was extracted from the original study conducted in 1995. The importance of exploring the role of gender in the study of children's perspective on smoking surfaced from the research findings of the cross sectional study, but the initial data collected from the Draw and Write Technique did not take this variable into account. On a similar note, focus group interview data are not available for the first two years of the study as Vaughn et al., (1996) recommended that the method not be conducted with children under six years of age and thus it was not introduced into the study until Year 2. Such omissions did not necessarily affect the quality of the research or negate the validity of the findings but in effect, served to reflect the flexibility and strength of utilising a cohort longitudinal approach that enabled gaps to be filled in subsequent administrations (Douglas 1976 as cited in Cohen and Manion, 1994).

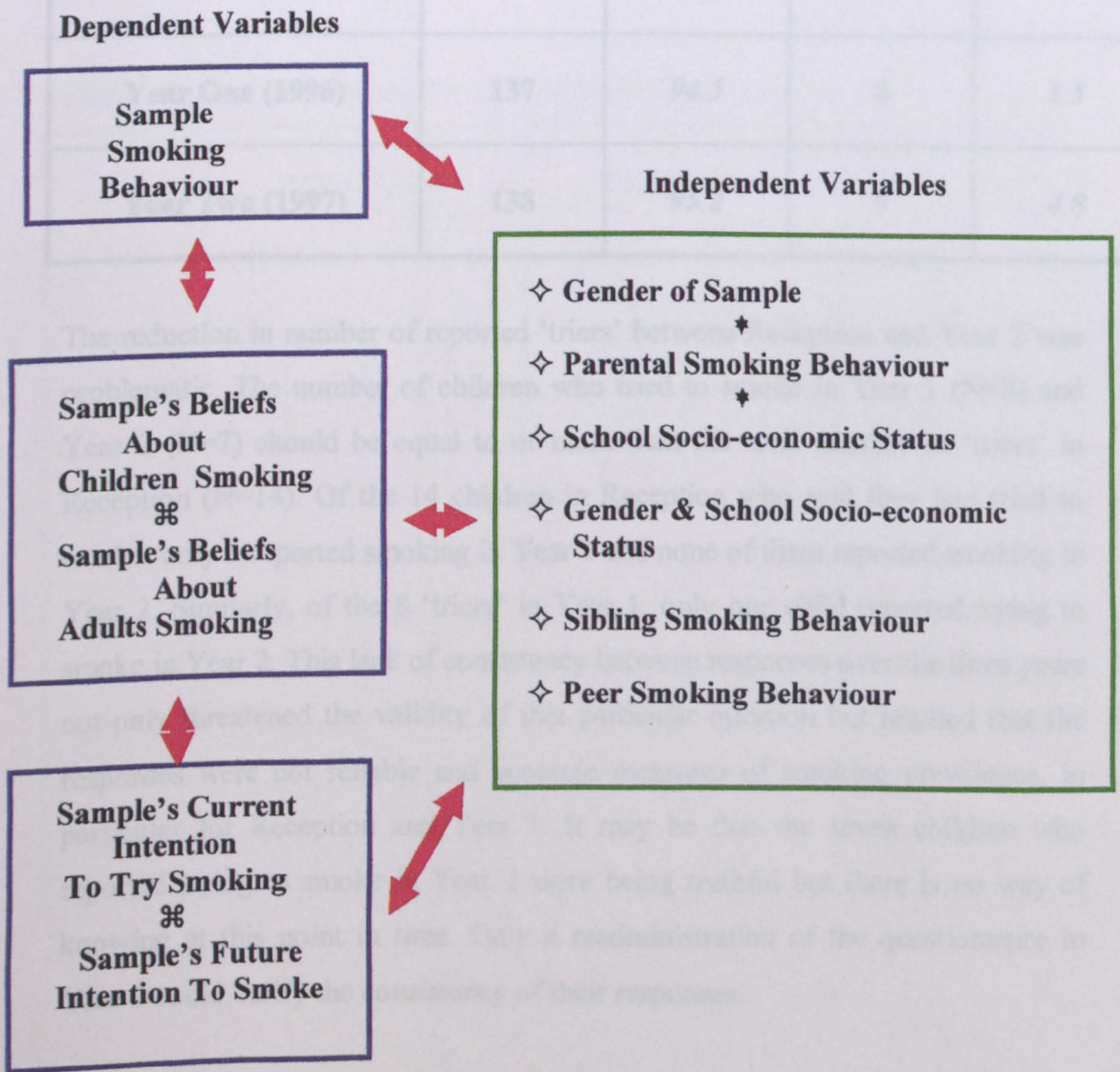
CHAPTER SIX

Results of the Longitudinal Cohort Study

6.1 Questionnaire Results

To best illustrate which variables were looked at in association, a model of the different relationships involved is depicted below. Amendments to the original model (Figure 7) show how the cross-sectional study has altered and progressed over time, resulting in new relationships to investigate.

Figure 30. A Model of the Relationships Explored In the Longitudinal Cohort Study



6.1.1 *Sample Smoking Behaviour*

Children's smoking behaviour as a measure of prevalence was assessed by asking them if they had ever tried to smoke a cigarette, 'even just one puff'. It is evident from Table 15. below, that the majority of the subjects (90%) over the three year span had never smoked whilst a decreasing minority reported trying to smoke at least once in the 3 year period. There were no significant differences in responses over time (Cochran's Q = p >.05).

Table 15. Sample Smoking Behaviour By Year

Year Group N = 145	**Non Triers**		**Triers**	
	N	**%**	**N**	**%**
Reception (1995)	**131**	*90.3*	**14**	*9.7*
Year One (1996)	**137**	*94.5*	**8**	*5.5*
Year Two (1997)	**138**	*95.2*	**7**	*4.8*

The reduction in number of reported 'triers' between Reception and Year 2 was problematic. The number of children who tried to smoke in Year 1 (N=8) and Year 2 (N=7) should be equal to or more than the total number of 'triers' in Reception (N=14). Of the 14 children in Reception who said they had tried to smoke, only 5 reported smoking in Year 1 and none of them reported smoking in Year 2. Similarly, of the 8 'triers' in Year 1, only one child reported trying to smoke in Year 2. This lack of consistency between responses over the three years not only threatened the validity of this particular question but implied that the responses were not reliable and accurate measures of smoking prevalence, in particular for Reception and Year 1. It may be that the seven children who reported trying to smoke in Year 2 were being truthful but there is no way of knowing at this point in time. Only a readministration of the questionnaire in Year 3 could verify the consistency of their responses.

Because the accuracy of the responses regarding smoking experience were unreliable and only comprised a maximum of 6% of the total sample, generalisations could not be made, thus any results based on the analysis of data from this question were not included. Conjecture for this anomaly in self-reported smoking behaviour will be posited in Chapter Seven.

Sample Smoking Behaviour - Smoking Behaviour of Significant Others

The cross sectional study highlighted the influence of parental, sibling and peer smoking habits on children's smoking behaviour. Although this association could be assessed for the longitudinal cohort study, it was important to determine how the smoking behaviour of these significant others had changed over time as outlined in Table 16. and what impact, if any this had on the sample's beliefs about and intentions to smoke.

Table 16. Smoking Behaviour of Significant Others By Year

	RECEPTION				YEAR ONE				YEAR TWO			
	Smoker		Non Smoker		Smoker		Non Smoker		Smoker		Non Smoker	
	N	%	N	%	N	%	N	%	N	%	N	%
Mother	*60*	*42*	83	**58**	*59*	*41*	86	**59**	*59*	*41*	86	**59**
Father	*71*	*50*	70	**50**	*64*	*45*	78	**55**	*63*	*44*	80	**56**
Sister	*8*	*8*	94	**92**	*6*	*7*	78	**93**	*5*	*6*	76	**94**
Brother	*10*	*10*	95	**90**	*11*	*12*	79	**88**	*8*	*9*	80	**91**
Peer	*8*	*7*	109	**93**	3	*3*	95	**97**	*5*	*4*	108	**96**

Although it seemed evident that on most accounts, the rate of smokers decreased slightly each year, there were in fact, no significant differences in the responses over time (Cochran Q = p >.05). Overall, there were more non-smokers than smokers in this sample, but at least 40% of parents were still partaking in the habit. Rates of smoking for siblings and friends were relatively low, less than 12% over the three years respectively. The number of siblings and peers who smoked was somewhat negligible, making it difficult to draw any accurate generalisations from the results, to determine if their smoking behaviour has any impact on the beliefs or intentions of the sample. These relationships, analysed in detail, were largely insignificant and weakly associated and therefore were not reported in this document.

6.1.2 *Parental Smoking Behaviour* - Gender as a Variable

Table 17. indicates that parental smoking rates remained fairly stable across the three year span. At least 78% of mothers and fathers who smoked when the subjects were in Reception, were still smoking by the time they entered Year Two. There was a non significant decreasing trend (p >.05) of smoking occurring in parents with the passage of time. As girls got older, their father's smoking rate decreased somewhat from 49% to 40% whilst mother's remained constant at about 44%. For the male subjects in this study, both parent's rate of smoking declined slightly from 41% to 37% for mothers and from 51% to 49% for fathers.

Table 17. Parental Smoking Behaviour By Gender

Girls N= 78 Boys N= 67	**Mothers Who Smoke**		**Fathers Who Smoke**	
	N	**(%)**	**N**	**(%)**
Reception Girls	**33**	*43%*	**38**	*49%*
Year One Girls	**34**	*44%*	**33**	*42%*
Year Two Girls	**34**	*44%*	**31**	*40%*
Reception Boys	**27**	*41%*	**33**	*51%*
Year One Boys	**25**	*37%*	**31**	*48%*
Year Two Boys	**25**	*37%*	**32**	*49%*

Parental Smoking Behaviour - School Socio-economic status as a Variable

A significant trend reflecting a moderate association (Cramer's V Coefficient ranges from 0.35 in Reception to 0.26 in Year 2 for mothers and from 0.32 in Reception to 0.29 in Year 2 for fathers) was found in the number of parents who smoked and the school (as a measure of social class) that their children attended. As can be seen in Figure 31. and Figure 32., there was a statistically significant inverse relationship ($p<.05$) between parental smoking habit and social class across each year group. The highest proportion of mothers and fathers who smoked, had children in schools representative of the least preferable social economic conditions. These findings concurred with the results found in Table 3. and Table 4. of the cross sectional study, outlining the distribution of parental smoking habit by social class.

Figure 31.

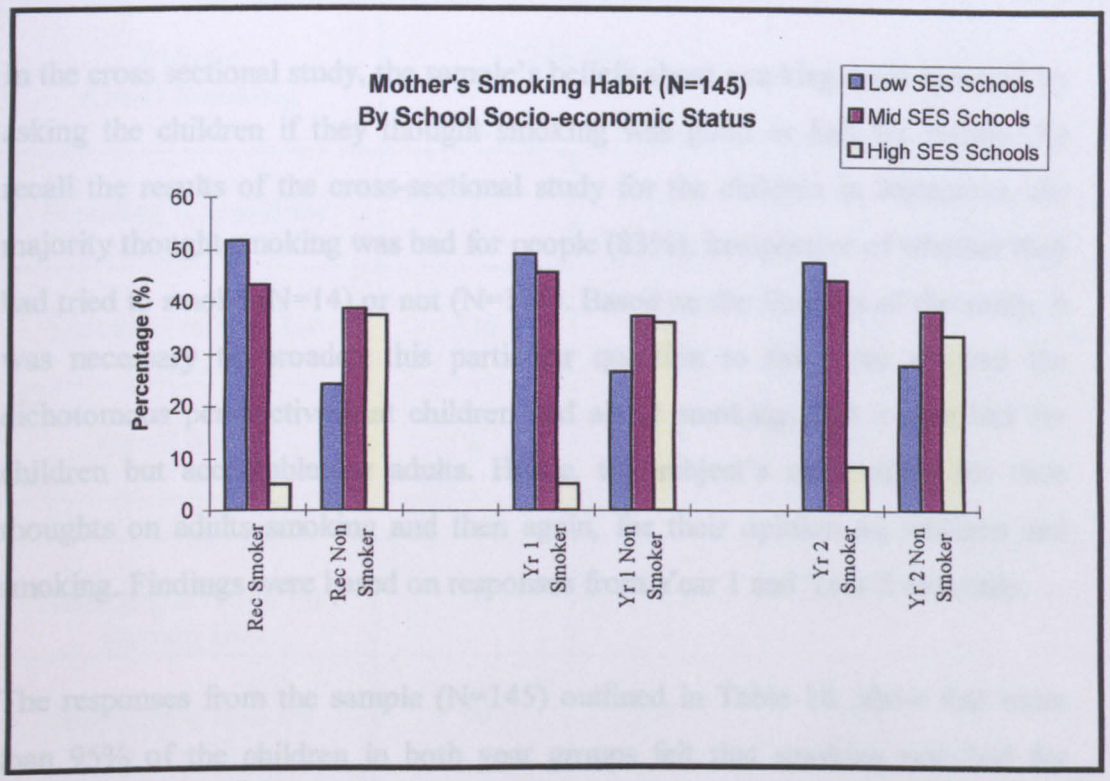
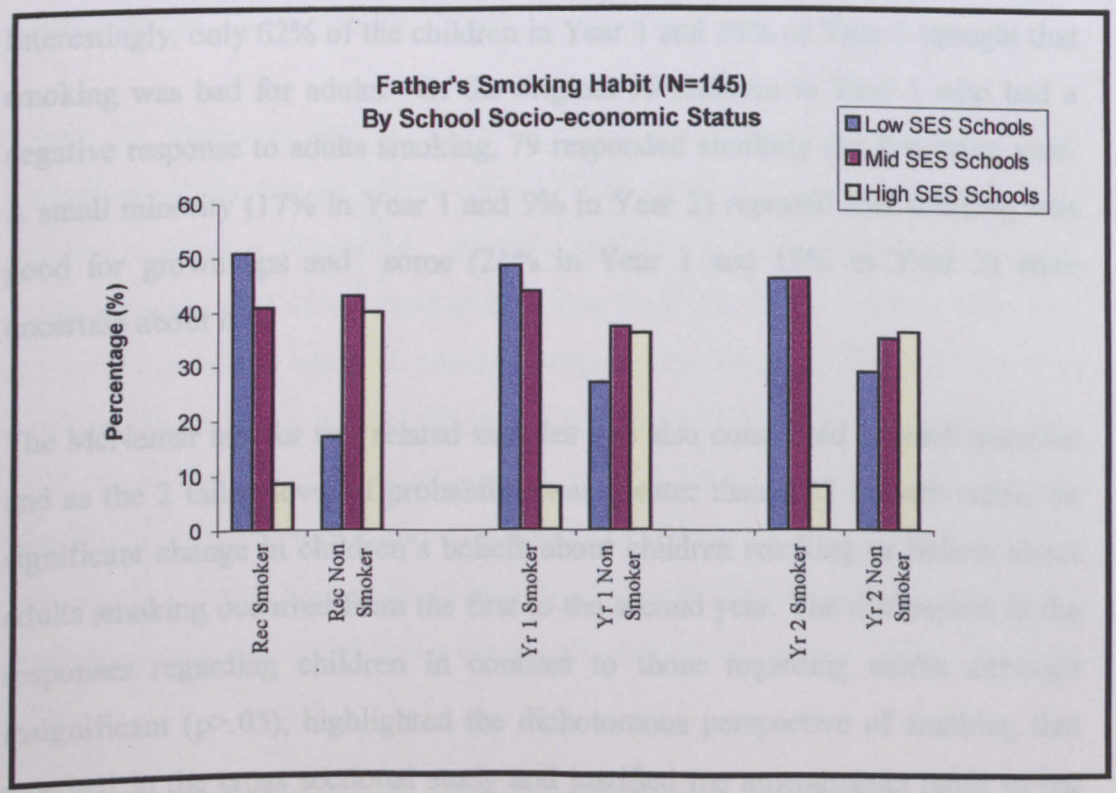


Figure 32.



6.1.3 *Sample Beliefs about Smoking*

In the cross sectional study, the sample's beliefs about smoking were assessed by asking the children if they thought smoking was good or bad for people. To recall the results of the cross-sectional study for the children in Reception, the majority thought smoking was bad for people (83%), irrespective of whether they had tried to smoke (N=14) or not (N=130). Based on the findings of the study, it was necessary to broaden this particular question to take into account the dichotomous perspective that children had about smoking; that it was bad for children but acceptable for adults. Hence, the subject's were asked for their thoughts on adults smoking and then again, for their opinion on children and smoking. Findings were based on responses from Year 1 and Year 2 data only.

The responses from the sample (N=145) outlined in Table 18. show that more than 95% of the children in both year groups felt that smoking was bad for children, less than 1% in Year 1 and 2% in Year 2 thought it was good for children and the remainder (4% in Year 1 and 1 % in Year 2) did not know if smoking was good or bad for children. Of the 138 children who believed smoking was bad for children in Year 1, 135 felt the same way in Year 2. Interestingly, only 62% of the children in Year 1 and 76% of Year 2 thought that smoking was bad for adults. Of the original 90 children in Year 1 who had a negative response to adults smoking, 79 responded similarly the following year. A small minority (17% in Year 1 and 9% in Year 2) reported that smoking was good for grown ups and some (21% in Year 1 and 15% in Year 2) were uncertain about it.

The McNemar test for two related samples was also conducted on each question and as the 2 tailed level of probability was greater than 0.05 in both cases; no significant change in children's beliefs about children smoking or beliefs about adults smoking occurred from the first to the second year. The differences in the responses regarding children in contrast to those regarding adults although insignificant ($p>.05$), highlighted the dichotomous perspective of smoking that emerged in the cross sectional study and justified the amendments made to the questionnaire thereafter.

Table 18. Children's Beliefs About Smoking By Year

Belief s About Smoking	Year One		Year Two	
	N=145	%	N=145	%
Smoking is Good for Children	**1**	*0.7*	**3**	*2.1*
Smoking is Bad for Children	**138**	*95.2*	**140**	*96.6*
Don't Know	**6**	*4.1*	**2**	*1.3*
Smoking is Good for Grown Ups	**24**	*16.6*	**13**	*9.0*
Smoking is Bad for Grown Ups	**90**	*62.1*	**111**	*76.5*
Don't Know	**31**	*21.3*	**21**	*14.5*

Sample Beliefs About Smoking - Gender as a Variable

Figure 33. illustrates that the majority of children (over 90% in both years), regardless of whether they were girls or boys believed smoking to be bad for children. Likewise, Figure 34. shows a similar pattern but to a lesser extent. Approximately 60% of boys and girls in Year One and 75% in Year Two felt that it was not good for adults to smoke. Compared to their beliefs about children smoking, there was a greater degree of uncertainty among the girls (Year 1 = 24% ; Year 2 = 14%) and boys (Year 1 = 18%; Year 2 = 14%) as to whether smoking was something good or bad for adults. Any apparent gender differences between the sexes was insignificant ($p>.05$) and the strength of association between gender and belief was weak on all accounts (Cramer's V Coefficient = 0.1).

Figure 33.

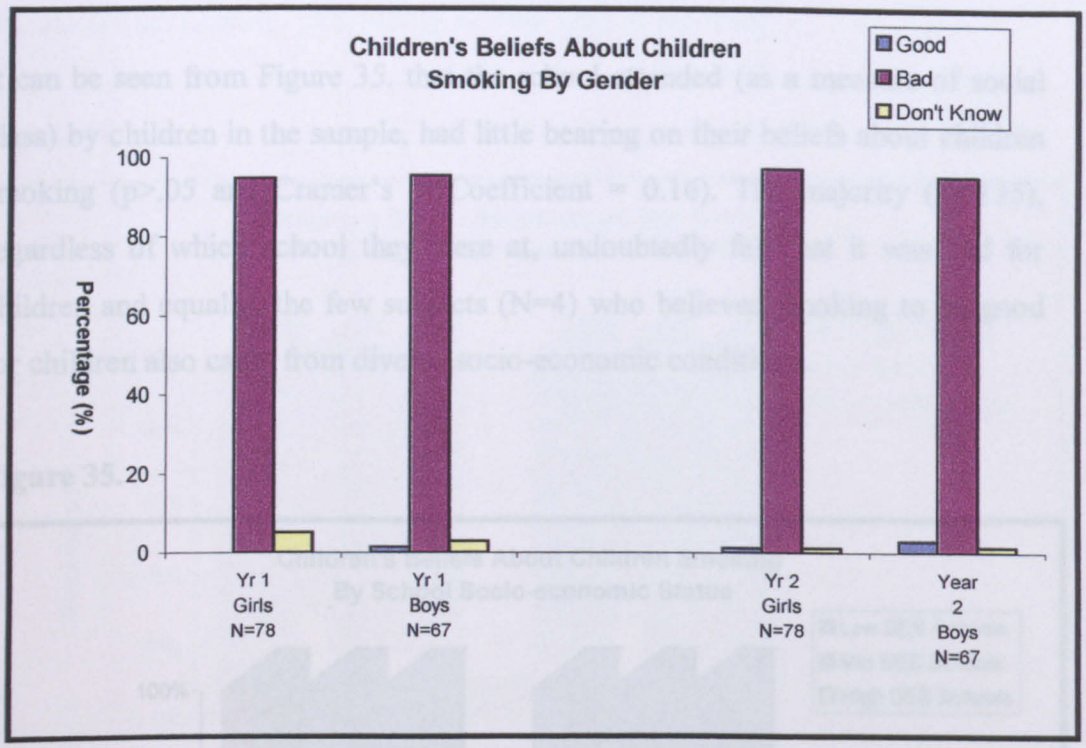
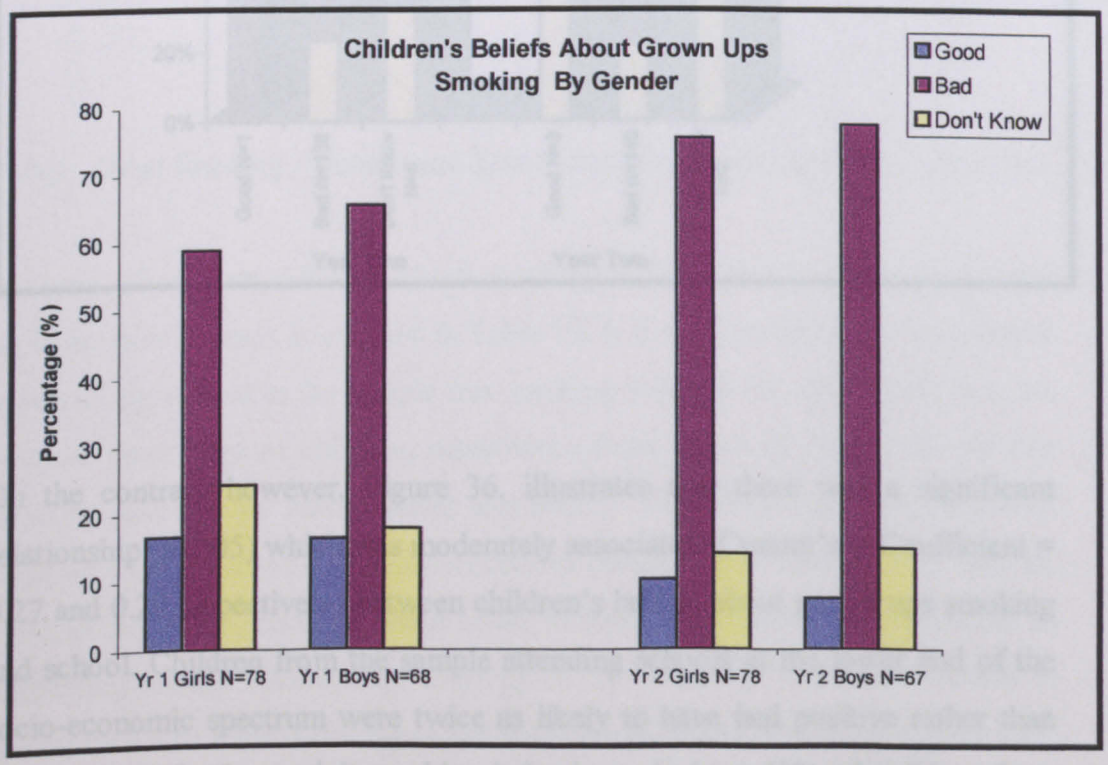


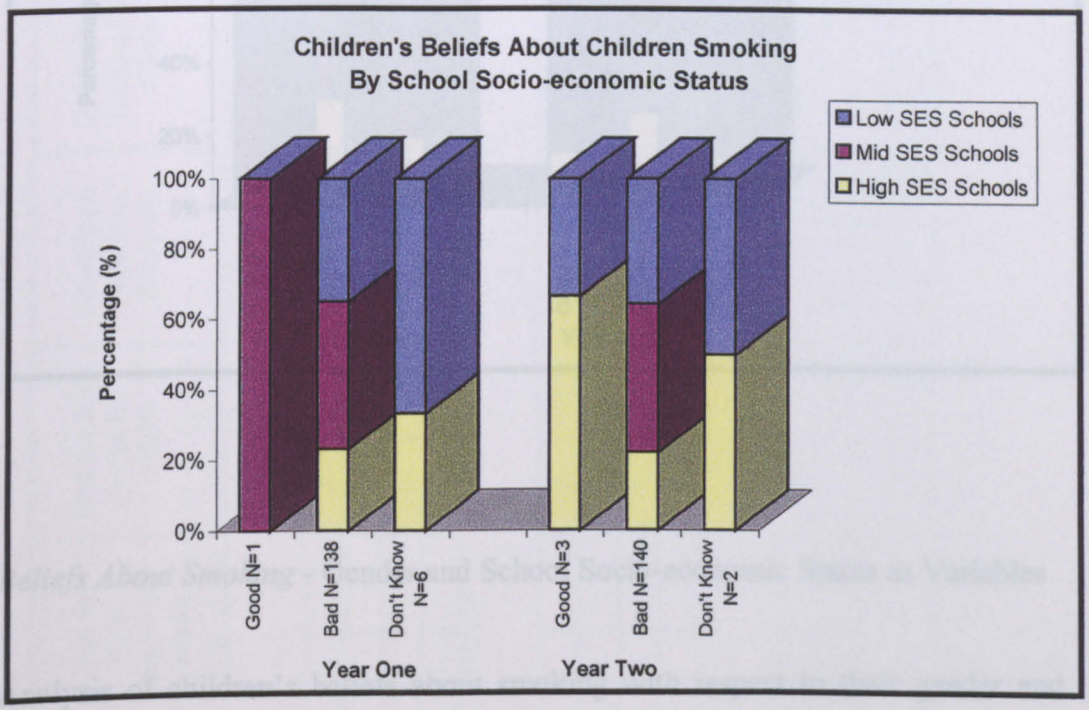
Figure 34.



Sample Beliefs About Smoking - School Socio-economic Status as a Variable

It can be seen from Figure 35. that the school attended (as a measure of social class) by children in the sample, had little bearing on their beliefs about children smoking ($p>.05$ and Cramer's V Coefficient = 0.16). The majority (N=135), regardless of which school they were at, undoubtedly felt that it was bad for children and equally, the few subjects (N=4) who believed smoking to be good for children also came from diverse socio-economic conditions.

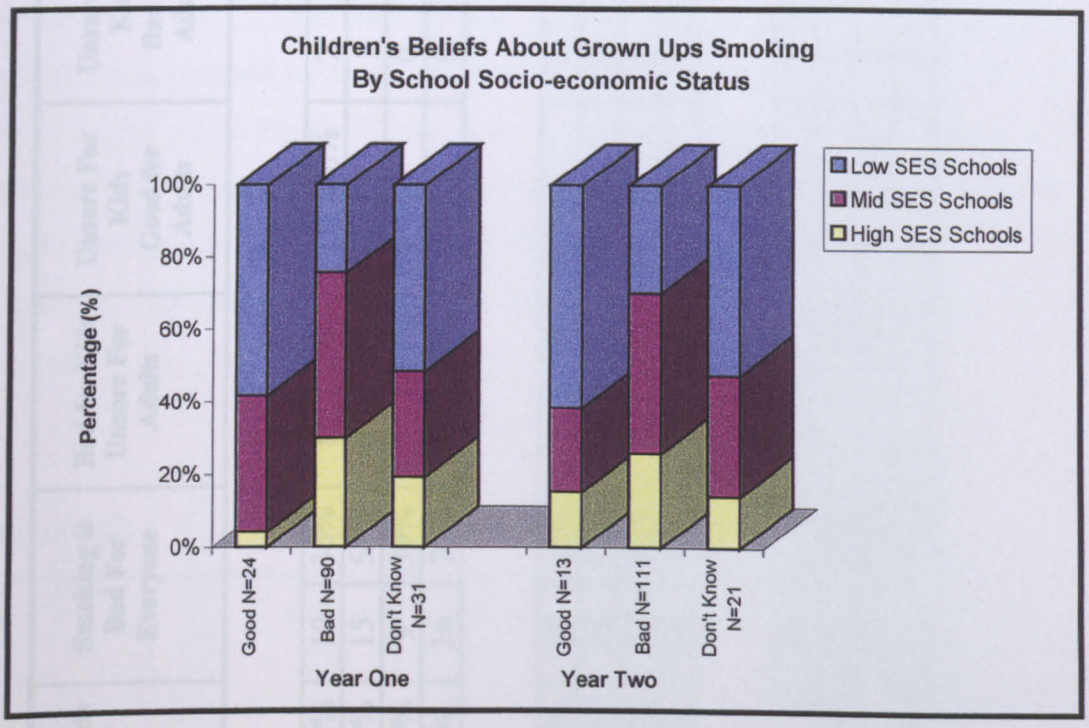
Figure 35.



On the contrary however, Figure 36. illustrates that there was a significant relationship ($p< .05$) which was moderately associated (Cramer's V Coefficient = 0.27 and 0.29 respectively) between children's beliefs about grown ups smoking and school. Children from the sample attending schools at the lower end of the socio-economic spectrum were twice as likely to have had positive rather than negative beliefs about adult smoking behaviour. At least 50% of children from these same schools were also more inclined to be unsure about their attitude toward grown ups smoking. Moreover, as the schools' socio-economic

conditions improved, the number of children who thought smoking was good decreased significantly, particularly in Year One of the study.

Figure 36.



Beliefs About Smoking - Gender and School Socio-economic Status as Variables

Analysis of children's beliefs about smoking with respect to their gender and socio-economic status is outlined in Table 19. It is obvious that there was almost universal agreement in the sample that smoking was bad for children. In fact, the greatest percentage of children, regardless of sex or social class believed that smoking was bad for both children and adults. To a lesser extent, a portion of children from all three social classifications believed that smoking was bad for children but either uncertain about adults or good for adults. This resulted in an interesting pattern whereby the majority of the responses were concentrated in the centre of the table (smoking is bad for everyone) and then cascaded outward.

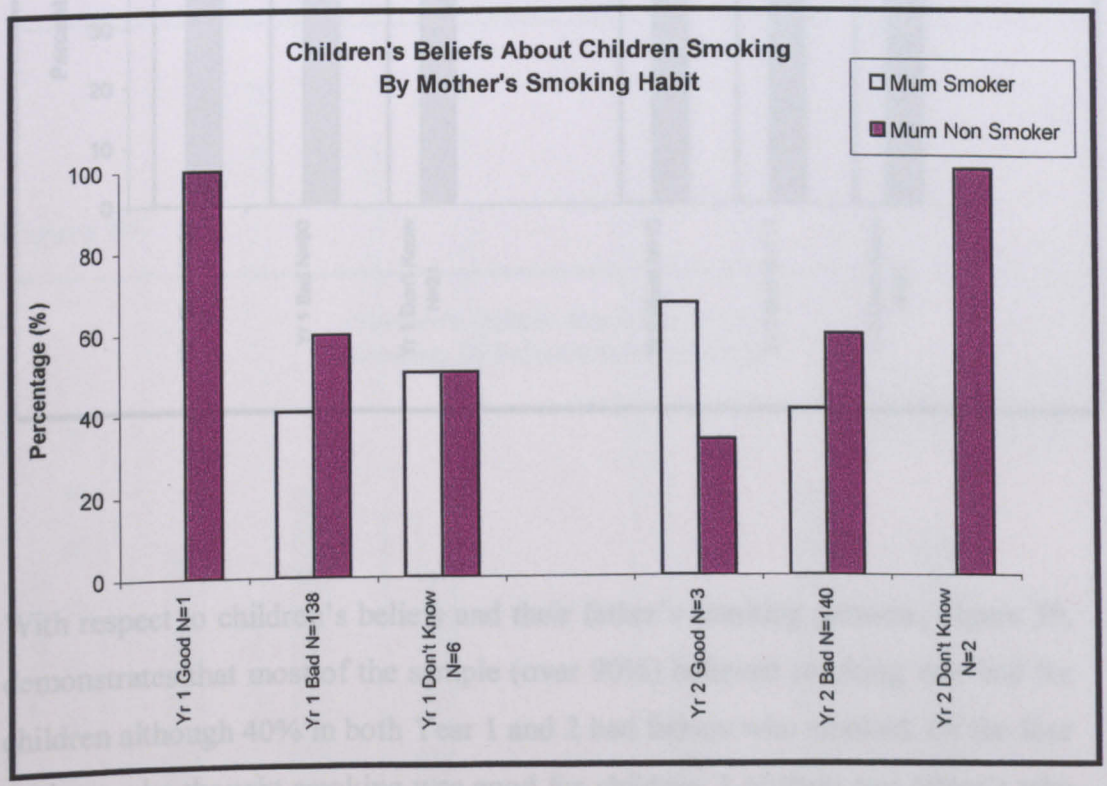
Table 19. Children's Beliefs About Smoking By Year Group, Gender and School Socio-economic Status

	Smoking is Good for Everyone		Good for Kids Bad for Adults		Good for Kids Unsure for Adults		Bad for Kids Good for Adults		Smoking is Bad For Everyone		Bad for Kids Unsure For Adults		Unsure For Kids Good for Adults		Unsure For Kids Bad for Adults		Unsure For Everyone	
LOW SES SCHOOLS																		
Year 1 Girls	0		0		0		7	25%	10	36%	8	29%	1	6%	2	7%	0	
Year 2 Girls	1	4%	0		0		5	18%	15	54%	6	21%	0		1	4%	0	
Year 1 Boys	0		0		0		6	26%	9	39%	7	30%	0		0		1	4%
Year 2 Boys	0		0		0		2	9%	16	70%	5	22%	0		0		0	
MID SES SCHOOLS																		
Year 1 Girls	0		0		0		5	17%	19	63%	6	20%	0		0		0	
Year 2 Girls	0		0		0		1	3%	26	87%	3	10%	0		0		0	
Year 1 Boys	1	3%	0		0		3	10%	22	76%	3	10%	0		0		0	
Year 2 Boys	0		0		0		2	7%	23	79%	4	14%	0		0		0	
HIGH SES SCHOOL																		
Year 1 Girls	0		0		0		0		14	74%	4	21%	0		0		1	5%
Year 2 Girls	0		0		0		1	5%	16	84%	2	11%	0		0		0	
Year 1 Boys	0		0		0		0		13	87%	1	7%	1	7%	0		0	
Year 2 Boys	0		2	13%	0		1	7%	11	73%	0		0		0		1	7%

Sample Beliefs About Smoking - Parental Smoking Behaviour

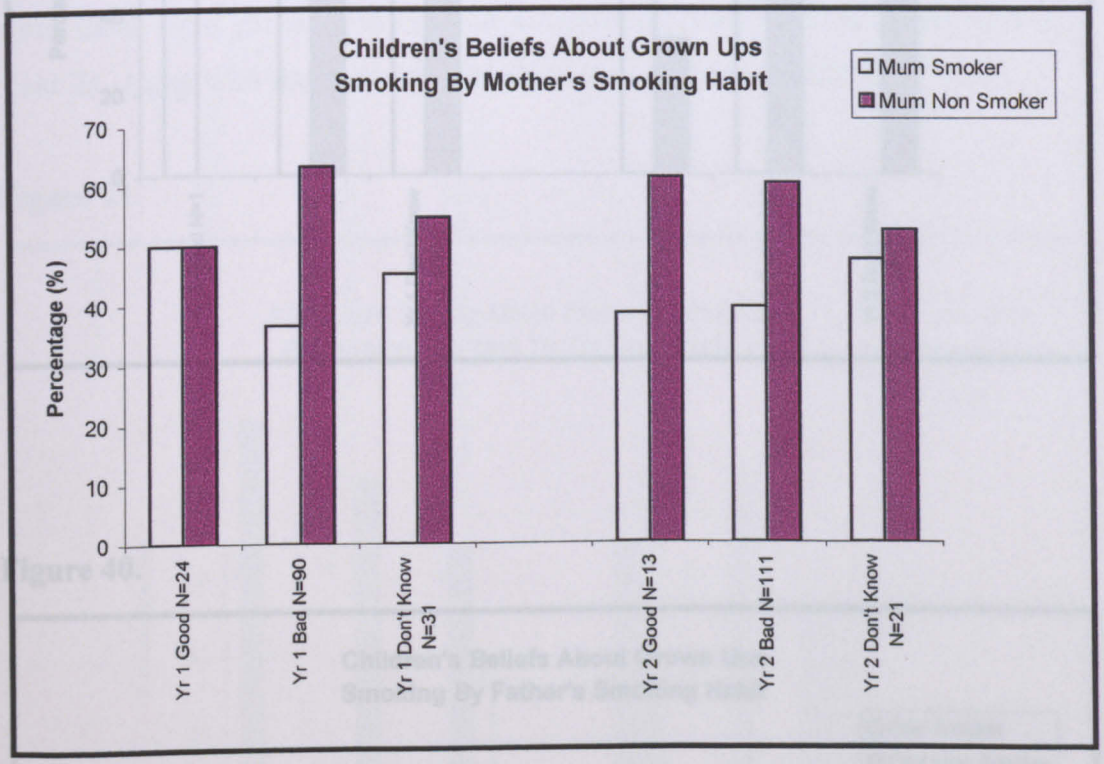
In contrast to some of the findings of the cross sectional study, children's beliefs about smoking were not likely to be influenced by the smoking habits of significant others. These relationships, were largely not statistically significant ($p>.05$) and plagued by weak associations (Cramer's V Coefficient = 0.18 for most cases). From Figure 37. it can be seen that the majority of children (over 95% in Year 1 and 2) regardless of whether their mother smoked or not, thought that smoking was bad for children. The exception was in Year 2, where 2 of the 3 children who had positive attitudes toward smoking also had mothers who smoke.

Figure 37.



It would appear from Figure 38. that children's opinions about adults smoking, although less extreme were still independent of maternal smoking behaviour. 62% of children in Year One and 76% of children in Year Two thought smoking was bad despite one third of them having mothers who smoked. Of the Year One pupils who thought smoking was good (N=24), half had non smoking mothers and of the Year Two subjects (N=13), two-thirds had mothers who do not smoke.

Figure 38.



With respect to children's beliefs and their father's smoking patterns, Figure 39. demonstrates that most of the sample (over 90%) believed smoking was bad for children although 40% in both Year 1 and 2 had fathers who smoked. Of the four subjects who thought smoking was good for children, 3 of them had father's who smoked.

Figure 40. shows that of the minority who felt that smoking was good for grown ups (N=24 for Year 1 and N=13 for Year 2), 50% of first year children and 70% of second year children reported having fathers who smoked.

Figure 39.

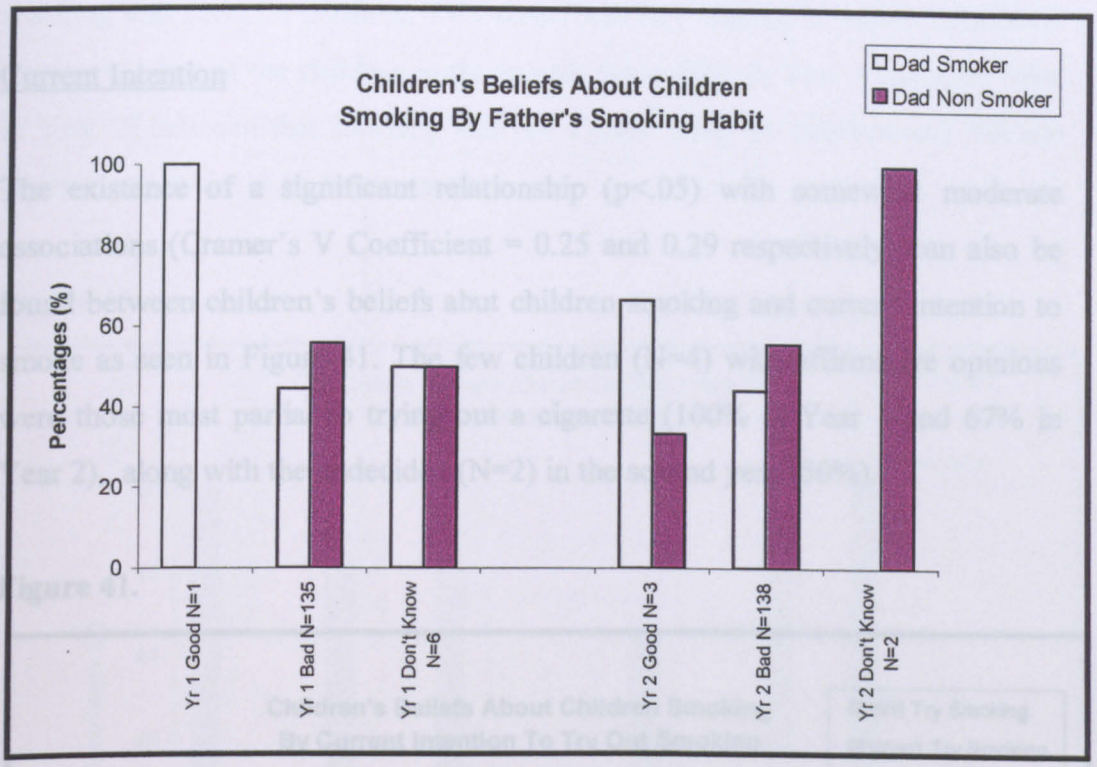
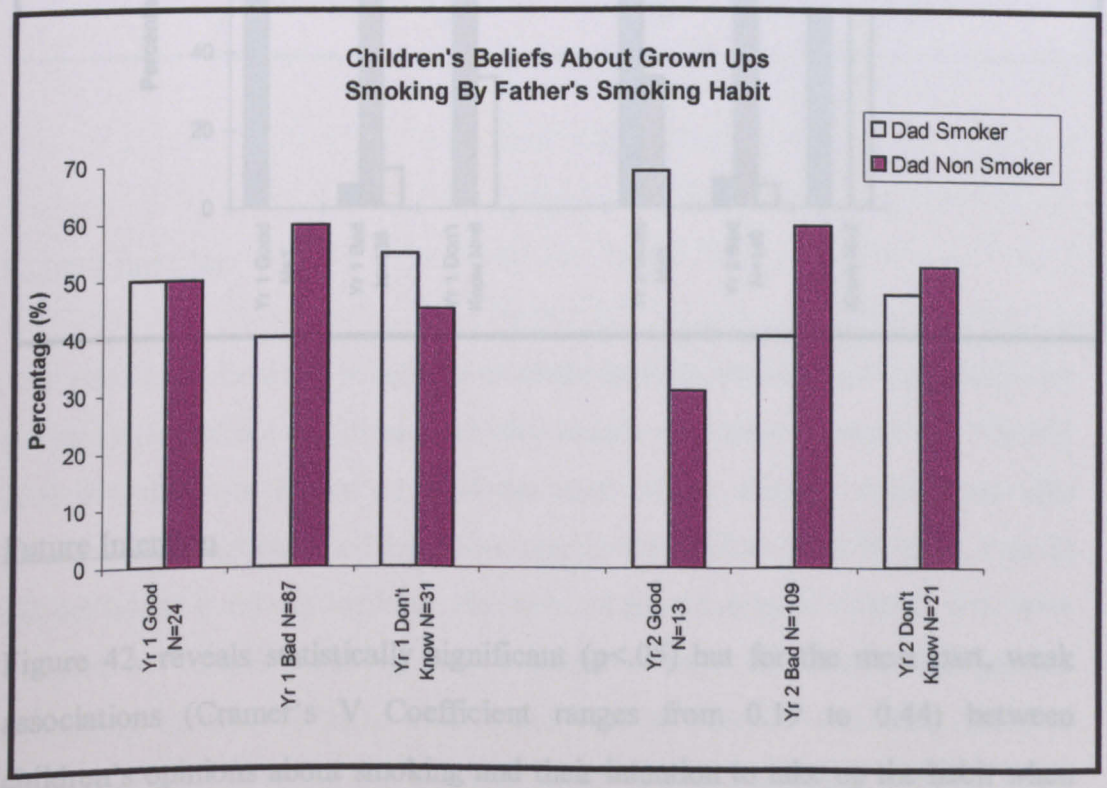


Figure 40.

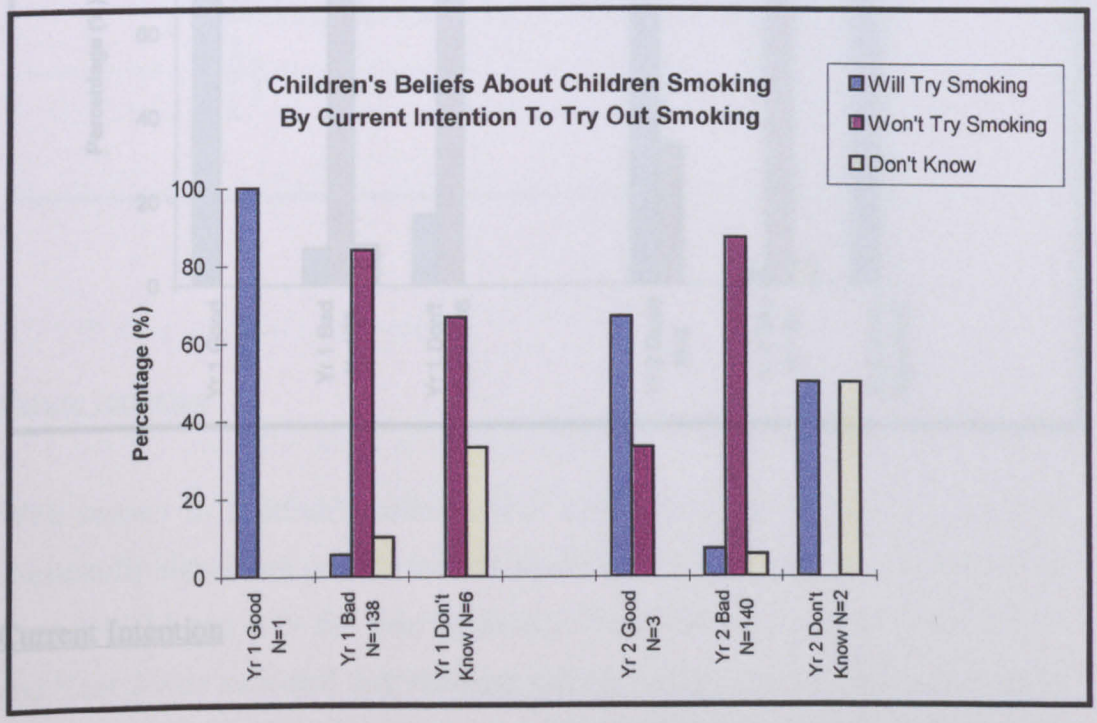


Sample Beliefs About Smoking - Intention to Smoke

Current Intention

The existence of a significant relationship ($p<.05$) with somewhat moderate associations (Cramer's V Coefficient = 0.25 and 0.29 respectively) can also be found between children's beliefs abut children smoking and current intention to smoke as seen in Figure 41. The few children (N=4) with affirmative opinions were those most partial to trying out a cigarette (100% in Year 1 and 67% in Year 2), along with the undecided (N=2) in the second year (50%).

Figure 41.

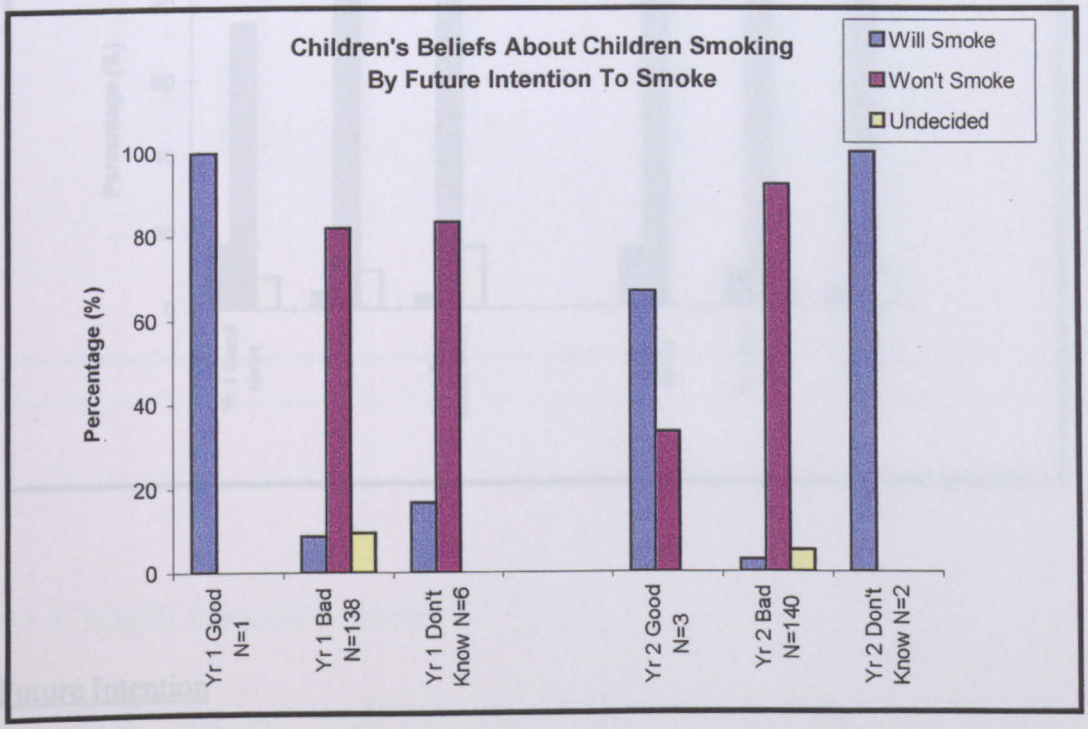


Future Intention

Figure 42. reveals statistically significant ($p<.05$) but for the most part, weak associations (Cramer's V Coefficient ranges from 0.19 to 0.44) between children's opinions about smoking and their intention to take up the habit when older. Of the few subjects (N=4; 1 child responded identically in both years and

3 children changed their responses from one year to the next) who thought smoking was good for children, 75% stated that they wanted to smoke when they grew up. Most of the children in the sample (over 80% in Year 1 and over 90% in Year 2) believed that smoking was not a good thing for children and did not express any desire to be future smokers.

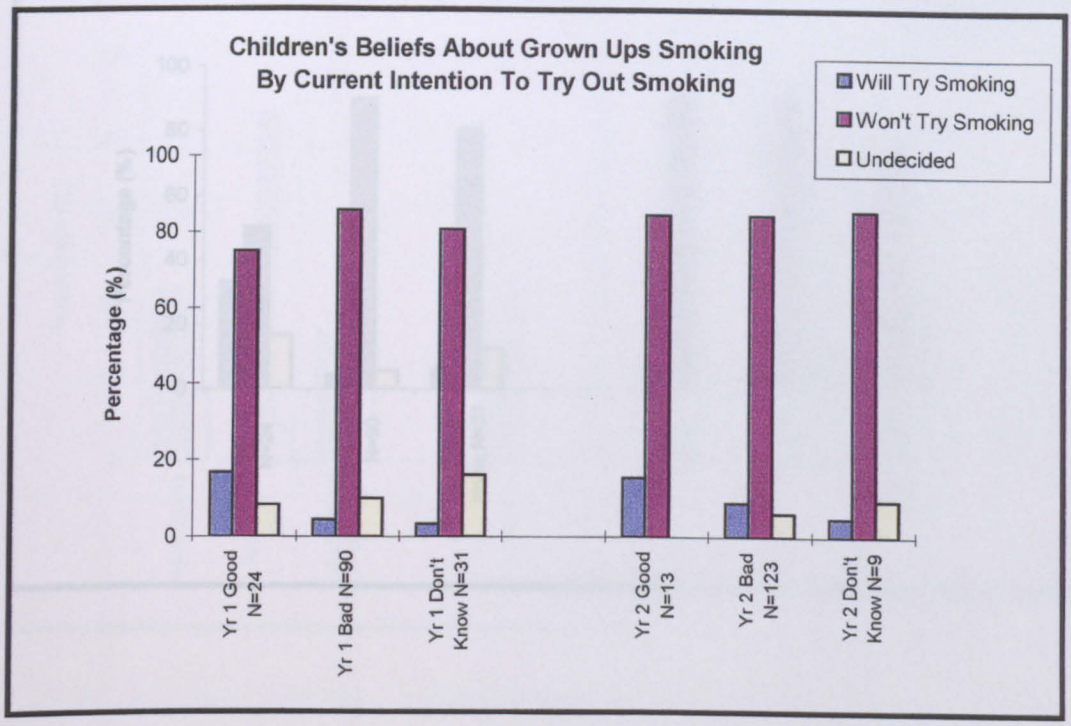
Figure 42.



Current Intention

The association between beliefs about adults smoking and current intention to try out smoking was not significant and very weakly correlated (Cramer's V = 0.14). It is evident from Figure 43. that the most of the sample, even those who believed smoking was good for grown ups (N=24 in Year 1 and N=13 in Year 2) did not intend to try out smoking. However, of the minority of subjects who were inclined to believe smoking was a positive habit for adults, the greatest percentage of them (17% in Year 1 and 15% in Year 2) were most likely to express interest in trying out smoking rather than not smoking at all or being indecisive about the choice.

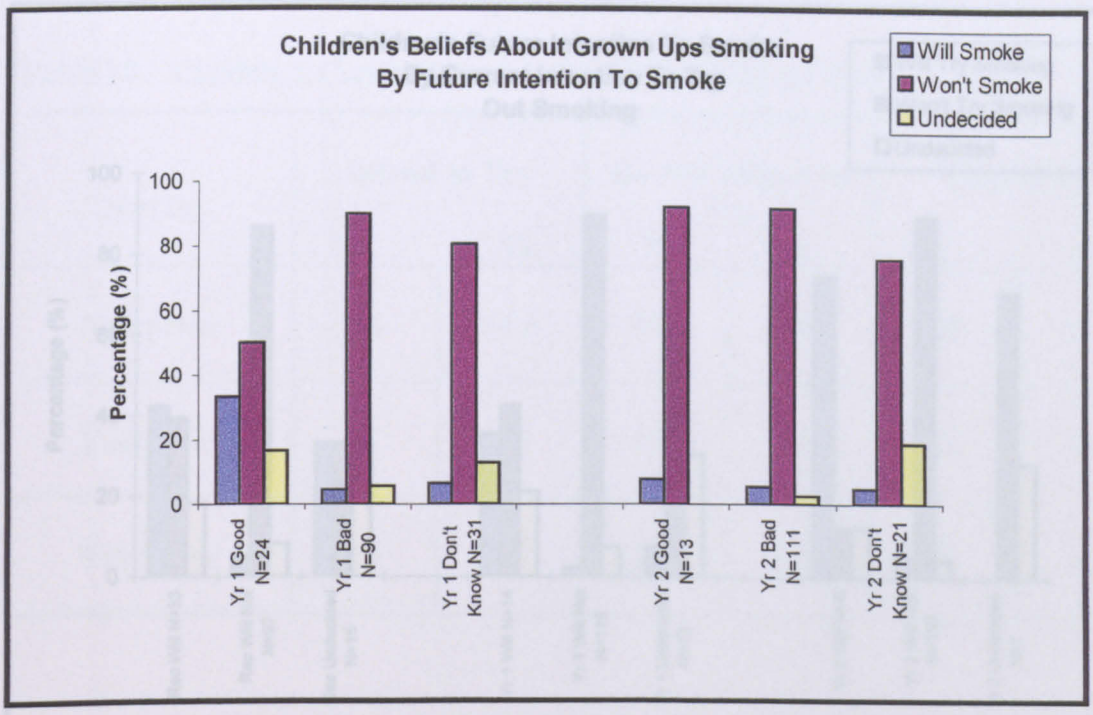
Figure 43.



Future Intention

With respect to children's beliefs about adults smoking, Figure 44. paints a statistically significant ($p<.05$) but not highly related (Cramer's V Coefficient for Year 1= 0.24 and 0.19 for Year 2) picture. Over 90% of the children in Year 1 and Year 2 who indicated that smoking was bad for grown ups, did not intend to be prospective smokers. This was also true for the segment of the sample who thought smoking was good for adults. Of the children with positive thoughts about adult smoking (N=24 and N=13 respectively), half of those in Year One and almost all (92%) in Year Two did not intend to smoke in adulthood.

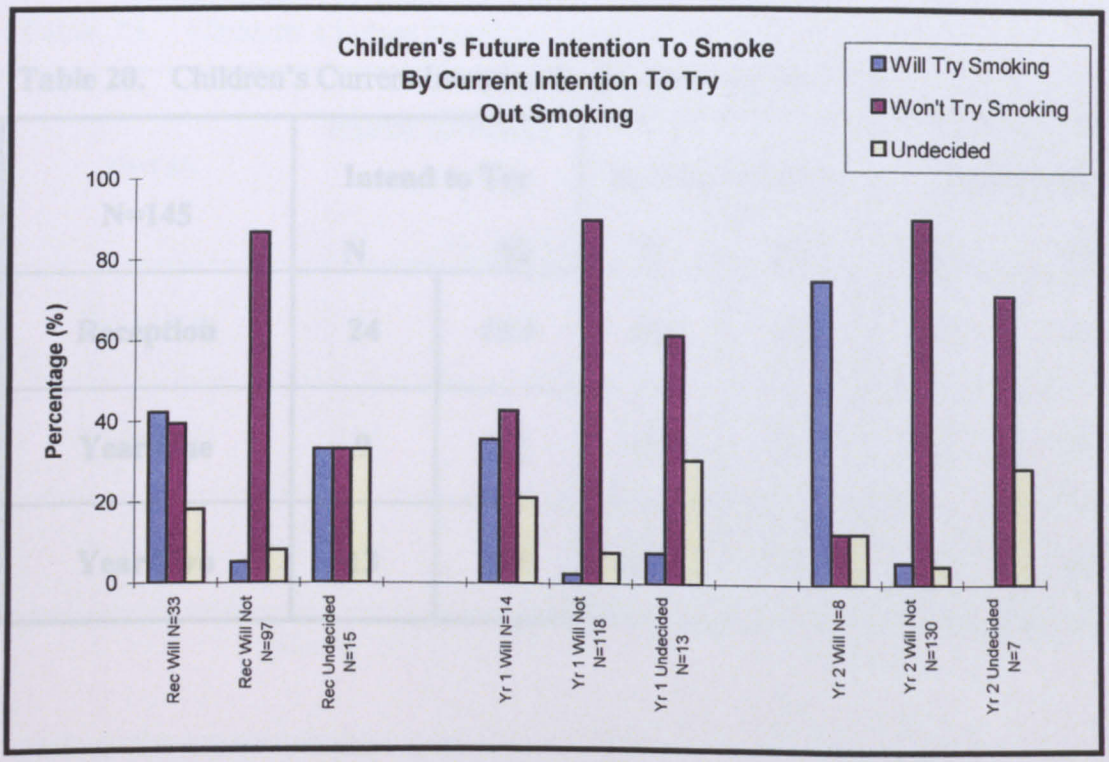
Figure 44.



6.1.4 *Sample Intention to Smoke*

As a result of the pilot study, it became apparent that there was a need to bisect the question of intention to smoke -*Do you want to smoke when you grow up?*; to differentiate between the children in the sample who were keen to try a cigarette as 'a one off', for the sake of curiosity and those who intended to take up the habit in the future. Children were asked if they wanted to try a cigarette, even just one puff (current intention) and also if they wanted to smoke when they grew up (future intention). Not surprisingly, Figure 45. shows that these two variables were significantly related ($p<.05$) and rather highly correlated (Cramer's V Coefficient for Reception = 0.38; Year 1= 0.34 and Year 2= 0.43) to one another. Of the children in Reception (N=33) who expressed an interest in prospective smoking, 42% stated that they wanted to try it out now as well. Likewise, 36% of children in Year One (N=14) and 75% of children in Year 2 (N=8) indicated that they wanted to experience smoking now but also wanted to take up the habit when grown up.

Figure 45.



Sample Intention to Smoke - Current Intention

In contrast to the cross sectional study however, where the results from the two 'intention' questions were virtually similar and therefore reported as one, some diversity in response did arise in the cohort study and these differences needed to be documented.

Table 20. is a summation of the sample's current intention to try out smoking for the duration of the study. The patterns that materialised were similar to those found in Table 21. which documented children's future intention to smoke, with the exception being those subjects who wanted to try out smoking (N=24 in Reception; N=9 in Year 1 and N=13 in Year 2). The inverse relationship evident in the aforementioned table was somewhat skewed here by the slight increase in numbers of children who wanted to try smoking in Year 2. As $p > .05$ for the Cochran Q test, the differences in responses over the three years however, were not significant.

Table 20. Children's Current Intention To Try Smoking By Year

N=145	Intend to Try		Do Not Intend to Try		Undecided	
	N	%	N	%	N	%
Reception	**24**	*16.6*	**102**	*70.3*	**19**	*13.1*
Year One	**9**	*6.2*	**120**	*82.8*	**16**	*11.0*
Year Two	**13**	*9.0*	**123**	*84.8*	**9**	*6.2*

Sample Intention to Smoke - Future Intention

From Table 21. , it can be seen that in general, most children (Reception = 67%; Year One = 81% and Year Two = 90%) did not express any desire to smoke when older. The percentage of children who wanted to smoke in adulthood decreased with the passage of time from 23% in Reception to 5.5% in Year Two.

A similar decreasing trend was also found in those subjects who were undecided about their future smoking behaviour (Reception = 10%; Year One = 9%; Year Two = 5%). The changes in frequencies over the three year time span differed significantly from one year to the next, which indicated that there were some changes in responses over time (Cochran's Q test <.05); the only ones to do so in the entire data set. Of the 33 children in Reception who said they wanted to smoke when grown up, only 2 responded in an identical manner in Year Two. Similarly, only one subject who was undecided in Reception was still undecided two years later whilst the majority of children from the sample (N=91) consistently reported that they would not smoke in adulthood over the 3 year period.

Table 21. Children's Future Intention To Smoke By Year

N=145	Intend to Smoke		Do Not Intend to Smoke		Don't Know	
	N	%	N	%	N	%
Reception	**33**	*22.8*	**97**	*66.9*	**15**	*10.3*
Year One	**14**	*9.7*	**118**	*81.4*	**13**	*8.9*
Year Two	**8**	*5.5*	**130**	*89.7*	**7**	*4.8*

Current Intention to Smoke - Gender as a Variable

Figure 46. illustrates that boys were almost three times more likely to want to try out smoking than girls. This association however, was significant only in Reception ($p<.05$) and moderately correlated for that year group. There appeared to be an inverse relationship between gender and desire to try out smoking as the number of potential 'triers' decreased as the children got older. Explanations for this trend are posited in Chapter 7.

Future Intention to Smoke - Gender as a Variable

In a like manner to current intention to try out smoking, a greater percentage of boys according to Figure 47. stipulated that they intended to smoke when older as compared to the girls in the sample. Interestingly, twice as many girls in Reception indicated that they wanted to smoke when grown up but did not intend to try it out in the present. The number of males with positive intentions to smoke decreased over time from 28% in Reception to 15% in Year One and 9% in Year Two. This decline was non significant ($p>.05$) and the relationship between gender and future intention to smoke was weak (Cramer's V Coefficient < 0.17).

Figure 46.

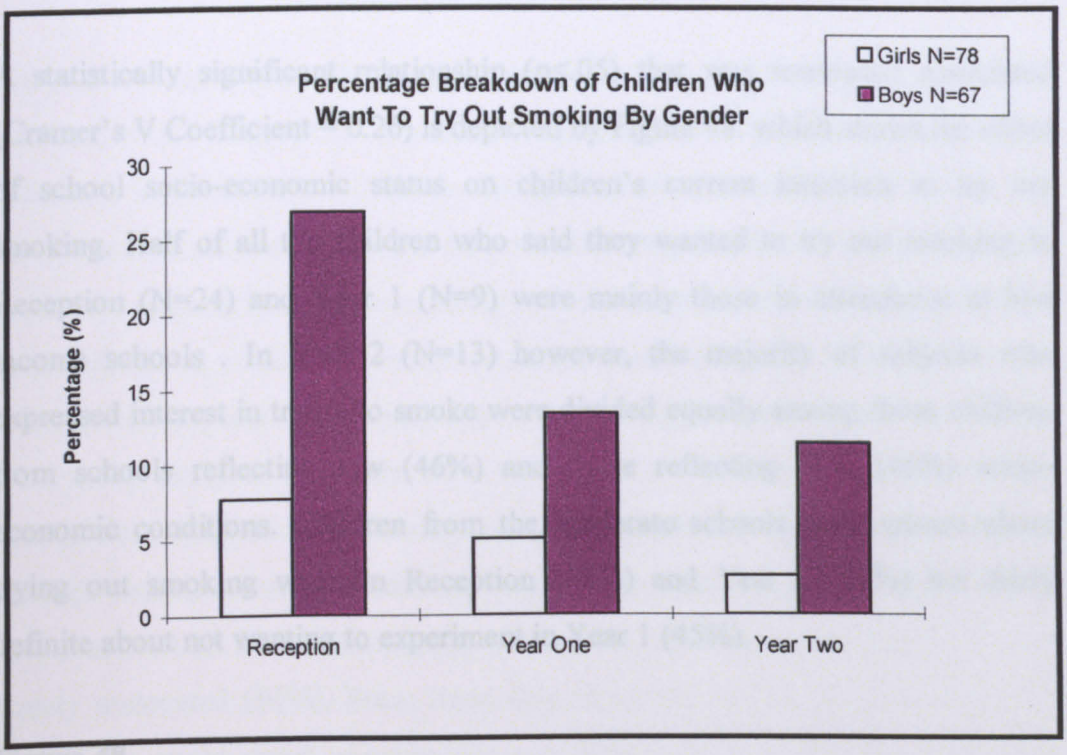
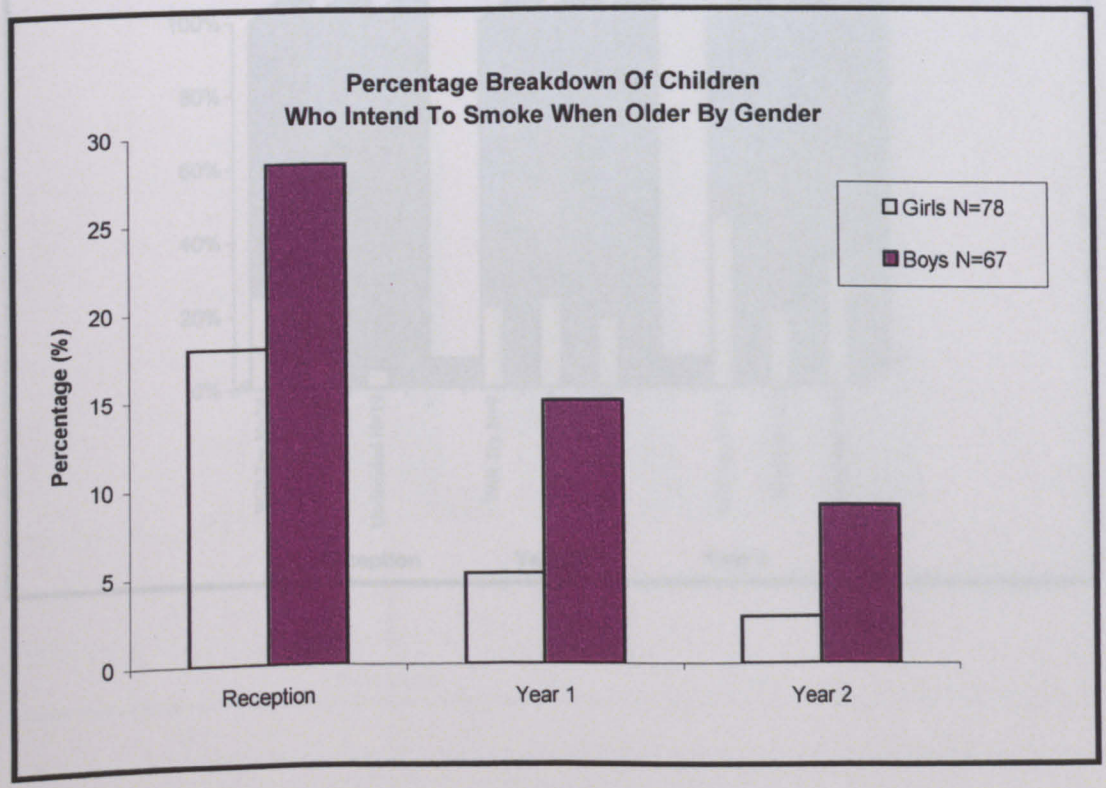
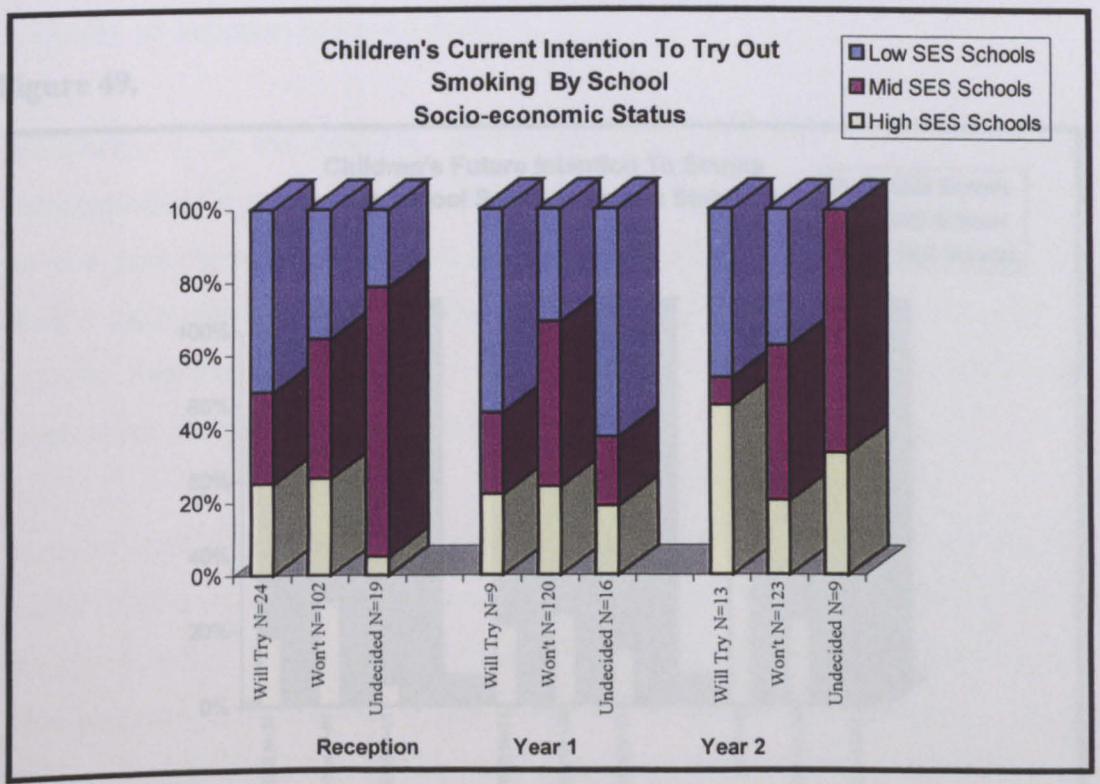


Figure 47.



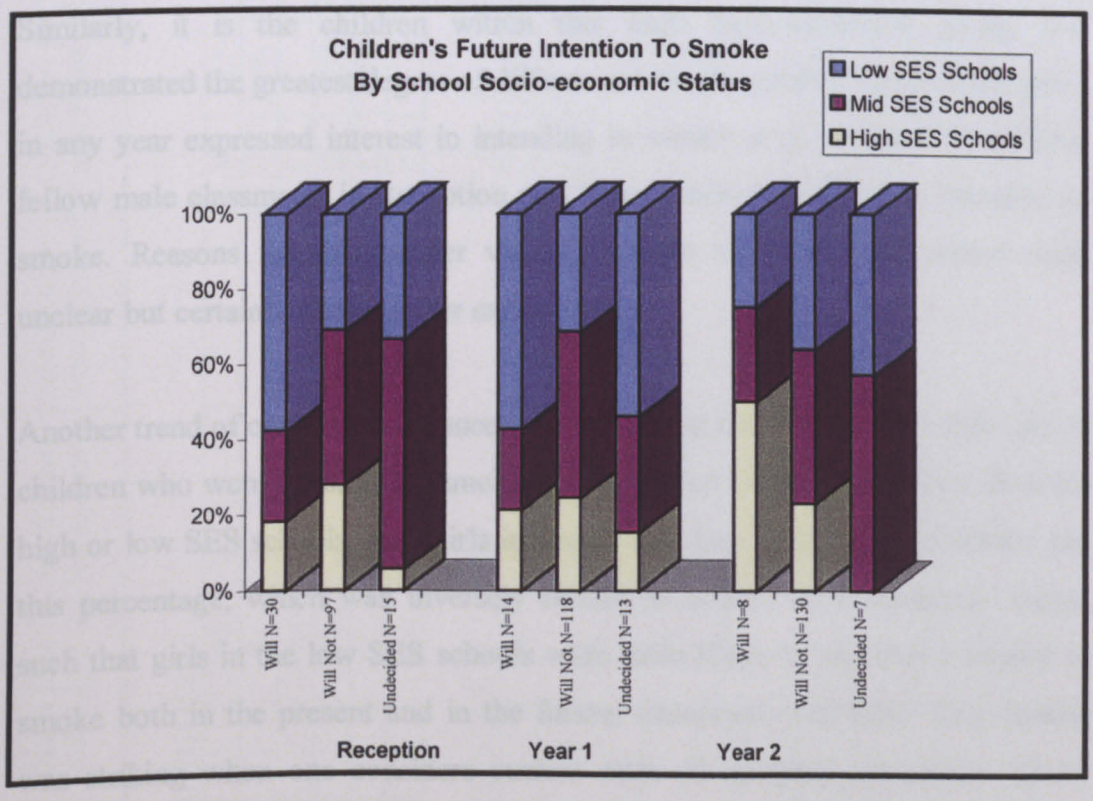
A statistically significant relationship ($p<.05$) that was somewhat associated (Cramer's V Coefficient = 0.26) is depicted by Figure 48. which shows the effect of school socio-economic status on children's current intention to try out smoking. Half of all the children who said they wanted to try out smoking in Reception (N=24) and Year 1 (N=9) were mainly those in attendance at low income schools . In Year 2 (N=13) however, the majority of subjects who expressed interest in trying to smoke were divided equally among those children from schools reflecting low (46%) and those reflecting high (46%) socio-economic conditions. Children from the moderate schools were unsure about trying out smoking when in Reception (74%) and Year 2 (67%) but fairly definite about not wanting to experiment in Year 1 (45%).

Figure 48.



The relationship between future intention to smoke and the school that children attended was statistically significant ($p<.05$) and moderately associated (Cramer's V Coefficient = 0.28) for Reception only. As indicated in Figure 49., the Reception children from the schools reflecting the lowest socio-economic conditions were at least twice as likely to want to smoke in the future. Children in attendance at moderate schools were the most uncertain about their future behaviour (73%) and those at the school with the highest socio-economic ranking were more likely to state that they would not become future smokers. This pattern was not noted the following two years. Instead, it was the children from the high ranking school that made up half of those who intended to smoke in the future and those from the opposite end of the economic spectrum that were largely undecided (54%). From these data, it would not be possible to predict intention to smoke based on school socio-economic status.

Figure 49.



Intention to Smoke -Gender and School Socio-economic Status as Variables

Table 22. is a summation of the multivariate analysis of the dependent variables of gender and school socio-economic status by children's current and future intention to smoke. The largest percentage of the sample, regardless of gender and school did not intend to smoke at that point in time or when older (from 43% to 95% over the 3 years). A noteworthy pattern emerged for the 'never smokers' whereby the likelihood of never intending to smoke, either in the present or in the future increased every year for both sexes with the exception of Year 2 boys in the high SES school where there was a decrease from 67% to 47%. A somewhat analogous trend was also apparent for those children who intended to smoke in the present and in the future whereby decreases in intention were noted for almost every year, for both sexes bar the high SES boys in Year 2 who showed an increase from 7% to 20%. This enduring anomaly was of significant interest in light of the fact that the girls from the high SES school expressed virtually no intention to smoke at all.

Similarly, it is the children within this high socio-economic group that demonstrated the greatest degree of difference between gender. None of the girls, in any year expressed interest in intending to smoke at all whilst 20% of their fellow male classmates in Reception and Year 2 indicated that they intended to smoke. Reasons for this gender variance within the high SES school were unclear but certainly merit further exploration.

Another trend of consequence concerned the girls in this sample. The minority of children who were considering smoking in the future were mainly boys from the high or low SES schools. Few girls indicated that they were likely to smoke and this percentage, which was inversely related to school socio-economic status, such that girls in the low SES schools were most likely to say they intended to smoke both in the present and in the future, decreased over time. This finding was striking when one considers current rates of smoking prevalence clearly showing that girls smoke more than boys - 15% of girls and 11% of boys smoked regularly in 1996 (Jarvis, 1997).

Table 22. Children's Intention To Smoke By Year Group, Gender and School Socio-economic Status

	Intend to Smoke Now and Future		Smoke Now Not in Future		Smoke Now Future Unsure		Not Now Yes in Future		Never Smoke		Not Now Future Unsure		Unsure Now Yes in Future		Unsure Now No in Future		Unsure for Both	
LOW SES SCHOOLS																		
Rec Girls	5	18%	0		0		3	11%	18	64%	0		1	7%	1	7%	0	
Year 1 Girls	1	4%	0		0		1	4%	17	61%	2	7%	1	4%	4	14%	2	7%
Year 2 Girls	1	4%	1	4%	0		0		24	86%	2	7%	0		0		0	
Rec Boys	3	13%	1	4%	3	13%	5	22%	10	43%	0		1	4%	0		0	
Year 1 Boys	2	9%	1	4%	1	4%	2	9%	13	57%	2	9%	1	4%	1	4%	0	
Year 2 Boys	1	4%	3	13%	0		0		18	78%	1	4%	0		0		0	
MID SES SCHOOLS																		
Rec Girls	1	3%	0		0		2	7%	17	57%	5	17%	0		4	13%	1	3%
Year 1 Girls	0		1	3%	0		1	3%	25	83%	2	7%	0		1	3%	0	
Year 2 Girls	1	3%	0		0		0		26	87%	0		0		1	3%	2	7%
Rec Boys	2	7%	2	7%	1	3%	1	3%	14	48%	0		2	7%	3	10%	4	14%
Year 1 Boys	1	3%	0		0		1	3%	23	79%	2	7%	0		2	7%	0	
Year 2 Boys	0		0		0		1	3%	23	79%	2	7%	0		3	10%	0	
HIGH SES SCHOOL																		
Rec Girls	0		0		0		1	5%	18	95%	0		0		0		0	
Year 1 Girls	0		0		0		0		18	95%	0		0		0		1	5%
Year 2 Girls	0		1	5%	0		0		18	95%	0		0		0		0	
Rec Boys	3	20%	2	13%	1	7%	1	7%	7	47%	0		1	7%	0		0	
Year 1 Boys	1	7%	1	7%	0		1	7%	10	67%	0		1	7%	0		1	7%
Year 2 Boys	3	20%	2	13%	0		0		7	47%	0		1	7%	2	13%	0	

The impetuses that propel young girls to move from a 'no intention' orientation to regular rates of smoking that surpass those of boys have been widely researched but to date, as discussed in Chapter 5, are still not well understood. The longitudinal cohort study, in tracking both the intentions and the smoking behaviour of girls along with their overall perspectives about the habit affords a unique opportunity to explore the myriad of factors that triggers this transition. Moreover, if the study is continued past the age of experimentation and into regular habit acquisition, potentially it can verify the assumed correlation between intention and behaviour and confirm whether the subjects who expressed intention to smoke are indeed those that do go on to take up the habit.

Current Intention to Smoke - Parental Smoking Behaviour

From Figure 50. and Figure 51., it can be seen that in some cases, children who wanted to try out smoking appeared more likely to have parents who smoked. This relationship was for the most part, not significant ($p>.05$) and very weakly related (Cramer's V <0.13). An exception however, was found in paternal smoking behaviour for Year 1 where almost 90% of children willing to try out smoking had fathers who smoked ($p<.05$ and Cramer's $V = 0.25$). By contrast, these children also reported having mothers who were non smokers (78%).

Figure 50.

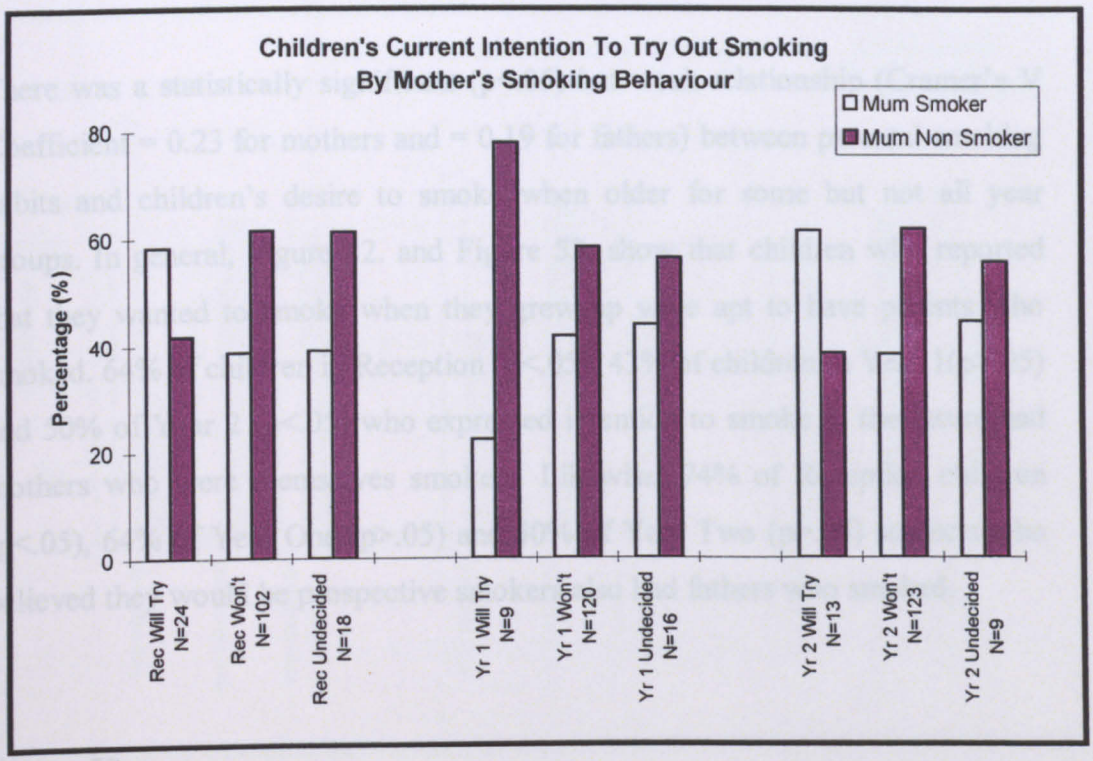
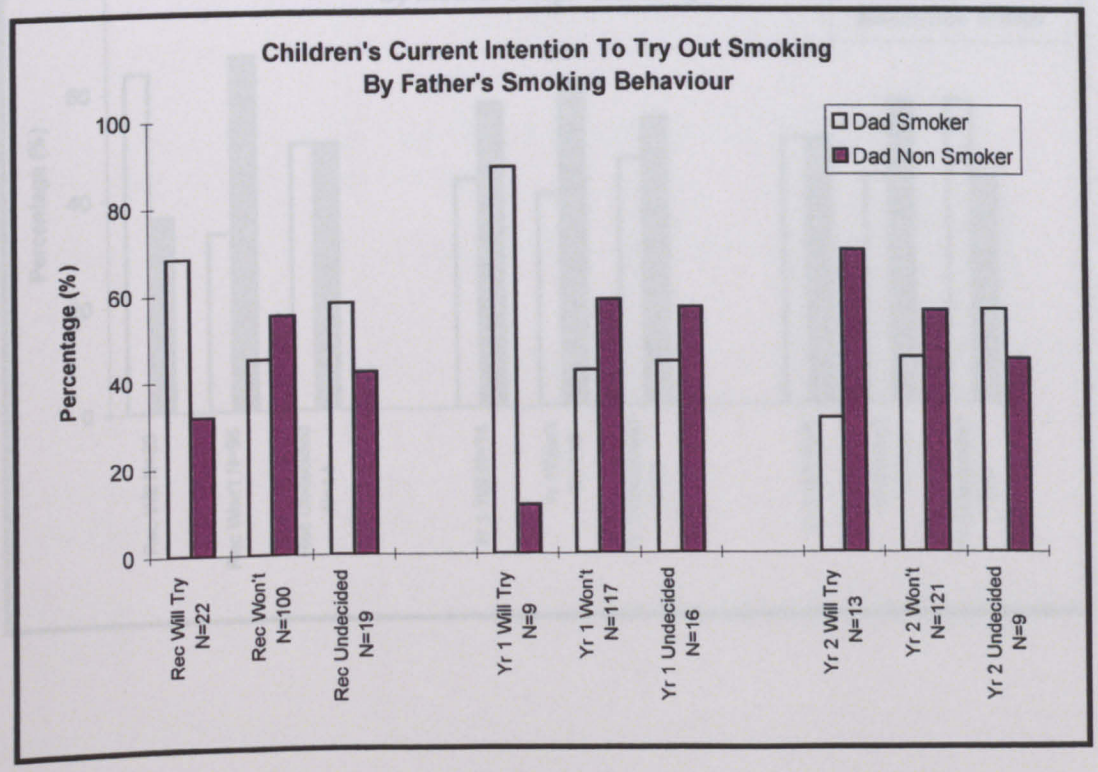


Figure 51.



There was a statistically significant ($p<.05$) but weak relationship (Cramer's V Coefficient = 0.23 for mothers and = 0.19 for fathers) between parental smoking habits and children's desire to smoke when older for some but not all year groups. In general, Figure 52. and Figure 53. show that children who reported that they wanted to smoke when they grew up were apt to have parents who smoked. 64% of children in Reception ($p<.05$), 43% of children in Year 1($p>.05$) and 50% of Year 2 ($p<.05$) who expressed intention to smoke in the future had mothers who were themselves smokers. Likewise, 74% of Reception children ($p<.05$), 64% of Year One ($p>.05$) and 50% of Year Two ($p>.05$) subjects who believed they would be prospective smokers also had fathers who smoked.

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Figure 52.

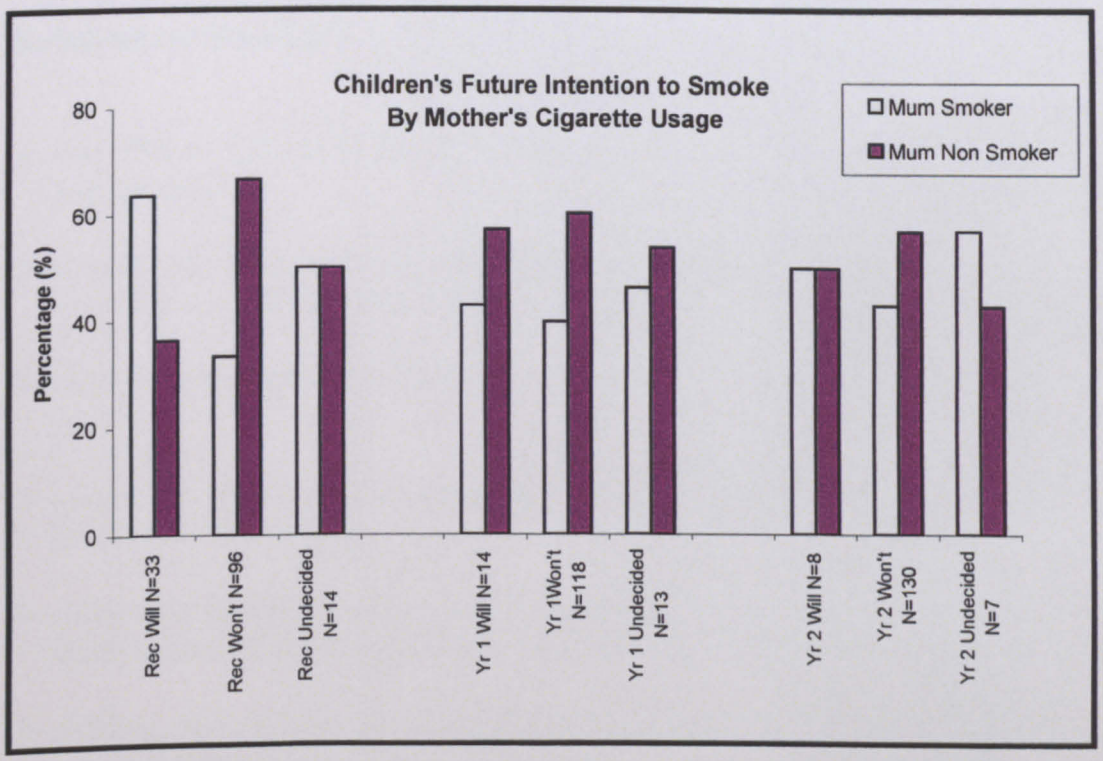
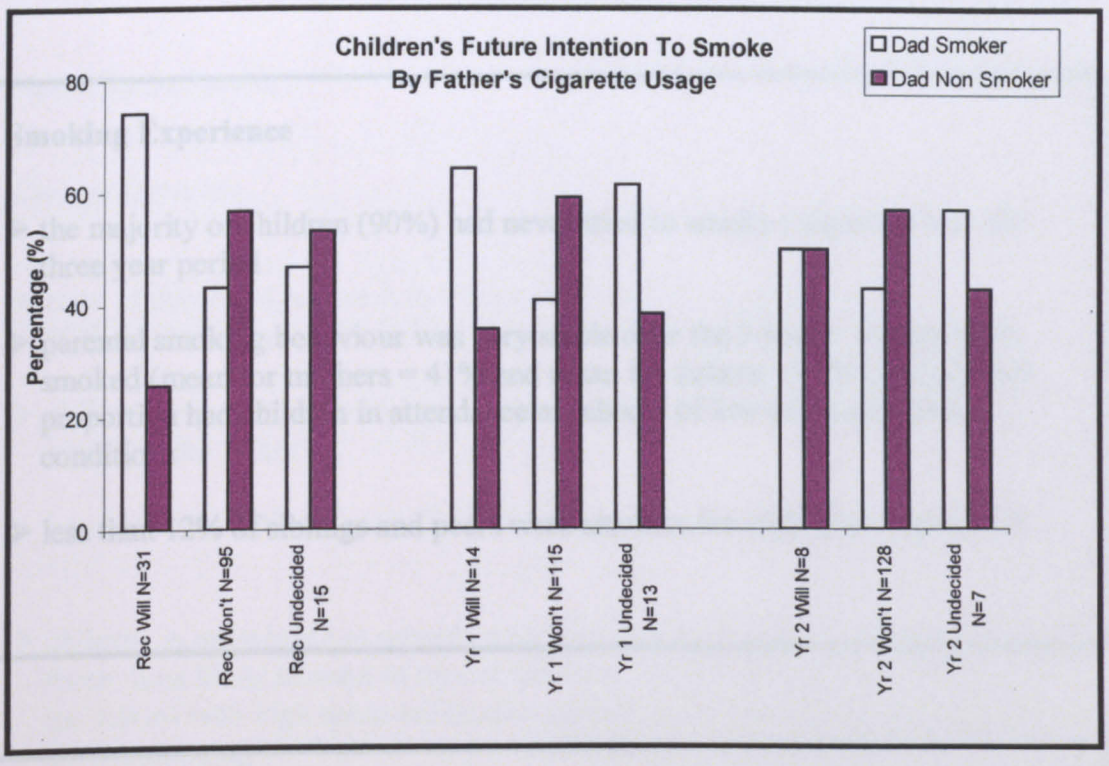


Figure 53.


Children's Future Intention To Smoke
By Father's Cigarette Usage
Dad Smoker
Dad Non Smoker
Percentage (%)
80
60
40
20
0
Rec Will N=31
Rec Won't N=95
Rec Undecided N=15
Yr 1 Will N=14
Yr 1 Won't N=115
Yr 1 Undecided N=13
Yr 2 Will N=8
Yr 2 Won't N=128
Yr 2 Undecided N=7

6.2 Summary of Questionnaire Results

Smoking Experience

- the majority of children (90%) had never tried to smoke a cigarette over the three year period
- parental smoking behaviour was very stable over the 3 years - at least 40% smoked (mean for mothers = 41% and mean for fathers = 47%), the greatest proportion had children in attendance at schools of low socio-economic conditions
- less than 12% of siblings and peers were smokers for each year respectively

Beliefs about Smoking

- over 95% of children in Year 1 and 96% in Year 2 believed that smoking was bad for *children*
- 62% of children in Year 1 and 77% of children in Year 2 believed that smoking was bad for *grown ups*
- there were no significant changes in children's beliefs about smoking over time
- gender and school socio-economic status seemed to have little effect on beliefs about *children* smoking
- children from schools with low socio-economic conditions were twice as likely to have positive rather than negative beliefs about *grown ups* smoking
- children with positive beliefs about *grown ups* smoking were more inclined to express interest in trying out smoking and wanting to smoke in the future

Intention to Smoke

Current Intention

- most children did not want to try out smoking, for curiosity sake (70% in Reception, 83% in Year 1 and 85% in Year 2)
- children who wanted to try out smoking were mainly those who intended to smoke in the future
- boys were three times more likely to want to try out smoking than girls
- children in attendance at schools with low socio-economic conditions were those most likely to want to try out smoking - in Year 2 however, boys from the school with high socio-economic conditions were just as likely to want to try out smoking
- children who wanted to try out smoking were more likely to have parents who smoked

Future Intention

- most children did not intend to smoke when grown up (67% in Reception, 81% in Year 1 and 90% in Year 2)
- boys were more likely to express intention to smoke when grown up than girls
- children who stated they wanted to smoke in the future were more apt to have parents who smoked

6.3 Draw And Write Technique Results

6.3.1 *Inquiry One*

In this first inquiry, the children were asked to draw someone smoking and respond to the questions: 1) How does your smoker feel? and 2) Where does the smoke go? The coding categories were identical to those found in Section 4.7.1 of the cross sectional study and as such, have not been repeated here. The results presented below are based on the frequency of responses found in Appendix 10.

Thematic Trends

Inquiry 1 - Reception

- at least twice as many children wrote negative (61%) as opposed to positive (28%) comments pertaining to how smokers feel
- only a minority of the sample (27%) stated that the smoke entered the body; the majority (72%) believed that the smoke dissipated into the environment or went some other place
- few children mentioned specific internal organs; 1 cited the heart and 3 wrote lungs
- nobody wrote about cancer but 2 children mentioned death

Inquiry 1 - Year One

- similar to the preceding year, twice as many subjects (64%) made negative rather than positive comments (30%) regarding how smokers would feel
- 4 boys and 2 girls made reference to 'other feelings' such as both happy and sad
- as before, a large part of the sample (73% made up of 85 boys and 78 girls) were of the opinion that the smoke went somewhere -up to the sky, in the air, out the window
- 20% mentioned the smoke entering the body (boys = 17% and girls = 20%)
- two children referred to the heart and six wrote about the lungs; all answers were evenly distributed between both sexes

- one girl mentioned asthma but cancer and death did not come up at all

Inquiry 1 -Year Two

- this time 53% of children wrote negative rather than positive comments (31%) about how smokers would feel
- 3 boys and 3 girls made 'other' comments like the smoker feels normal or heavy
- once again, 62% of the sample (girls = 63% and boys = 61%) put down that the smoke went some place in the environment
- a small proportion (12%) of which 11% were boys and 14% were girls specifically mentioned smoke entering the body
- twice as many boys (N=8) than girls made reference to the chest
- allusion to the heart (3%) and the lungs (16%) was fairly evenly divided between the males and females
- again, no mention of cancer or asthma but one boy wrote about death

In comparing the subsequent responses to the question 'How does your smoker feel?' for the sample, over the three year span, it is apparent from Figure 54., that there were very few differences across time. There was a slight decline in the number of subjects who wrote negative comments from over 60% in Reception and Year 1 down to 53% in Year 2. Conversely, there was a very slight increase in the percentage of children who accredited smoking with positive connotations with the passage of time from 28% in Reception to 31% in Year 2.

Figure 54.

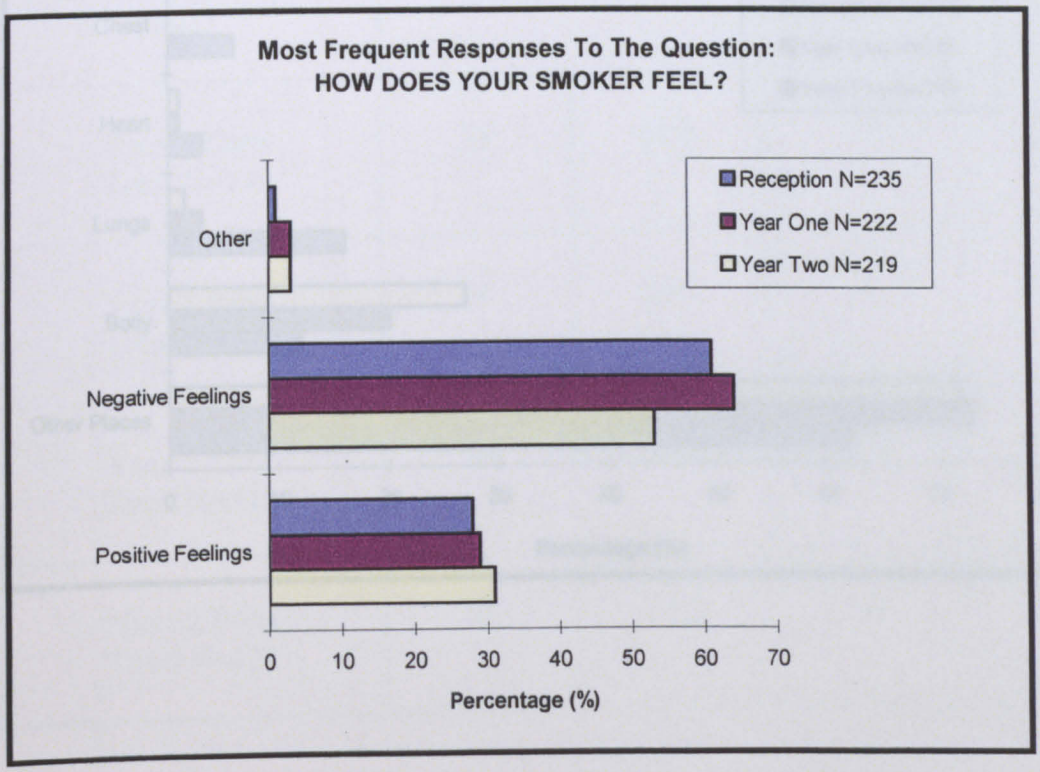
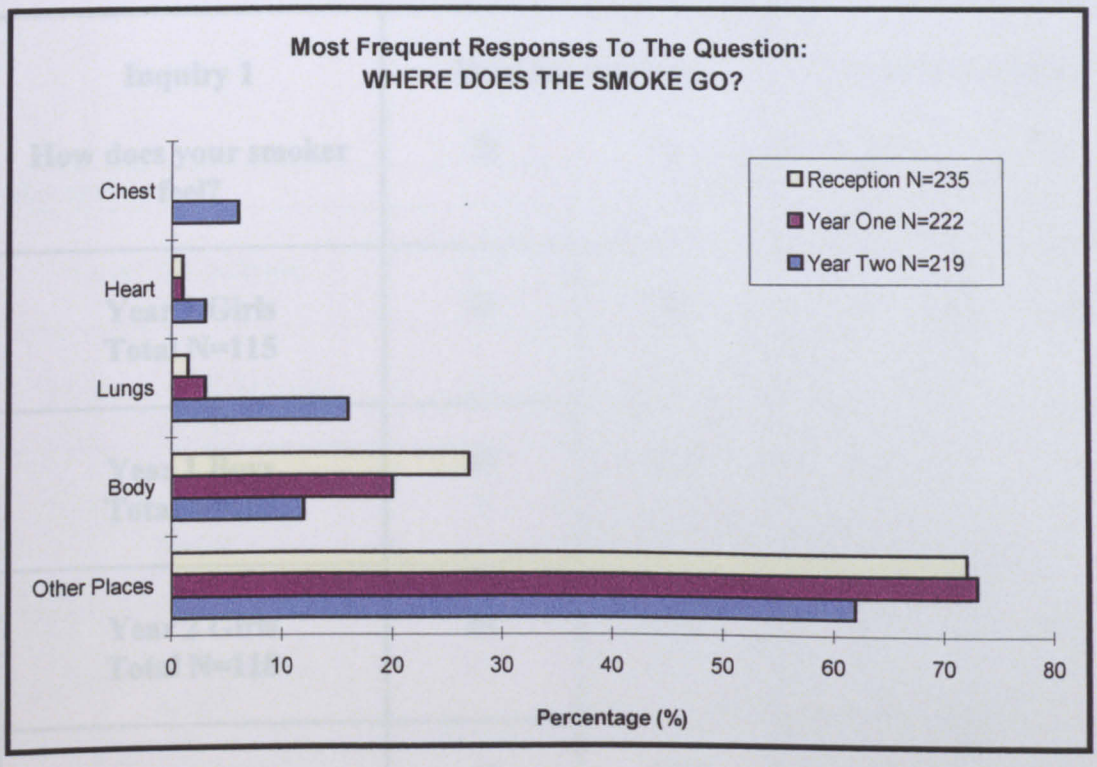


Figure 55. depicts the outcome of the reply to the question 'Where does the smoke go?' There was particular concordance in the children's responses in Reception and Year 1 but much greater diversity in answers for Year 2. This can most likely be attributed to the process of cognitive development which takes place with the progression of time. In general, children relied heavily on observational cues which can be seen in the fact that the majority (over 70% in Reception and Year 1 and over 60% in Year 2) wrote down where they actually saw the smoke going as opposed to where they thought it went. Children who

mentioned the smoke entering the body decreased twofold over time from 27% in Reception to 12 % in Year 2. Specifying particular internal organs known to be affected by smoking increased dramatically in Year 2, especially in relation to the lungs, mentioned by 2% in the first administration but up to 16% in the last.

Figure 55.



Inquiry One - Gender As a Variable

Gender differences within year group to responses for Inquiry One are shown in Table 23. Overall, there was very little difference in response based on gender over time. In Year One, the percentage of girls and boys who commented negatively was 64% and 65% respectively. In Year 2, a similar trend emerged as 54% of girls and 52% of boys had negative perceptions. Likewise, the positive responses unfolded in much the same manner with 30% of girls and 29% of boys recording comments in Year 1 but 4% more girls responding positively in Year 2 (34%). Both girls and boys from the high socio-economically classed school had the highest percentage of negative feelings (girls = 83% and boys = 76%) and the

lowest of positive feelings (girls = 13% and boys =19%) in Year 1 but conversely in Year 2, both sexes had the highest proportion of positive feelings (girls =48% and boys =38%) and the least (boys = 38%) or second least (girls = 52%) negative responses.

Table 23. Responses to Inquiry One By Gender

Inquiry 1 **How does your smoker feel?**	**Negative Feelings**		**Positive Feelings**	
	N	**%**	**N**	**%**
Year 1 Girls **Total N=115**	74	64%	34	30%
Year 1 Boys **Total N=107**	69	65%	31	29%
Year 2 Girls **Total N=118**	64	54%	40	34%
Year 2 Boys **Total N=101**	52	52%	28	28%

Inquiry One - School Socio-economic status as a Variable

Table 24. outlines the relationship of school socio-economic status (SES) within year groups on children's responses to the query about how they perceived smokers would feel within each year group. Patterns of association did not seem to be apparent. In the majority of the cases, regardless of socio-economic background, negative comments were more pervasive than positive ones. Interestingly, the children from the economically prosperous school had the greatest percentage of negative feeling in the first two years (74% and 80%) but the least in Year 2. In fact, the responses from that year group were almost split

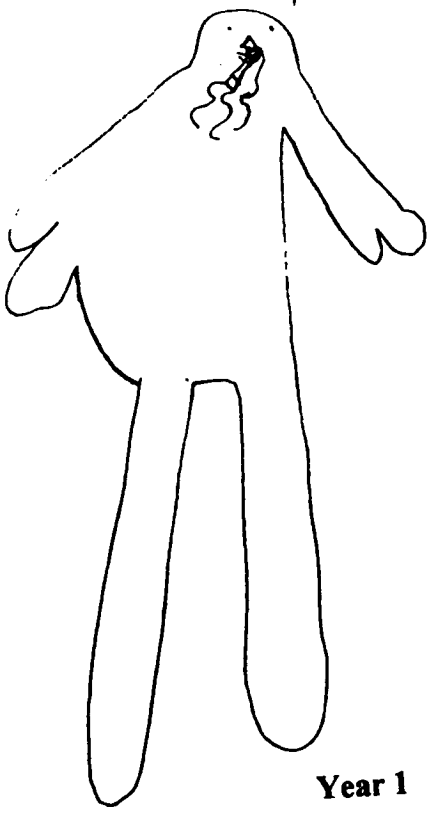
evenly between negative (45%) and positive ones (43%). As noted in the some of the questionnaire findings for gender and socio-economic status, irregularities within the sample of children at the high SES school seemed to occur with some consistency but little justification.

Table 24. Responses to Inquiry One by School Socio-economic Status

Inquiry 1	**Negative Feelings**		**Positive Feelings**	
	N	(%)	N	(%)
Reception				
Low SES Schools N=64	35	**55%**	17	**27%**
Medium SES Schools N=132	80	**61%**	38	**29%**
High SES School N=39	29	**74%**	10	**26%**
Year One				
Low SES Schools N=64	38	**60%**	18	**28%**
Medium SES Schools N=114	60	**53%**	40	**35%**
High SES School N=44	35	**80%**	7	**16%**
Year Two				
Low SES Schools N=70	34	**49%**	22	**31%**
Medium SES Schools N=107	63	**59%**	28	**26%**
High SES School N=42	19	**45%**	18	**43%**

Examples of Responses For Inquiry 1

the smok go's in the nose
the puson Filsa lito bab



Year 1

Reception

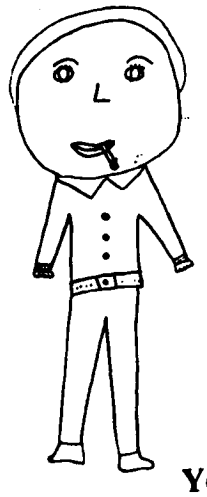
Smoke is going in
Liverpool
They feel ill.

Reception

In your mouth
Happy

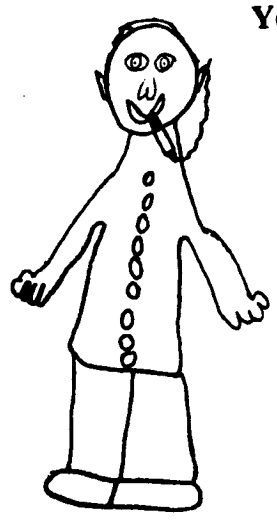
The smoke go's in the mouth.
They feel good.

Year 1



Year 2

Year 2



The smoke is going in an ashtray.
She feels happy cause she likes smoking

the smoke gos to the pecsons longs
they feel dizzey.

6.3.2 *Inquiry Two*

In the second inquiry, children were asked to draw someone who had been smoking for a long, long time. Subsequently, they were to respond to the question: How can you tell from the inside of the body that this person has been smoking for a long time? To facilitate understanding, some of the original coding categories for this particular inquiry outlined in Section 4.7.2 of this thesis were renamed and are classified as follows:

- VISIBLE SIGNS: SETTING (formerly external observable factors)

any comments referring to an observation or cue that someone smokes such as seeing smoke coming out of the mouth, seeing their cigarettes, smelling the smoke

- VISIBLE SIGNS: APPEARANCE (formerly physical appearance)

any reference to observed physical appearance that results from smoking like black teeth, yellow fingers, coughing, smelly breathe, wrinkles

- WELL BEING: PHYSICAL (formerly internal physical factors)

generic terms to describe being in poor health such as being sick, tired, ill, feeling bad, being weak, horrible and not healthy

- WELL BEING: EMOTIONAL (formerly personality)

the attribution of length of time smoking to personal attributes like happiness, sadness, smiling and liking it

- PERSON - AGE - TIME

any comments that make reference to someone in particular or to a specific period of time in life like adulthood or old age

• LUNGS - HEART

the mentioning of these two organs with regards to the health implications of smoking

• CANCER - DEATH - ASTHMA

any comments that specifically mention these smoking related issues

Thematic Trends

Inquiry 2 - Reception

- 26% o f children cited visible signs in the setting such as 'seeing smoke' or 'seeing cigarettes' whilst 9% referred to visible signs in appearance (yellow fingers, black teeth) as a means of identifying someone who had been smoking for a long time
- a somewhat similar ratio emerged for the 27% of children who used physical well being (they look sick) and the 6% who used emotional well being (they look sad) to mark a long time smoker
- 44 children (19%) actually referred to a specific person or a certain stage of life
- 5% of the subjects acknowledged the health implications on the body in general
- 5 children (2%) wrote about the lungs, 6 specified the heart (3%) but no one cited cancer
- both death and tar were mentioned 3 times each

Inquiry 2 - Year One

- continued reliance on visible cues to identify someone who had been smoking for a long time as signs in the setting are mentioned by 23% and signs in one's appearance were referred to by 16% of the sample
- almost 30% of the children wrote about the poor well being of long time smokers whilst 7% mentioned their emotional state
- 25 children (11%) denoted a specific person or certain time of life
- a few more children (8%) made reference to internal body parts than previously
- 7 children talked about the lungs (3%), twice as many wrote about the heart

(7%) and 2 mentioned asthma

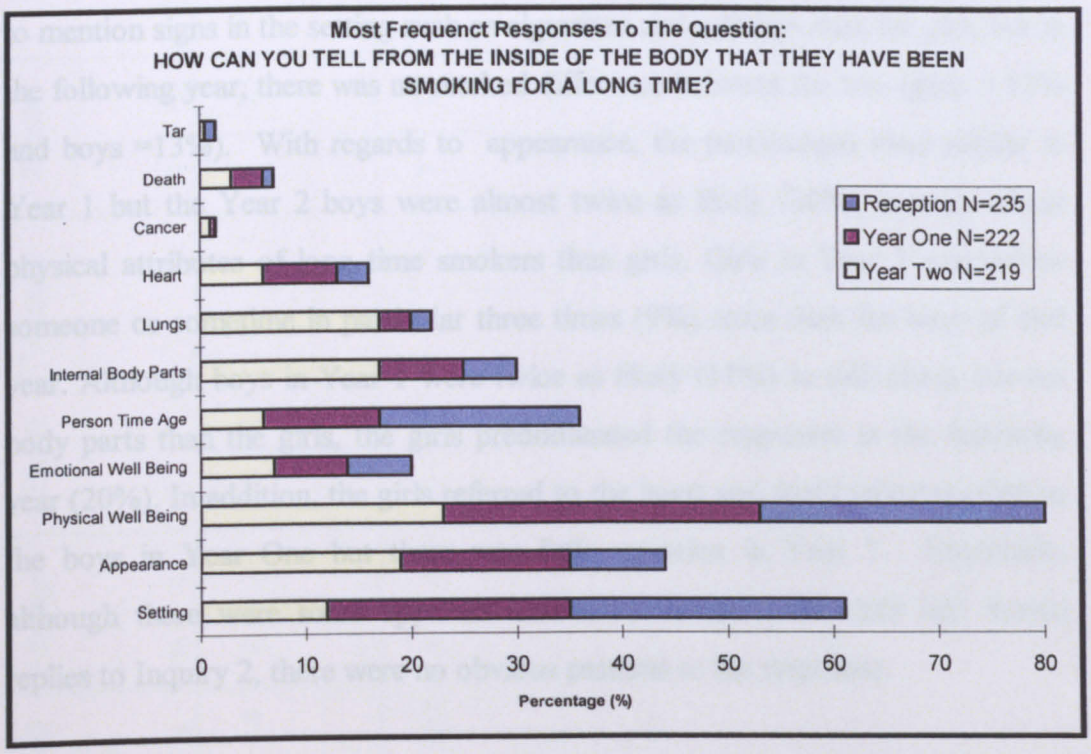
- one child referred to cancer and 6 brought up death (3%)

Inquiry 2 - Year Two

- a decreasing dependence on visual cues was noted as only 12% talked about signs in the setting but a marked increase in the number of children who characterised long time smokers by their physical appearance (19%)
- 23% of the sample relied on the smoker's ill health (looks sick, is poorly) and 7% used emotional well being as a means of recognising a person who had been smoking for a long time
- 14 children (6%) mentioned a specific person or period of one's life
- a greater number of children (17%) wrote about smoke damage to the inside of the body than had before
- there was specific mention of the lungs by 38 children (17%) and the heart by 12 (6%)
- 2 children referred to cancer, 1 talked about tar and 6 (3%) cited death

An illustration of the most frequent responses to the question 'How can you tell from the inside of the body that someone has been smoking for a very long time?' can be found in Figure 56. As noted in the cross sectional study, this question was conceptually difficult for many of the children in the sample. The aim of the question was to get an indication of the level of comprehension young children have about smoking related implications to personal health. The heavy reliance on observable cues as a means of identifying someone who has been smoking for a long time suggested that much of the sample did not or perhaps could not understand what was being asked of them. The most frequent responses to the question about the internal effects of smoke in actuality, referred to the external environment, outward physical appearance and personal well being.

Figure 56.



For the most part, as the sample got older and developed cognitively, the answers became more sophisticated and revealed a better understanding of human physiology. For example, where less than 2% of the children specified the lungs in Reception, 17% brought it up in Year 2. Twice as many subjects (6%) talked about the heart and three times as many (17%) made reference to some internal body parts in Year 2 as compared to when they were in Reception. By contrast, at least half as many (12%) mentioned visible signs in the setting and one third as many (6%) referred to someone specifically or to a certain time in life, by the time they reached 7 years of age. Interestingly, the physical attributes of long time smokers like yellow fingers, black teeth and wrinkly skin were mentioned more often in Year 2 (19%) than in the other years -Reception (9%) and Year 1 (16%).

Inquiry Two - Gender as a Variable

Gender differences between responses in Year 1 and Year 2 are outlined in Table 25. In general, responses are somewhat parallel between the sexes but there were

some noteworthy exceptions. In the first year, the boys were twice as likely (32%) to mention signs in the setting such as cigarettes and ashtrays than the girls but in the following year, there was no marked difference between the two (girls = 11% and boys =13%). With regards to appearance, the percentages were similar in Year 1 but the Year 2 boys were almost twice as likely (26%) to write about physical attributes of long time smokers than girls. Girls in Year 2 referred to someone or sometime in particular three times (9%) more than the boys of that year. Although boys in Year 1 were twice as likely (11%) to talk about internal body parts than the girls, the girls predominated the responses in the following year (20%). In addition, the girls referred to the heart and death twice as often as the boys in Year One but there was little variation in Year 2. Essentially, although there were some apparent differences between the male and female replies to Inquiry 2, there were no obvious patterns to the responses.

Inquiry Two - School Socio-economic Status as a Variable

Table 26. summarises the responses to the question about internal effects of smoking by school social economic status (SES) within the three year groups. As with the first inquiry, there did not appear to be any significant differences between the different social classifications over time. In Reception, the percentages were fairly similar for each variable. Only 9% of children from low SES schools mentioned physical well being as compared to 32% for the moderate and 36% for the high SES school. In Year One, the only seemingly relevant variance that emerged was for the mid SES schools where a higher proportion (18%) referred to someone in particular or a certain stage in life as a means of identifying long time smokers. The one mention of cancer was from a child in the low SES schools. There was little disparity in the Year 2 responses as well. The only difference of note was that 17% of children from the high SES school, tended to rely on emotional well being as an indicator of someone who had been smoking for a long time compared to less than 7% for the other two classifications.

Table 25. Responses To Inquiry Two By Gender

Inquiry 2	Visible Signs: Setting		Visible Signs: Appearance		Well Being: Physical		Well Being: Emotional		Person Time Age		Internal Body Parts		Lungs		Heart		Cancer		Death		Tar	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Year 1 Girls Total N=115	16	14	18	15.6	37	32.1	9	7.8	13	11.3	6	5.2	3	2.6	10	8.7	0		4	3.5	0	
Year 1 Boys Total N=107	34	32	18	16.8	28	26.2	6	5.6	12	11.2	12	11.2	4	3.7	5	4.7	1	.93	2	1.9	0	
Year 2 Girls Total N=118	13	11	16	14	32	27	7	6	11	9	23	19.5	19	16	7	6	0		4	3	1	1
Year 2 Boys Total N=101	13	13	26	26	19	19	9	9	3	3	15	15	19	19	5	5	2	2	2	2	0	

Table 26. Responses to Inquiry Two By School Socio-economic Status

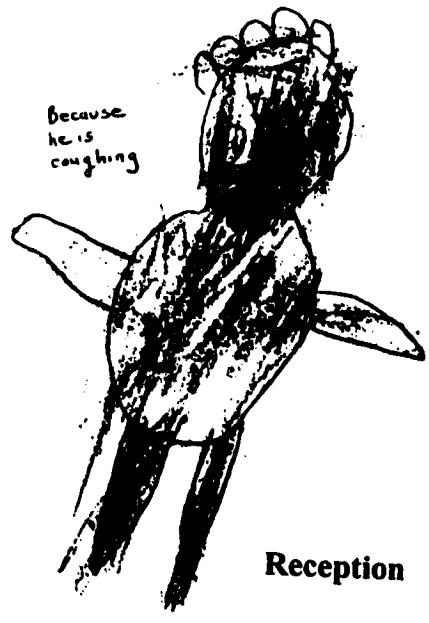
Inquiry 2	Visible Signs: Setting	Visible Signs: Appearance	Well Being: Physical	Well Being: Emotional	Person Time Age	Internal Body Parts	Lungs	Heart	Cancer	Death	Tar
Reception											
Low SES N=64	18 (28.1%)	7 (11%)	6 (9.4%)	3 (4.7%)	10 (15.6%)	2 (3.1%)	1 (1.6%)	1 (1.6%)	0	1 (1.6%)	1 (1.6%)
Mid SES N=132	33 (25%)	11 (8.3%)	43 (32.6%)	5 (3.8%)	29 (22%)	9 (6.8%)	4 (3%)	3 (2.3%)	0	2 (2.3%)	1 (.75%)
High SES N=39	10 (25.6%)	4 (10.3%)	14 (35.9%)	6 (15.4%)	5 (12.8%)	0	0	2 (5.1%)	0	0	1 (2.6%)
Year One											
Low SES N=64	13 (20.3%)	10 (15.6%)	23 (35.9%)	2 (3.1%)	3 (4.7%)	6 (9.4%)	1 (1.6%)	4 (6.3%)	1 (1.6%)	1 (1.6%)	0
Mid SES N=114	29 (25.4%)	16 (14%)	32 (28.1%)	10 (8.8%0	21 (18.4%)	9 (7.9%)	4 (3.5%)	5 (4.4%)	0	3 (2.6%)	0
High SES N=44	8 (18.2%)	9 (20.5%)	10 (22.7%)	3 (6.8%)	1 (2.3%)	3 (6.8%)	2 (4.5%)	6 (6.8%)	0	2 (4.5%)	0
Year Two											
Low SES N=70	10 (14.3%)	17 (24.3%)	15 (21.4%)	5 (7.1%)	5 (7.1%)	12 (17.1%)	9 (12.9%)	3 (4.3%)	1 (1.4%)	2 (2.9%)	0
Mid SES N=107	10 (9.3%)	18 (16.8%)	29 (27.1%)	7 (6.5%)	5 (4.7%)	18 (16.8%)	20 (18.7%)	7 (6.5%)	0	0	1 (.93%)
High SES N=42	6 (14.3%)	7 (16.7%)	7 (16.7%)	4 (16.7%)	4 (9.5%)	8 (19%)	9 (21.4%)	2 (4.8%)	1 (2.4%)	4 (9.5%)	0

Examples of Responses For Inquiry 2

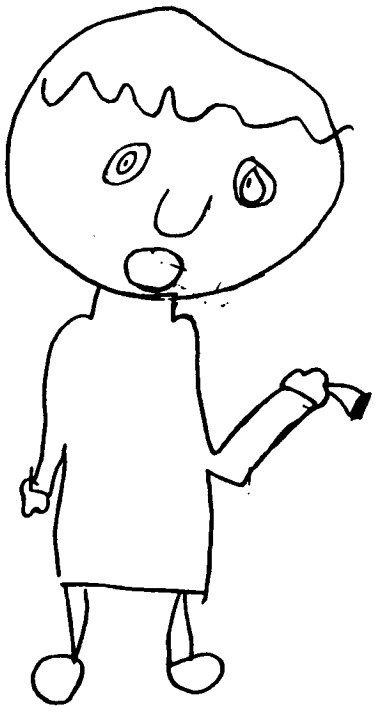
Reception

Reception

Year 1



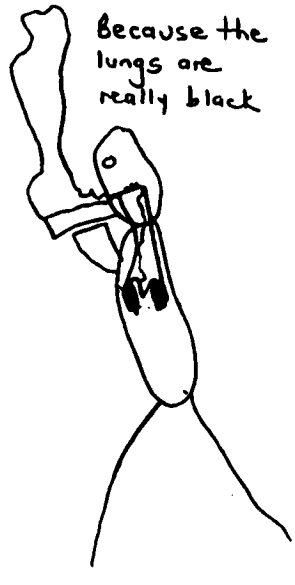
Reception



tar in your lungs.

Year 2

Year 1



Year 1

6.3.3 *Inquiry Three*

In contrast to the previous request, the children were asked to draw a young person who had just started to smoke. A series of questions pertaining to this topic were included ranging from 1) How old is your young person who just started to smoke? and 2) Why does this person want to smoke? to 3) Where did this person learn to smoke? None of the coding categories for this inquiry differed from those in the original project which are outlined in Section 4.7.3. of the cross sectional study.

Thematic Trends

Inquiry Three - Reception

- almost half the sample (46%) indicated that their young smoker was under 10 years of age, 22% put between 11-20 years and 16% over 21 years of age
- desire, pleasure and curiosity were by far the most frequent replies (42%) for this age group in response to why young people want to smoke
- imitation was cited by 16% of the sample: copying parents (5%), copying mates (3%) and copying other people in general (8%)
- 14% attributed the uptake of smoking by young people to 'image'
- 18 children (8%) stated that personality was one reason why young people smoke
- with respect to where young people learned to smoke, 40% of the children made a familial reference with 8% mentioning mothers, 7% fathers, 1% both parents, 16% house or home, 3% siblings, 5% grandparents and 1% aunts, uncles or cousins
- 11% of the children put down other people in general and less than 1% said friends
- the television was only cited once
- at least 30% of subjects stipulated a specific place like the shop or school in response to the query of where they had learned to smoke

Inquiry 3 - Year One

- over half the sample (56%) wrote that their young smoker was between 11-20 years of age, 29% put under 10 and 13% said over 21
- imitation was the main reason given by 38% of the children for young people smoking, parents made up 19%, friends 6% and others 13%
- desire, pleasure and curiosity were cited by 32% of the sample
- 14% of this age group felt that image played a vital role in the smoking habits of young people
- pressure from other people was suggested by 13 children (6%), personality by 10 subjects (5%) and 5 boys (2%) thought it might be because 'they want to die'
- in response to where young people learn to smoke, almost half the sample (49%) mentioned a familial reference; specifically mother (11%), father (10%), parents (12%), house or home (6%), and siblings, grandparents and other relations (10%)
- 20% cited other people, 8% said friends and 1% stated television
- 20% indicated a specific location where young people learn to smoke

Inquiry 3 - Year Two

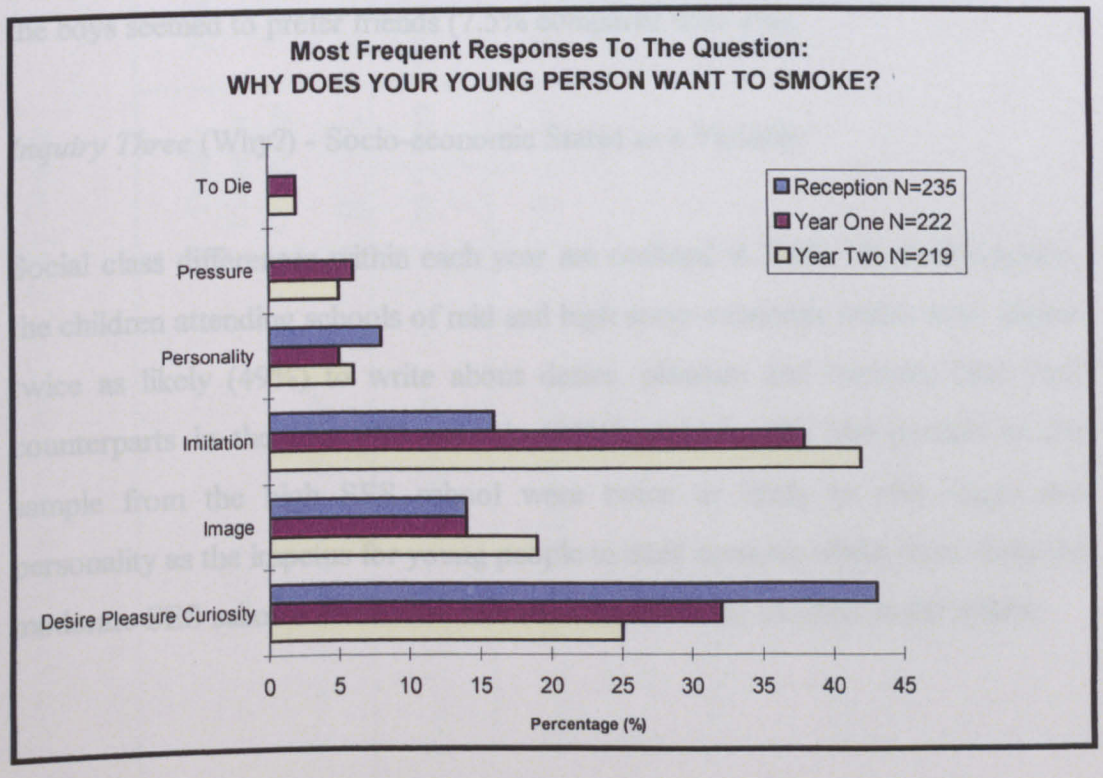
- much like the previous year, a major portion of the sample (63%) stipulated that their smoker was between 11 and 20 years of age, 27% put under 10 years and 9% said over 21 years of age
- in a similar trend to Year 1, 42% of the sample felt that imitation of parents (18%), of friends (10.5%) and of other people (13%) was the major factor behind young people wanting to smoke
- one quarter of the sample (N=55) felt that desire, curiosity and pleasure were the reasons why children took up smoking
- 19% said that image played an integral role
- 12 children (6%) were of the opinion that personality was responsible whilst a small minority (5%) thought it might be down to pressure from others
- 4 subjects (2%) mentioned the notion of young people smoking because they 'wanted to die'

- in response to where young people learn to smoke, 43% mentioned a familial reference: mother (8%), father (11%), parents (16%), house or home (3%), siblings (1%) and other relatives (4%)
- almost one quarter (23%) cited other people as the culprits
- unlike previous years, friends made up a larger percentage of the responses (15%)
- television was referred to by 2% of the sample and 10% mentioned a specific location

Inquiry Three - Why do young people want to smoke?

When comparing the responses to the question of why young people want to smoke over the three year period, it is apparent from Figure 57, that some changes in children's perceptions did take place, in particular between Reception and Year One.

Figure 57.



When the sample was in Reception, 43% cited ***'because they want'*** (desire) or ***'because they like it'*** (pleasure) or ***'to see what it is like'*** (curiosity) as the main reasons why young people smoked. However, with maturity, the rationale diversified such that an equivalent percentage (42%) of the subjects under study were now more inclined to believe that copying significant others was the major factor in the uptake of smoking by the young. Moreover, the issue of image and smoking became more important, especially in Year 2 and new grounds for the uptake of smoking like ***'pressure by others'*** and ***'wanting to die'*** emerged.

Inquiry Three (Why?) - Gender as a Variable

Table 27. contrasts the gender differences within year groups for the question regarding children's rationale to commence smoking. On the whole, gender differences were slight. In the first year, the girls (15%) tended to allude to image somewhat more often than the boys (12%) but they, in turn, mentioned desire, pleasure and curiosity (34%) a little more than the girls (30%). With respect to imitation, the girls favoured parental influence (22% as compared to 15%) whilst the boys seemed to prefer friends (7.5% compared with 4%).

Inquiry Three (Why?) - Socio-economic Status as a Variable

Social class differences within each year are outlined in Table 28. In Reception, the children attending schools of mid and high socio-economic status were almost twice as likely (49%) to write about desire, pleasure and curiosity than their counterparts in the low SES schools (25%). Additionally, the portion of the sample from the high SES school were twice as likely to cite image and personality as the impetus for young people to start smoking whilst those from the moderate SES schools mentioned imitation almost twice as often as the others.

Table 27. Responses to Inquiry Three (Why?) By Gender

Inquiry 3 Why do young people smoke?	Desire Pleasure Curiosity		Image		Personality		Copy Parents		Copy Friends		Copy Others		Pressure From Others		To Die	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Year 1 Girls Total N= 115	35	30.4	17	14.8	5	4.3	25	21.7	5	4.3	14	12.2	8	6.9	0	
Year 1 Boys Total N=107	36	33.6	13	12.1	5	4.7	16	15	8	7.5	14	13.1	5	4.7	5	4.7
Year 2 Girls Total N= 118	26	22	18	15	10	8.5	29	25	13	11	14	12	2	1.7	1	.84
Year 2 Boys Total N=101	29	29	23	23	2	2	10	10	10	10	14	14	8	8	3	3

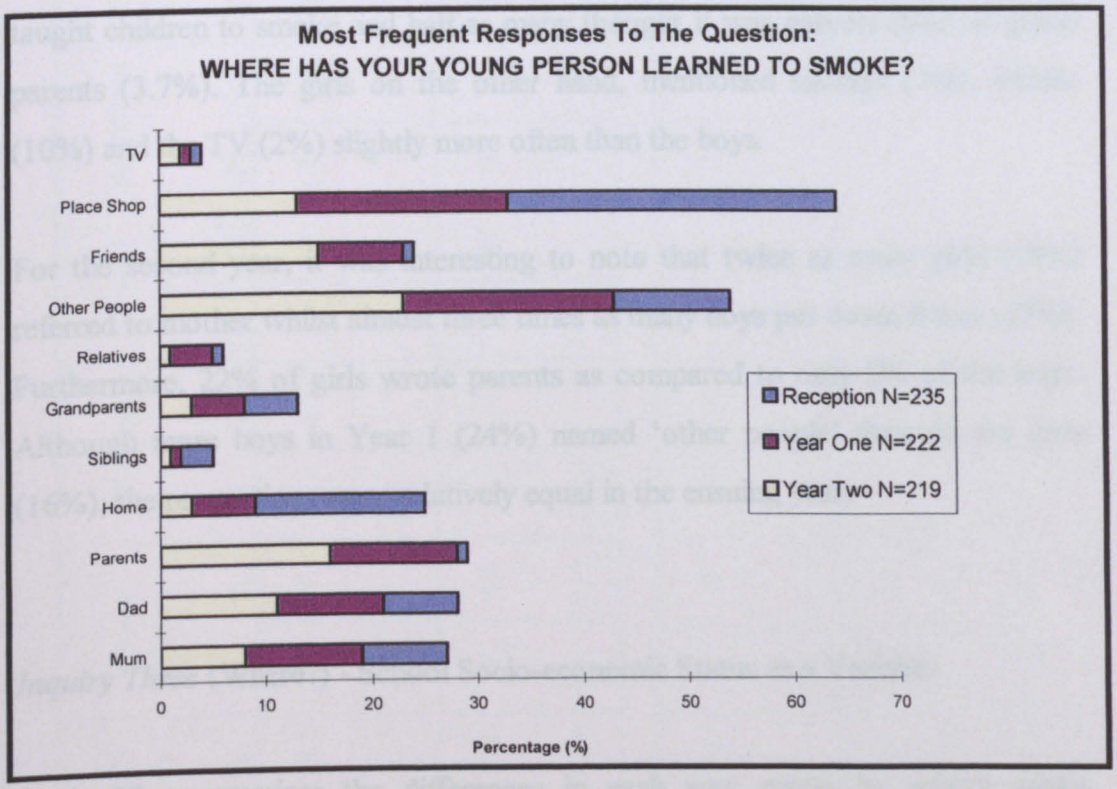
Table 28. Responses To Inquiry Three (Why?) By School Socio-economic Status

Inquiry 3	Desire Pleasure Curiosity		Image		Personality		Copy Parents		Copy Friends		Copy Others		Pressure From Others		To Die	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Reception																
Low SES Schools N=64	16	25	7	10.9	6	9.4	4	6.3	0		4	6.3	0		0	
Mid SES Schools N=132	65	49.2	17	12.9	6	4.5	6	4.5	5	3.8	15	11.4	0		0	
High SES School N=39	19	48.7	9	23	6	15.4	1	2.6	1	2.6	2	5.1	0		0	
Year One																
Low SES Schools N=64	24	37.5	10	15.6	5	7.8	8	12.5	2	3.1	5	7.8	2	3.1	0	
Mid SES Schools N=114	28	24.6	9	7.9	5	4.4	24	21.1	9	7.9	20	17.5	10	8.8	4	3.5
High SES School N=44	19	43.2	11	25	0		7	15.9	2	4.5	3	6.8	1	2.3	0	
Year Two																
Low SES Schools N=70	15	21.4	12	17.1	2	2.9	15	21.4	9	12.9	10	14.3	1	1.4	1	1.4
Mid SES Schools N=107	29	27.1	15	14	7	6.5	19	17.8	9	8.4	14	13.1	9	8.4	1	.93
High SES School N=42	9	21.4	14	33.3	3	7.1	4	9.5	5	11.9	4	9.5	0		2	4.8

Inquiry Three - Where do young people learn to smoke?

Figure 58. details children's thoughts about where young people learn to smoke. On average, 44% of the sample overall, referred to a family member as the source of learning for young smokers. References to mother and father are fairly evenly distributed throughout each year group. Interestingly, when the children were in Reception, they were more prone to using the general term 'home' but by the time they reached Year 2, they were more likely to specify 'parents' instead. Over 20% of the children in Year 1 and 2 mentioned 'other people'.

Figure 58.



The significance of the peer group increased with the passing of time. The majority of citations for friends as the focal point for learning how to smoke came from the second year (15% compared to 1% in Reception and 8% in Year 1). In the opinion of this sample, television played a minimal role in educating children about how to smoke (less than 2% overall). In many cases, the children in the sample, in particular when in Reception, interpreted the question 'where did your young person learn to smoke' in the most literal sense and therefore responded

with specific locations like the shop, the park or in town. As there was an inverse relationship in the frequency of responses to this query with the passage of time (Reception = 31%, Year 1 = 20% and Year 2 = 13%), it can be assumed that cognitive development played an integral role in the understanding and interpretation of meaning.

Inquiry Three (Where?) - Gender as a Variable

With regards to gender differences in the frequency of responses, the results can be seen in Table 29. There appeared to be some divergence in responses between the sexes for certain categories. In Year 1, twice as many boys (13%) thought dad taught children to smoke and half as many thought it was parents (8%) or grand parents (3.7%). The girls on the other hand, mentioned siblings (2%), friends (10%) and the TV (2%) slightly more often than the boys.

For the second year, it was interesting to note that twice as many girls (10%) referred to mother whilst almost three times as many boys put down father (17%). Furthermore, 22% of girls wrote parents as compared to only 8% of the boys. Although more boys in Year 1 (24%) named 'other people' than do the girls (16%), the proportions were relatively equal in the ensuing year.

Inquiry Three (Where?) - School Socio-economic Status as a Variable

Table 30. summarises the differences in each year group by school socio-economic status. Within Reception, significant differences were found in the frequencies of a few responses. None of the children from the high SES school mentioned dad as the source of learning but 5% from the moderate schools and 15% from the low schools did. However, the subjects from the highest ranking school did cite 'home' three times more than the lowest group (8%). Equally, they and the children from the moderately ranked schools mentioned a specific place or the shop twice as often as the lowest ranked school (18%).

Table 29. Responses to Inquiry Three (Where?) By Gender

Inquiry 3 Where?	Mum		Dad		Parents Family		House Home		Siblings		Grand Parents		Relatives		Other People		Friends		Place Shops		TV	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Year 1 Girls Total N=115	11	9.6	8	7	18	15.7	8	7	2	1.7	8	7	5	4.3	18	15.7	11	9.6	22	19.1	2	1.7
Year 1 Boys Total N=107	14	13	14	13	9	8.4	6	5.6	0		4	3.7	4	3.7	26	24.3	6	5.6	23	21.5	0	
Year 2 Girls Total N=118	12	10	7	6	26	22	5	4	2	2	5	4	1	1	26	22	21	18	10	8.5	1	1
Year 2 Boys Total N=101	5	5	17	17	8	8	2	2	1	1	1	1	1	1	24	24	12	12	19	19	3	3

Table 30. Responses To Inquiry Three (Where?) By School Socio-economic Status

Inquiry 3	Mum		Dad		Parents Family		House Home		Siblings		Grand Parents		Relatives		Other People		Friends		Place Shop		TV	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Reception																						
Low SES N=64	6	9.4	10	15.6	2	3.1	5	7.8	1	1.6	1	1.6	0		8	12.5	0		12	18.8	0	
Mid SES N=132	9	6.8	6	4.5	0		23	17.4	4	3	8	6.1	3	2.3	12	9.1	2	1.5	46	34.8	1	.75
High SES N=39	3	7.7	0		1	2.6	10	25.6	0		2	5.1	0		6	15.4	0		14	35.9	0	
Year One																						
Low SES N=64	6	9.4	10	15.6	11	17.2	7	10.9	0		2	3.1	2	3.1	11	17.2	5	7.8	10	15.6	0	
Mid SES N=114	13	11	6	5.3	12	10.5	6	5.3	2	1.7	9	7.9	7	6.1	18	15.8	11	9.6	29	25.4	1	.88
High SES N=44	6	14	6	14	4	9.1	1	2.3	0		1	2.3	0		15	34.1	1	2.3	6	13.6	0	
Year Two																						
Low SES N=70	4	5.7	7	10	14	20	2	2.9	0		0		0		13	18.6	11	15.7	8	11.4	2	2.9
Mid SES N=107	10	9.3	13	12.1	15	14	4	3.7	3	2.8	4	3.7	2	1.9	23	21.5	13	12.1	16	15	1	.93
High SES N=42	3	7.1	4	9.5	5	11.9	1	2.4	0		2	4.8	0		14	33.3	7	16.7	5	11.9	1	2.4

In Year One, there were some dramatic changes in the frequency of responses. 14% of the sample from the high SES school said that dad played a vital role in teaching children how to smoke; the ratio for the other schools remained virtually the same. In addition, reference to 'home' declined dramatically for the moderate SES schools (17% down to 5%) and the high SES school (26% down to 2%). By contrast, references to parents as the primary source of education for young smokers increased substantially on all accounts. Another notable variation in response based on school social class was evident in those who put down 'other people' and 'friends' in response to the query about where children learn to smoke. Twice as many children (34%) from the high school mentioned other people but only one-quarter (2%) as many put down friends in comparison to the other two social classifications.

Less disparity in answers arose in Year 2. Less than 4% of children overall, mentioned home and the percentage of those citing parents increased slightly, in particular for the low SES schools (20%). Significantly more subjects from the high SES school (33% compared to 22% for mid and 19% for low) referred to other people and television was mentioned for the first time in the high and low groups.

Examples of Responses for Inquiry 3

Reception

Because he saw his non smoking. In his house.

Year 2

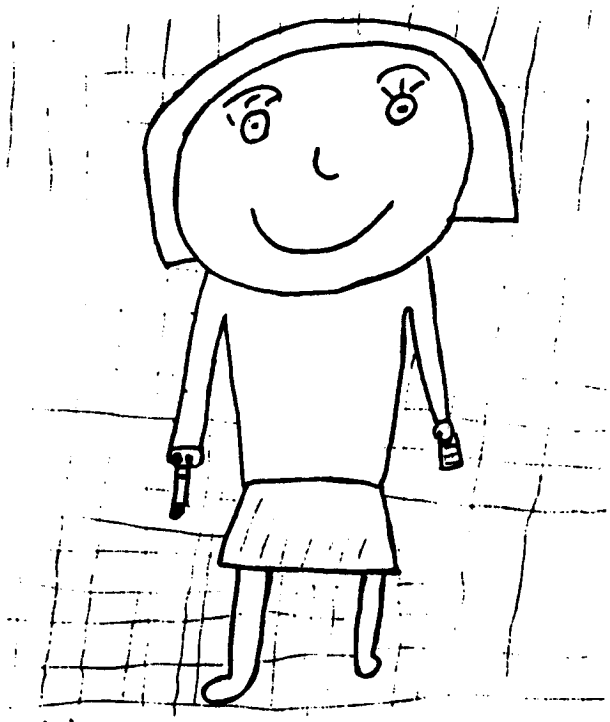
Becase He fouyit was cool off tele on cool programs

At home - Mummy Because she thought She was a big lady.

Reception

Year 2

becarse her frends fayrst her to smock in a pub.



13-Gill. Because she wants to feel like she's her mum, leoned off people

Year 1

6.3. 4 *Inquiry Four*

For this last inquiry, the children were asked to imagine themselves in a room where other people are smoking. They were required to write 1) how they felt in this situation and 2) what they would say to the smokers. All coding categories remained the same and can be referred to in Section 4.7.4 bar two which were merged into the one category listed below.

• SPECIFIC HEALTH CONCERNS (was own health concerns and specific illness) any mention of illness, being unable to breathe, coughing, asthma, problems with specific body parts like the chest, the heart

Thematic Trends

Inquiry 4 - Reception

- the majority of children (72%) felt negatively about being in the same room as someone smoking; 18% had positive feelings
- 9% of children mentioned a specific health concern like breathing problems or coughing
- a large percentage of the sample (71%) said they would ask the smoker to 'stop smoking' or to 'leave the room'
- 7 children (3%) said they liked being in the company of smokers whilst 7% expressed dislike
- 2% would question the smokers as to why the indulge in the habit and equally, 2% would perform an action such as hitting the smoker or leaving the room themselves
- 3% of the sample would reprimand the smoker and 1% would say nothing at all

Inquiry 4 - Year One

- three quarters of the sample reported having negative feelings when situated in a room full of smokers; only 5 children (2%) put down positive comments
- 22% referred to specific health concerns

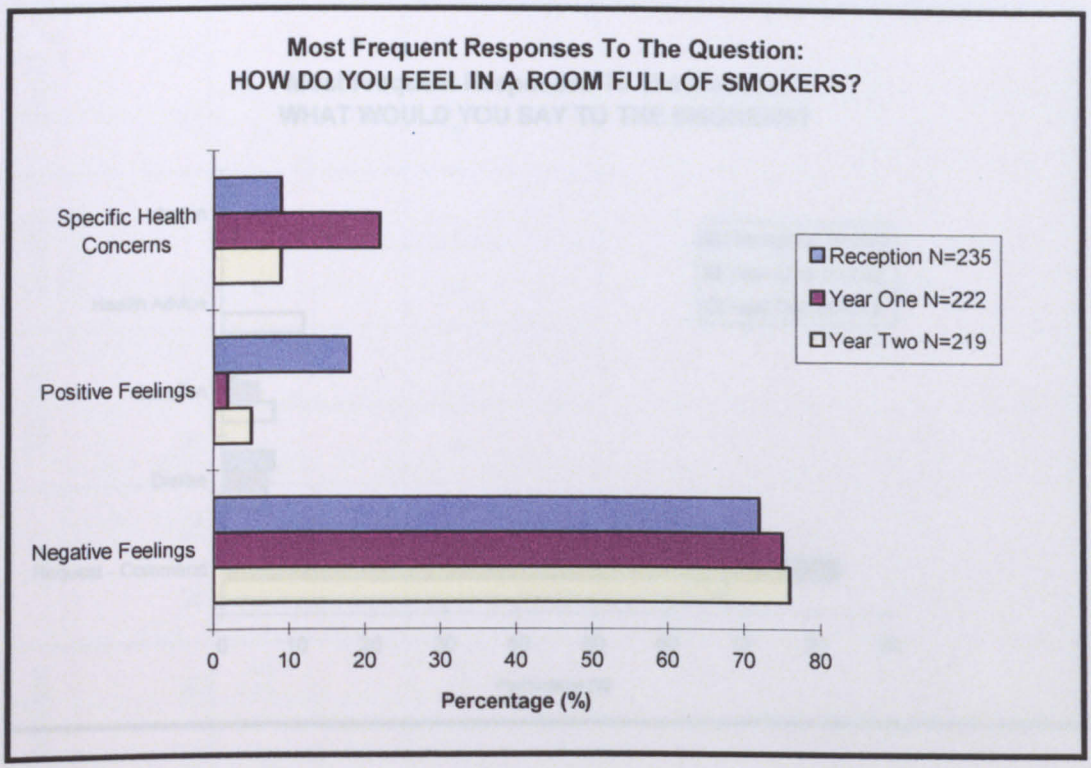
- most of the sample (83%) stated they would request the smoker to stop smoking or to leave the room
- 6% of children expressed dislike at being in the company of smokers in contrast to the 1% who liked it
- 10 children (5%) would question the smoker about their habit, 1 child would leave the room and another would do nothing at all

Inquiry 4 - Year Two

- negative comments made up the majority of the responses (76%) with regards to feelings about being in a room full of smokers; 5% wrote positive comments
- 9% of the children mentioned specific health concerns
- many subjects (68%) said they would ask the smoker to stop smoking or request they leave the room
- no one mentioned that they liked being in a room with smokers but 6% specifically mentioned disliking it
- 11% of children gave the smokers some health advice like 'its bad for your lungs'
- 15 children (7%) would question the smokers, 2% would act in some manner and no one would remain silent

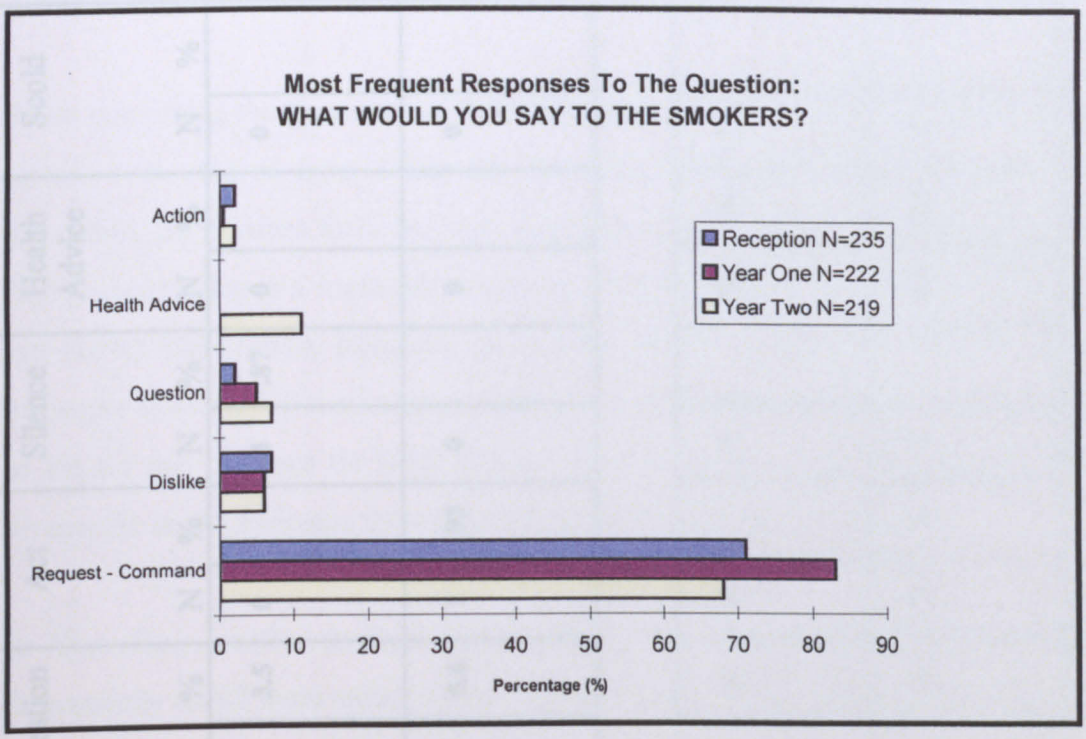
It is rather obvious from Figure 59. that few children changed their feelings about being in the company of smokers for the duration of the study. Over 70% of the sample cited negative feelings in each year. When in Reception, feelings were most positive (18%) and in Year 1, least positive (2%). In Year One, the children were also twice as apt to have specific health concerns (22%) than in any other year.

Figure 59.



With regards to what they would say to the smokers in the room, the distribution of responses is illustrated in Figure 60. The majority of children (over 65% in each year group) would ask the smokers to 'stop it' or to 'get out'. Little variation between Reception, Year 1 and Year 2 occurred in those who expressed dislike at being in a room full of smokers. There was however, an inverse association between age and inquisition. The percentage of subjects who interrogated the smokers increased almost twofold with each passing year from 1.7% in Reception to 7% in Year 2. Also associated to the progression of age was the fact that the small percentage (11%) of children willing to dispense health advice about the dangers of smoking all came from Year 2.

Figure 60.



Inquiry Four - Gender as a Variable

The relationship between gender and response rates for the last inquiry are outlined in Table 31. The girls in Year 1 mentioned both negative (79%) and positive (3%) feelings slightly more often than the boys (70% and 1% respectively). In turn however, the percentage of boys commenting on specific health concerns (27%), questioning the smoker (6%) or acting in some manner (1%) was marginally greater than it was for the girls. In the following year, the percentage of positive feelings for the boys was double (6%) that of the girls (3%) and conversely, the percentage of specific health concern for the girls was almost double (11%) for that of the boys (6%). The girls were somewhat more likely to request or command the smokers to stop smoking or leave the room (75% for girls, 61% for boys) but the boys tended to question (8%) or give advice (12%) slightly more than their female counterparts.

Table 31. Responses To Inquiry Four By Gender

Inquiry 4	Negative Feelings		Positive Feelings		Specific Health Concerns		Request Command		Dislike		Like		Question		Act		Silence		Health Advice		Scold	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Year 1 Girls Total N= 115	91	79	3	2.6	19	16.5	93	80.9	7	6.1	1	.87	4	3.5	0		1	.87	0		0	
Year 1 Boys Total N=107	75	70	1	.93	29	27.1	92	86	6	5.6	1	.93	6	5.6	1	.93	0		0		0	
Year 2 Girls Total N=118	91	77	4	3	13	11	88	75	6	5	0		7	6	0		0		12	10	0	
Year 2 Boys Total N= 101	75	75	6	6	6	6	61	61	6	6	0		8	8	5	5	0		12	12	0	

Inquiry Four - School Socio-economic Status as a Variable

When comparing the frequency of responses for Inquiry 4 by school socio-economic status, it is evident from Table 32. that there were few major differences. In Reception, the children from the high SES school had slightly more positive feelings (21%) about being in a room full of smokers than those from the moderate (18%) or low (16%) SES schools. Ironically, these same children expressed the greatest dislike of people smoking (10% compared to 6%) as well as the greatest like (8% compared to 3% for mid and zero for low). Subjects from the lowest SES schools commented on specific health concerns three times more (19%) than the others do.

In Year One, positive feelings about being in the company of smokers dropped dramatically for all three social classifications (less than 3%). There was a significant increase in the comments relating to specific health concerns for the children attending moderate (25%) and high (14%) SES schools with only a slight rise from the previous year for those in the low SES schools (22%). For this year, it was the children from the lowest ranking schools as opposed to the highest who had mentioned both disliking (8%) and liking (3%) smokers to a greater degree than the others. Interestingly, the only subjects to act (2%) or those most likely to question the smokers (11%) were from the high SES school.

In Year 2, the percentage of positive feelings about the presence of smokers remained less than 3% for the low and moderate schools but increased almost fivefold (14%) for the high SES school. Once again, it was those children from the lowest classified schools (9%) that indicated they liked to be around smokers two and even three times more often than the children from the other schools. Similar to the preceding year, those from the high SES school were at least twice as inclined (14%) to interrogate smokers or to act in some manner (5%). Children from moderate SES schools were only half as likely (7.5%) to give any health advice to smokers as compared to their fellow classmates in other socio-economic conditions.

Table 32. Responses To Inquiry Four By School Socio-economic Status

Inquiry 4	Negative Feelings		Positive Feelings		Specific Health Concerns		Request Command		Dislike		Like		Question		Act		Silence		Health Advice		Scold	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Reception																						
Low SES N=64	39	61	10	15.6	12	18.6	38	59.3	4	6.3	0		2	3.1	1	1.6	0		0		2	3.1
Mid SES N=132	100	76	24	18.2	7	5.3	98	74.2	8	6.1	4	3	1	.75	3	2.3	2	1.5	0		3	2.3
High SES N=39	29	74	8	20.5	2	5.1	30	77	4	10.3	3	7.7	1	2.6	0		0		0		2	5.1
Year One																						
Low SES N=64	42	66	2	3.1	14	21.9	52	81.3	5	7.8	2	3.1	4	6.3	0		0		0		0	
Mid SES N=114	88	77	1	.88	28	24.6	102	89.5	6	5.3	0		1	.88	0		1	.88	0		0	
High SES N=44	36	82	1	2.3	6	13.6	31	70.5	2	4.5	0		5	11.4	1	2.3	0		0		0	
Year Two																						
Low SES N=70	50	71	1	1.4	6	8.6	46	65.7	6	8.6	0		5	7.1	1	1.4	0		10	14.3	0	
Mid SES N=107	85	79	3	2.8	11	10.3	77	72	5	4.7	0		4	3.7	2	1.9	0		8	7.5	0	
High SES N=42	31	74	6	14.3	2	4.8	26	61.9	1	2.4	0		6	14.3	2	4.8	0		6	14.3	0	

Examples of Responses To Inquiry 4

Reception

I would Feel angrey.
and I would tell them stop smoking because you are purluting the air for otherpeople

Year 2

It make me feel sick

Year 1

TEL 0151 231 4022

6.4 Summary of Draw and Write Results

- primary schoolchildren aged 5 to 7 in this study generally harboured negative perceptions about smoking
- these children demonstrated an age-related awareness of the health risks involved in smoking cigarettes
- the children in this study had well formulated ideas about habit formation
- they acknowledged the significant role the family plays in habit acquisition
- as the children progressed from Reception to Year 2, there was more diversity in their responses and a more sophisticated understanding of the nature of the habit
- in general, school socio-economic status and gender did not greatly influence the perceptions these children had about smoking but these variables did account for some of the variation in frequency of responses that emerged

6.5 Interviews Results

The four dominant themes pervasive throughout the interviews were:

1) children's negative disposition about smoking
2) children's knowledge about smoking
3) children's awareness of roles the family played in the smoking culture
4) children's belief that smoking was bad for children but may be acceptable for adults

These themes, emerging from a content analysis of the transcriptions, which was grounded in the dialogue of the interviewees, remained constant across the 3 year time span. Responses became lengthier, detailed and more complex as the children got older but generally their perceptions remained stable. As a result of the cross sectional study, it was felt that it was important to place the children in the 'smoking context' of their home environment and thus they were asked if anyone at home smoked. In Year 1, 20 of the 28 (71%) children interviewed lived in a house where someone smoked and in Year 2, 18 of 23 (78%) stated they lived with at least one smoker. In both cases, mothers were primarily cited.

6.5.1 *Negative Dispositions About Smoking*

Beliefs About Smoking

In Reception, all the interviewees agreed that smoking was bad for people and no one could think of anything good to say about it. In Year 1, their point of view did not change at all although one boy from the moderate SES school hypothesised that ***' I think its good for some people, I think. Cause they feel relaxed. It just must be mostly old people but its not very good with them to smoke cause they can cough cause I seen one as I was going home, she was having a cigarette and she was coughing and she was quite old'***

With regards to what benefits there are to smoking, two-thirds of the children felt that there were no benefits to smoking, a couple did not know and the remainder were of the opinion that smokers ***'must like it'*** because ***'it tastes nice'***, ***'they think its good for you'*** and ***'when you smoke it, they like it so they have more of them...because I think they might like go up the brains.'*** Although no gender differences between boys and girls responses with respect to any advantages to smoking were apparent, all the interviewees in the high SES school were unified in their belief that smoking had no benefits whilst responses from the other two economic groups were varied

In Year 2, fewer children stated that ***'there is nothing good'*** about smoking. Perhaps this was a function of the fact that more of the interviewees were able to rationalise what others find enjoyable about smoking. Reasons ranged from ***'because they like the taste'***, ***'it might just soothe them'***, ***'Your friends think your cool'***, and ***'It shows that you're a grown up and you show off'*** to ***'you get to do it all the time'*** and ***'Sometimes it can make them healthy because it won't go into the heart or lungs if they don't do it long. It will just come back out'***. It is interesting to note that boys were much more verbose than the girls in their replies for this particular query.

Perceptions of Children Who Smoke

In Reception, children were asked if they felt young smokers would have many friends. The general consensus was ***'no because they smoke, because they're naughty smoking and I think its bad for you and you die'*** although a few children did think that they would have numerous friends, for reasons unrelated to smoking; ***'cause they found friends out in the street'*** and ***'they can play together'***.

In the subsequent years, the question was modified somewhat such that children were asked if they would like young smokers to be their friends. Most of the sample did not want to be friends with smokers and for the most part, their

reasoning fell along two lines of thought. Children were either concerned about the negative consequences that second hand smoke could have on their health: *'I don't want them smoking, smoking around me because I don't want a disease'* and *'They'll get all smoke in me mouth and I'll feel sick and I'll cough'* or they were concerned about succumbing to peer pressure: *'No because I don't smoke and they do- I would start too'* and *'No because they'll make you smoke ... tell them to go to the shops and they'll give you some money and tell them to go to the shops and buy some.'*

The few children who stated they would like to be friends with the smokers gave reasons that were not related to smoking but rather stemmed from proper social etiquette or outward appearance: *'because everyone should play together' 'they've got kind faces' and 'cause they are nice, they got nice clothes.'*

In Year 2, much of the whole sample interviewed had a negative outlook on having mates who smoke. Once again, much of the rationale was based on the impact passive smoking can have on health *' because all the smoke will go into my lungs'* and *'if they smoke near me, I will get an infection like they are'* or the fear of peer pressure *'they'll force me to have a try and if I have a try well then I'll just get used to it and might die'* or *'they'd start getting me and say that I was chicken, that I was scared to smoke.'*

Some examples of moral reasoning also arise in responses such as *'I wouldn't want to get the blame for smoking'* and *'... if someone see smoking in the back garden, they could just ring the fire brigade.'* There was also the impression that some of these children were venturing to take a personal stand against something that they felt impinged on their own well-being, possibly a manifestation of their growing sense of self worth and self interest. For example, in the following responses: *'... they're smoking and I don't smoke, I won't smoke'* and *'... they smoke and I don't like people who smoke'*, the emphasis was on the 'I', in effect what the child wanted or needed, an indication they were perhaps maturing and coming into their own. Overall, with regards to children's

perspectives on peers smoking, the responses between each year group were so similar that it was virtually impossible to detect any gender or social class differences.

6.5.2 *Knowledge About Smoking*

Information Base

In asking children what they thought about smoking, it became abundantly clear that they had acquired a significant amount of information about the habit over the years. All the subjects knew where cigarettes could be bought and generally were aware that a minimum age of purchase existed. These children did not have a great deal of understanding about the composition of cigarettes. Most thought it was ***'paper and ash'*** although the odd child specified ***'paper and tobacco - an American plant, you make rollies with it'***. Several children gave quite detailed accounts of how to make a cigarette: ***'Like you can have tins and you can have little bits of paper and you can put some that brown stuff in the then you can light it and start to smoke'.***

When queried about the function of cigarettes in society, the children, for the most part did not know why cigarettes existed. ***'I don't really know why we wanted them. I just think someone invented them and he thought they were good so that why he started making them.'*** One enlightened child thought cigarettes were a reality ***'because people like them and the shop keepers make them cause so they can get money'***. Interestingly, there was almost unanimous agreement on the fact that cigarettes tasted ***'horrible'***. When asked to speculate on why people smoked despite the horrible taste, some of the children in Year 1 and Year 2 were of the opinion that ***'they just got used to it'*** or ***'cause they like the taste of it.***

All the children interviewed, regardless of whether they were members of a smoking household or not, were very much aware of where people smoked, who

smoked and they had some definite ideas about why people wanted to smoke. Moreover, all, to some degree were familiar with the health implications associated with tobacco smoke.

Locale of Smokers

All responses to a query about where the children saw people smoking were given in relation to a social context. When in Reception, the children mainly cited areas of close proximity ***'inside the house', 'at my auntie's house' 'when they are driving,*** and ***'in the entry'***. Several children also suggested ***'in the street', 'the pub'*** and ***'in the shops'***. Although similar, the responses in Year 1 were more prolific. The house, the shops, the pub, the street and cars were all mentioned again in conjunction with ***'in the cafe', 'in crowds', 'all in town'***, and in ***'hospitals, at home and when they're just sitting around some places in parks where they just wanna smoke because they've got nothing to do.'***

In the following year, the diversity in the responses was even more marked. Along with the locales given in the previous years, the Year 2 children also named ***'in taxis', 'on the bus', 'by the train station' 'hotels', 'in the hospital outside', 'at the beach'*** and ***'...at the football match cause I sit next to some people and they smoke'***. The persuasiveness of tobacco was certainly not lost on young children.

Gender of Smokers

The social experiences and cultural norms that children are exposed to, in conjunction with the prevailing ethos of their significant others can shape the perceptions and knowledge they assimilate. This is a viable explanation for the subsequent responses to children's thoughts on gender patterns of smokers. When in Reception, at least twice as many interviewees felt that men smoked more than women because ***'they smoke better because men are different than girls', 'because the girls does it after the boys cause if they are smoking at the same time, they can die again' , ' cause they are pregnant ... the baby will start***

coughing' and finally *'because women smoke slow and men smoke fast, my mum told me'.*

In the following year, children stated that men smoked more than women, one and half times more often. The rationale for this was based on such reasons as *'because they got bigger lungs than women', 'because they get more narky', 'because the women don't know if they need to breathe out or in - their dad told me', 'because they think that they're cool'* and *'cause they got more money than women'.* Although there were no evident gender differences for this question, it is interesting to note that almost all the citations for women came from the children attending the same moderately classed school.

Much the same as in Reception, twice as many children in the Year 2 sample were of the opinion that men smoked more than women. Again, an explanation for this belief evidently is rooted in the life style experiences children encounter on a daily basis. At this age (7), not only were the rationalisations more elaborate (see below) they were also more varied. A few children suggested *'both cause men and women smoke'* whilst others fell back on the phrase *'I don't really know'* thereby expressing some degree of uncertainty as to what they think the correct answer was. The same group of children from the moderate socio-economically classed school who were of the opinion that women actually smoke more than men the previous year, generally concurred this year, with the exception of two who modified their responses from women to 'both'.

'Women cause they like it more. Men usually stop like my dad stopped'.

'Men because men always smoke and women don't hardly smoke cause they don't want to be sick cause they want to carry on with their jobs and the men just like to go to work by smoking them ciggys to get to work and throw them on the floor to stand on'.

'Men - cause some women start to have babies cause they don't want to smoke and men don't have babies so that's why they have more cigarettes'.

'Men- because they are the biggest but sometimes women can be bigger than the men and if the man is bigger than the wife they like to smoke more because if its like sweets if the child grows up more it will like sweets more'.

'Men because they've got more money to get them'.

Rationale For Adults Smoking

Children in the sample all exhibited some understanding about why individuals wanted to smoke. In a like manner to The Draw and Write Investigative Technique, it was apparent in the interviews that children's reasoning was moulded by cognitive development and the social ambience in which they thrived.

According to the majority of interviewees in Reception, the basic premise for wanting to smoke was generally desire *'cause they want to smoke'*, *'maybe cause they like smoking'* , *'cause they wanted to try it'* or imitation *'because they like smoking, because they've seen someone else do it'* and *'somebody must have taught them'*. By the time the children reach Year 1, some had formulated divergent ideas about smoking acquisition.

Although desire and imitation were still commonplace, some responses went beyond *'because they love smoking'* or *'he wants to'* and *'because the dad's smoking and they wanted to copy'* to include such deductions as *'cause that their grown up, they think that they are good'* , *'because they want to smoke because sometimes they get narky - they get bad tempered'* and *'because they like it and they think its healthy, because it came from a plant and plants give you oxygen'*.

Much of the same logic that underpinned the foundation of the children's thoughts about why people smoke in the previous years was still evident in Year 2.

'Because the first time they smoke it they like it so they keep smoking'.
'Cause they are fed up .. They want to copy their friends'.
'Cause they think its clever'.
'Because they like smoking because they like the taste'.
'Cause they think its fun, cause other people do it'.

However, with the progression of time, some of their perceptions became more insightful and reflective of the events that were transpiring around them.

'They just start and they can't get rid of it cause they've got a habit - you can't stop'.

'Some of them think that smoking makes them relax a bit but its not that good for them'.

'Because when in the olden days they used to smoke and they thought it was good for you so they still smoke now and .... cause they haven't' been grown up around it and teached all this stuff'.

Rationale For Children Smoking

In addition to delving into primary schoolchildren's understanding of why people smoke, the interview process in the first and second year also included a specific inquiry about habit uptake of children. To some degree, the interviewees perceived that young smokers partake in tobacco for the many of the same reasons that adults do, ***'because they like it'*** and, ***'because of the taste'.*** Although allusions to desire and comments about curiosity ***'because they wonder what it's like'*** were frequent, there was overwhelming reference in Year

1 to imitation, specifically parental, as the principle motivation behind cigarette smoking by young people.

'Cause if their mum and dad smoke then they just will be the odd one out'.
'Cause they want to feel like they're mums and dads'.
'Cause they copy off their mum'.

There were some noteworthy variations in Year 2, although the concepts of imitation, desire, and curiosity were still central to the core children's beliefs about smoking acquisition.

'Because mum and dad are doing it all the time'.
'They might have sawed it on tele and thought oh I want to do that or they might just'.
'They want to see what it feels like'.
'They just like doing it - they think they are relaxed'.

At this stage however, perceptions altered; parental influence waned somewhat and was replaced by the sway of peers: ***'because they saw their mates smoking so they wanted to try it'*** and ***'cause their friends smoke ... the friends probably said you wanna smoke and I'll go get ciggys'*** and new justifications like conformity ***'because they want to be the same as another person probably'*** and image ***'they seeing what it is like because they want to be old'*** and ***'it might be just because lots of adults smoke and maybe its just they think they are adults'*** emerge.

Health Implications

Children's beliefs it seemed, were not gradational. Because their view of the world was in essence bipolar, either black or white, subsequent responses fit this pattern, even if they were inconsistent with the reality of their own situation. For example, when asked what can happen to people who smoke, pervasive in the

replies was the premise that if you smoke, ***'you'll die'***. A few of the children in Reception elaborated somewhat.

'Cause smoking makes you sick. He'll have a heart attack because he's been smoking too much and you could die'.

'It goes into a big blue balloon inside your body [lungs], ***you'll die. All the smoke goes into the mouth and they won't live longer'.***

The reality of the situation is that a large percentage of these children had parents who smoked and did not die. This discrepancy did not cause conflict in the manner in which they perceived the world around them.

One year on, more than 70% of the sample still mentioned that ***'they could die'***. Their responses however were now supplemented with greater detail of other subsequent consequences to health attributable to smoking.

'They could die. They could get sick. Because it makes all your lungs black and you start coughing all day'.

'Cause you get bad teeth, black and you get yellow fingers. You cough and it gives you a bad throat'.

'They can get gunge, like sort of gooey stuff and it stops their blood going to their heart. You die - you have no air'.

'You get cancer ... they can get sick, they get a tummy ache and you can be sick and sometimes you have to go to the hospital'.

Children in Year 1 were also asked to comment on the health implications for children who smoked. Once again ***'they can die'*** was the most common response. A couple of children alluded to ***'burns'*** and one boy thought ***'they might get***

asmtha'. By the time the subjects had progressed to Year 2, their understanding of cause and effect had developed, thus influencing the nature of their responses to the query about health consequences of smoking. Although *'they can die'* was still the prevailing answer, children now seemed to acknowledge that death was not the ultimate scenario for everyone who smoked. Furthermore, at this age, opinions were often peppered with physiological details of what can happen when individuals indulged in the habit.

'They could die cause it kills the lungs and they can't breathe. They might always cough and it stops them from breathing'.

'They can get very ill because their lungs go brown or black, so does the heart gets bad and they can't breathe properly'.

'You can die cause you can get cancer'.

'You can turn yellow sometimes, the skin, You can get cancer'.

Because reference to cancer was made by several children in this year group, it was imperative to extend the inquiry so as to understand their interpretation of what the word 'cancer' meant. Some children had never come across the term before, others had *'... heard of it but I don't know what it means'* and several mentioned specific people they knew who had it.

'It means its quite bad cause my granddad had it'.
'My uncle's got it. You can die'.
'Diseases in your body - because my Nan's auntie died with it'.

For the majority, cancer was equated to paramount illness.

'Dead, dead sick and it goes into your heart and lungs'.
'To get really sick, you can't hardly walk down the stairs if you are old'.

'It means the coughing is getting worse'.

'Yeah it means like something like all the ciggy badness just spreads all over you'.

Moreover, Year 2 subjects were also asked to contemplate why the pictured adult smokers looked healthy in appearance when smoking could cause one to *'be sick'* or *'get cancer'*. Their justifications were twofold. The most common reason was based on length of time smoked or frequency of smoking.

'Cause they have just started'.

'Cause they haven't been smoking for a long time'.

'Because they don't do it loads of time'.

'They could just smoke once a week'.

The second rather more intuitive reply had to do with the assumption that the consequences to health were within the body and hence not externally visible.

'They are healthy outside but they are sick on the inside -black from the smoke'.

'Because you can't see the insides, you can't see the lungs'.

With respect to the health implications for children who smoked, many of the children believed *'the same thing what happens to grown ups could happen'* that *'some can die, some can stay alive but be quite sick, some can get cancer when they are older.'* There was the distinct impression however, that many children felt that the consequences were far greater for children than adults.

'They could die dead quick because they are only young and they are not suppose to smoke. They can smoke if they want if they are bigger'.

'You can get kind of cancer but theirs is badder than the grown ups because they are younger than the grown ups, well they are not meant to smoke so it gets badder for the teenagers'.

References to cancer were rife with regards to children and smoking. One third of the interviewees in Year 2 thought that young smokers ***'can get cancer'*** as compared to only one eighth for adults. This disparity however, could be a function of the fact that the query about cancer followed the discussion on consequences of smoking for adults and preceded that for children. It is highly likely that the interviewees utilised those cues and responded accordingly. Conversely, the fact that many children believed that the repercussion to health were age related, coupled with their interpretation of cancer as the ultimate illness, could account for the higher frequency of references to the term with regards to children.

Passive Smoking

During the interviews, the children were engaged in dialogue that centred around the concept of passive smoking. None of the subjects in any year knew what the term itself meant but it was apparent from their responses to questions about their feelings when someone smoked near them that they had a conceptual understanding of second hand smoke. In Reception, all but one child expressed dislike at being in the presence of a smoker purely for personal, health related reasons.

'No cause I'll have a cough'.
'No cause I have Asmtha, it makes me have asmtha'.
'No cause it goes in your eyes and my mouth'.
'The one affirmative response was from a boy who '... like the smell of the smoke'.

Equally, in the following year, the children still had strong negative feelings about passive smoking. Once again, the reasons related mainly to the physical effects of

environmental tobacco smoke, in particular the resultant cough associated with breathing in the smoke.

'Because it makes me cough all the time'.
'Cough and feel sick'.
'The smoke would make me cough'.
'Sick mostly, It's the smell of it, the smoke'.

Several children had emotional reactions, dismayed by the intrusiveness of the smoke on their health.

'Sad, its because if you get it in your lungs, its bad for you'.
'Sad and sick cause the smoke goes into your mouth.'
'Angry cause I don't what them to, cause you are not meant to smoke in front of little people'.

The responses in Year 2 were of an equivalent nature to those from the previous years. In general, children felt ***'bad because the smokes all around you and it makes you cough'*** or ***'dead sad because if someone was smoking next to me, anything could happen'***. One child even postulated that ***'... you could get cancer yourself'***. The incidental nature of passive smoking, the perception that people in close proximity to smokers were literally ***'breathing it in'*** was evidently understood by many of the children

'It makes you coughing and you get bad lungs yourself cause all the smoke goes that comes out of their mouth goes into yours'.

'Sick because it goes into me and its like we are smoking too'.

'Very bad cause when you speak to someone and someone is smoking, the gas can come into you'.

Addiction and Cessation

Other concepts that were never mentioned by name but clearly understood were the notions of addiction and cessation. The children were engaged in conversation around the issue of whether trying to stop smoking was easy or difficult for smokers. When in Reception, the children had mixed views. Slightly more of those interviewed intimated that it would be ***'hard'*** or ***'difficult'*** to stop smoking ***'because you have been smoking for a very long time and you don't want to stop'*** and ***'because they are smoking and they want to do it again'***. Reasoning at this age was fairly primitive and generally based on the wants and needs of the smokers.

In the following year, almost the whole sample conceded that smoking cessation was difficult. Much of the rationale was once again based on the fact that ***'they don't wanna stop smoking'*** ,***'cause they've been doing it for a long time'*** but a few recognised the addictive nature of tobacco.

'Cause when you start you keep on getting and you can't really stop it'.
'Cause they like it so much and they can't stop it'.
'They can't stop- they'll keep on thinking'.
'Because when you just go off them you feel like you wanna get them again because you can't stop doing it'.

Such similarities abounded in Year 2 as well. The inability ***'to give it up'*** because ***'you can't like get over the taste'***, ***'you've been smoking for long'*** and ***'you've got used to it'*** was prevalent in the responses of the children. One girl even suggested that giving up smoking was ***'dead hard because they might be addicted'*** and went on to explain that it meant ***'they've been on it long and they can't stop or nothing'*** . A further point of intrigue emerged in the analogy to ***'sweets'*** made by two children when trying to express the addictive nature of smoking.

'It would be hard because its like sweets, you can't stop it'.

'Very hard because its like children, its very hard for them to stop eating sweets because if you eat sweets all the time, then you like them'.

6.5.3 *The Role of The Family*

According to the children in this sample, the role of the family was integral to the whole culture of smoking. The family, in particular mum and dad, were seen to be vital in the process of prevention against smoking but at the same time, were often considered the primary reason behind the uptake of the habit by young people. This dichotomous perspective flourished amongst most of the participants, despite being somewhat antithetical in nature.

Providers of Smoking Education

Following the discussion of the health consequences of smoking, children interviewed were asked where they had learned this information. Two-thirds of the sample in Reception specified a parent, in particular mother: ' ***My mum learned me that. She said if you smoke you die and God looks after you.'*** Other children ***'just learned it'*** by means of ***'...this story'*** or ***'off my computer ... it tells me that its dangerous. It is a doctor game'***

The responses for Year One were more diverse. Interestingly, most of the children from the lowest and highest socio-economic schools mentioned parents as the primary source of learning: ***'Me mum bought me a magazine about it'*** or ***'my dad taught me them'*** whilst children from the moderate school were less likely to report any parental intervention. Many tended to respond along the lines of ***'Cause I thought of it in my head' ; 'I just know'*** and ***'I am using me brain - made it up'.*** One *child* ***'saw it on tele'*** and another learned ***'from my old school.'*** Gender differences were not apparent.

In Year Two, responses were also varied, with slightly less emphasis on parents as the main educators about the dangers of smoking. Others such as relatives, ***'me auntie told me'*** or ***'my sister learned it all to me'*** or ***'people who live next door to me'*** were mentioned. Similar to the previous year, some interviewees ***'.. just thought of it'*** or ***'learned myself'*** whilst a couple stipulated that they ***' ..learned them in school'*** and one boy ***'... heard it on the programs like hospitals and doctors'***. Once again, there were no notable differences in responses for gender or social class.

In the course of the interviews for Year 2, a second question, pertaining to the primary educators of smoking was introduced. After identifying that smoking was a bad thing, children were then asked '*Who should be responsible for teaching children about the dangers?'* ***'Mums and dads'*** was the most prevalent response, often in conjunction with ***'all of their family'***. ***'Teachers'*** was another popular response in particular with children from the school with the highest socio-economic conditions and ***'doctors'*** was commonly mentioned by interviewees from the lowest SES schools. One point of intrigue that arose from this particular line of questioning was that almost without exception, the girls interviewed suggested a familial influence whereas the majority of boys suggested a professional one.

Promoters of the Smoking Habit

Children's perceptions of where young people learned to smoke and why they wanted to smoke was also rooted in the context of the family. The majority of the children in Reception cited ***'mum and dad'*** as the principal impetus behind the acquisition of the habit. Equally, learning ***'off their parents'*** was given by most in Year 1 as well. Some children in this year group also suggested that ***'they must of learned off their mates'***, ***'in the street'*** or ***'in pubs where other people smoke'***. One girl believed that children learned to smoke in a ***'smoking office'***.

Interestingly, by the time this sample reached Year 2, the consistency in responses wavered and more generic responses emerged such as ***'from people who smoke'***, ***'from grown ups'*** and from ***'people in the streets'***. The emphasis on ***'their parents'*** although still quite apparent gave way somewhat to ***'their mates'***, ***'from their other friends at school'***. This transition from family to peer group was consistent with the findings from the cross sectional study and has important implications for the manner in which health promotion interventions are developed and disseminated.

Parental Influence

The link between the smoking behaviour of parents and their children was acknowledged to a degree by the children in this sample. When asked for their thoughts on whether children who smoked would have parents who smoked, the results in Reception were mixed, ranging from ***'yes because big ones usually always smoke'*** and ***'yes because they see their mum and dad smoke'*** to ***'no because if you smoke you die'*** and ***'no, their mum and dad might get a ciggy and learn them how to smoke without no smoking'***. By Year One however, popular opinion rested mainly with the affirmative. The majority of the subjects were definitely united in the belief that young smokers were the offspring of smokers:

'Yeah cause they might copy off them'.
'Yeah because when they smoke, the mum and dad smoke, they told them try something'.

'Yeah because they seen them all the time and they would like to smoke as well'.

Contrary to most, one girl was of a different opinion ***'because they must have seen someone else doing it- their friends.'***

With regards to children's perceptions that young smokers had parents who smoked, all but three interviewees in Year 2 believed substantively in this association. Their rationale, it would seem was based primarily on parental role modelling.

'Because if their mums and dads smoke, they most probably copied them cause they might have ciggys in the packet and they must go to the bedroom and start smoking...

'...because they've seen the mum and dad smoking when they were little'.

'probably the same thing happened to them when they were little'.

'Yes cause if their mum and dads didn't smoke, then they wouldn't be smoking by then'.

Of the few who did not give credence to this supposition, their reasons still included an element of parental involvement: ***'No cause they probably say to them don't smoke but they probably do when they're alone'*** and ***'No cause if [the mum] got to stop smoking, tell them to stop smoking as well'***. One girl was indecisive ***'I only said maybe because I haven't seen their mum and dad'***. These three children attended schools located areas of moderate socio-economic status.

Parents Thoughts About Smoking

Based on the results of the interviews, it was obvious that, in the eyes of the children, parents occupy a central role in their knowledge and beliefs about smoking. It is somewhat surprising then, to discover that although most of the children generally had some idea about what their parents thought about tobacco smoke, this did not arise from discussions with them about the subject matter. Rather the impression was that many children equated parental thoughts on

smoking by their actions; that is if mum and dad were smokers, children believed their parents would ***'think that it's good'*** and ***'they think its all right'.***

This inextricable link between observational cues and perceptions did not seem to dissipate over time as the responses in Year 1 and Year 2 ran along similar lines: ***'well me dad thinks it's horrible cause he doesn't smoke, he thinks the smoke goes in his mouth as well and you can cough and me mum thinks, me mum want to stop, she likes it, she wants to stop but she can't, she tries to stop but she can't'*** and ***'My mum used to smoke so but now she thinks its not good'.*** There was amazing consistency in responses between Year 1 and 2. Perhaps this can be attributed to the fact that parental smoking prevalence also remained stable across this time span.

When there was some conflict between the action of parents and their subsequent words, namely when parents attempted to rationalise the existence of their habit by expressing negative thoughts whilst continuing to smoke, some children seemed to internalise this. As a result, their parental perceptions of smoking conveyed this sentiment.

Reception:

'It is very bad they can't stop, it is too hard for them'.

'They think they have to stop - they say I'll have to stop because of the baby-make her have a bad cough and she'll have to go to the doctors'.

Year 1:

'They think its horrible and they are trying to stop but they can't cause of the taste'.

'Me dad said its hard to stop and he said I wished there were no ciggys's in the world.'

Year 2:

'They think its bad but they still carry on because they keep forgetting that they are going to stop'.

6.5.4 *Smoking is Intrinsic to Adulthood*

The reoccurring theme that was perhaps most unexpected in the cross sectional interviews was the prevailing perception that smoking, although bad for children was acceptable for adults. The emergence of this trends seemed to emanate from the belief that smoking was an intrinsic part of adulthood. Such persuasiveness merited further consideration, thus an intensive exploration of the underlying attitudes and beliefs that inform this viewpoint was undertaken in the longitudinal study.

With regards to the appropriateness of smoking for adults and children, the responses in Reception were divided, approximately half felt that ***'it isn't OK to smoke, because they die'*** whilst the remainder were of the opinion that smoking was viable from age 14 onward, ***'when you are an adult, because adults are bigger than kids'***. No one proffered any reasons for why they felt smoking was bad for children but suitable for adults.

By Year 1, only three children, all from the high socio-economically classed school, were of the opinion that it was ***'never OK'*** to indulge in the smoking habit. The majority cited ages from fourteen to sixty, ***'when you are big'***, ***'when your nerves go'***, ***'when you are an adult'*** or ***'when your mum and dad aren't there'***. The reasons they gave for believing that smoking was endemic to adulthood ranged from ***'... because when a little person smokes they die because they've got littler lungs than big person'*** and ***'because your breathe is stronger'*** to ***'older, you are only allowed to smoke when you're older because you might get burns when they're little one because they might touch the other ends'***.

This two-tiered perception of smoking culminated in an inquisition regarding children's beliefs about who suffered more from the adverse effects of smoking, adults or children. Almost without exception, the children interviewed in Year One felt that smoking was in fact far more deleterious for children than adults. Much of the rationale was based on the perception of size.

'Children, because they've got littler lungs than big people'.
'Children because they are really tiny and they might get sick'.
'The children cause they are only young, they would go unconscious'.
'Children cause children could easily die, cause children are littler and don't know better than mums and dads'.
'Children because they are smaller than the mum and dad'.

These perceptions did not change to any great extent in the ensuing year. There were slightly more children who felt that people ***'shouldn't smoke'*** at all but the vast majority thought that it would be all right ***'when you are over 16'***. Once again, the conception was based on the physical differential between grown ups and children.

'Because you could die quick if you are not over 15 and you're smoking'.
'Cause when you are younger you can get cancer - when you are older, you can't cause you are bigger and you've got more air inside you'.
'... it doesn't matter if kids at 17 do it, its cause they'll die when they are about 60 but if you do it at 12, you can die a young age'.

It is interesting to note that this question was answered more fervently and in greater detail than any other question in the interview. All the participants had something to say about smoking being far worse for them than adults. Evidently it was a subject matter that they had confidence in their beliefs about and thus felt quite strongly about. As before, the justification for this point of view stemmed from the assumption that children were adversely affected by tobacco smoke because ***'they are really little and the grown ups are big' therefore, '... they***

could die quicker because they're smaller and their lungs are weaker' and *'...they haven't got the vessel work that can fight the disease'.*

6.6 Summary of Interview Results

- the sample's perspectives of smoking remained fairly constant over time

- the children in this study generally had negative beliefs and perceptions about smoking and smokers

- over the years, they acquired a considerable amount of information about tobacco and demonstrated significant awareness of where people smoked, who smoked, why they wanted to smoke and what health implications arose from smoking

- these children also showed conceptual understanding of passive smoking, addiction and cessation

- the children in this sample identified the family as integral to the whole culture of smoking - parents in particular were seen as both preventors and promoters of the smoking habit

- the children in this study were united in their belief that smoking was bad for children but could be acceptable for adults

- gender and school socio-economic status appeared to have little impact on what these children thought about smoking

- these children's perspectives on smoking reflected the maturation process of cognitive development and the experiences of their social world

6.7 Focus Group Interview Results

As focus group interviewing was utilised primarily as an exploratory technique, the analysis was driven by the aim of the larger research study; to investigate children's perspectives on smoking. Subsequent analysis of the discussions revealed that many of the emergent ideas bore a striking resemblance to the salient themes from the triangulated methodology of the cohort study. In particular, trends denoting children's negative disposition toward smoking, their knowledge of the nature of smoking, especially the health implications, the central role of the family and the belief that smoking is an intrinsic part of adulthood were apparent. The similarity in responses occurred despite gender and social background; that is to say that no group differences were noted within or between the various schools. Because children are exuberant by nature and often talk at the same time, identification of individual participants during transcription was difficult hence much of the discussion documented hereafter is not accredited to anyone in particular.

6.7.1 *Knowledge about smoking*

Commencing the focus group interviews with a brainstorming exercise, asking the participants to tell what they knew about smoking was very purposeful. It focused the groups to the topic at hand, it demonstrated the extent to which the concept of smoking was understood and it served to ease the participants, as all could contribute to such a general inquiry. There was unanimous agreement by all groups as documented below, that smoking was ***'very, very, very, very bad'***. Many children proffered a host of physiological repercussions that could arise from partaking in the habit.

S2: Its bad for you. It can damage your health

S4: It might damage your brain

S1: It will go around your heart and it will make your heart bad and makes your lungs bad

S: It can make you sick and die

S: It's not very good for you

S34: Its bad for your lungs

S33: You shouldn't really smoke cause its not very good for your insides - Inside I've been told that you get black in the lungs. And if you breathe smoke in, you might get cancer

The rationale for smoking was varied but within each group discussion, reasons ranged from personal factors such as desire, curiosity and image to social factors like imitating friends and family were evident, as demonstrated below.

S: They want to see what it's like for when they are older

S: Cause seeing their mum and dad or their friends doing it or big sisters or big brothers

S41: They think its dead cool because on tele when they've got their jackets on and sunglasses on and got cool cars...they think its good to smoke

S39: They just want to look cool but it is still bad for them, isn't it

S: Cause their friends do it

S: Because if their dad smokes, they might say its good for them

S45: Because their parents do it

S44: They get an example from someone

6.7.2 *Viewpoint of Grown Ups and Children Smoking*

After concluding for themselves that smoking was bad, each group was given a moral dilemma to ponder. They were asked if smoking was such a bad thing to do, should grown ups up or children be allowed to smoke? The reason for probing group opinion on grown ups and children separately, stemmed from the research findings of the cross sectional and longitudinal studies which clearly showed that children had a two-tiered outlook on smoking; in effect, that it was bad for themselves but not necessarily for adults. This dichotomous perspective was present in all the group discussions. Notions about adults were varied, as observed below.

S1: No- cause they can die and they'll have no family, you'll be yourself

S2: No because it could damage their health and if your parents die you'd have to go and live in somebody's house

S3: It could damage your lungs

S2: I might know. He's probably trying to say that because grown ups are grown ups they are allowed to do what they want

S36: Cause like they are grown ups and they can do what they want to do

S38: They are older than us and they can do what they want

S37: Because you can get die with it and I don't want my dad to die cause he smokes

However, there was consensus, as illustrated below, among all participants of the focus groups, that children should not be allowed to smoke. Negative dispositions were emphatic and immediate and often based on the premise that children, being small in stature, were fragile by nature.

S4: Cause it might kill them

S3: Because they are only little

S2: Because children are easier to kill because grown ups have hard lungs and kids have only got soft lungs

S1:...it will go into the heart

S4: If the police see them smoking, the police will put them in the home

This dual perspective was further supported by the viewpoint held by the majority of children in each focus group, that the implications of smoking were much greater for children than adults. Once again, the basis for this impression came from the notion that children and old people, as stipulated by some, are physiologically weak.

They are not stronger so they can die more quicker

Because like when they are like a little kid, its all dirty . When an adult does it well their strength will still keep you healthy but sometimes a child is so ill it can't

Children cause they are young. Because they will die before the adults because the adults are bigger than the little kids

Because old people..., they are weak and for children they've got small parts of the body then the grown ups

S3: because they are grown ups, they are more older and...

S2: Because the parents are allowed because they are made for them and they are not made for him, children because the chest, it will fill up the chest and the heart will get ... and it will slow down the heart and if it stops, he'll die

6.7.3 *Thoughts About Smoking Prevention in School*

Because the doctrine that children must play an active role in their own health promotion is intrinsic to the philosophy underpinning this research, coupled with the conviction that *'Communication on a level of the child's comprehension is imperative if effective health teaching is to be accomplished'* (Porter, 1974: 384), it was deemed necessary to focus group discussion on personal perceptions of smoking education programs. As such, ideas about prevention and implementation of strategies, namely who should administer anti-smoking interventions, when should they be administered, how should they be administered and what should they include, were explored.

A variety of methods to prevent children from starting to smoke were discussed in each group setting. In general however, as documented below, most strategies were either verbal, visual or physical in nature. Verbal warnings such as ***'say never ever smoke its bad for you and you might die'*** were by far the most common interventions voiced by group members. Visual means involved ***'putting up No Smoking signs'*** or physical actions like ***'bring them to the police station'*** or ***'smacking them'*** were also frequently put forth as possible options to prevent the uptake of smoking by young people.

Say no
Make a notice 'Don't Smoke'
Put it on a paper saying no children allowed to smoke
No children until 18 allowed to smoke
Tell them what happens to other people
Tell their mum and dad

Tell them about what can happen to them

You can stop making cigarettes .....

Tell the shop keeper not to give them to the people

You can tell them to put it out or you won't be their friend

Just give them no money to buy them

Threaten them

If they won't put it out, you smack them

With respect to who should be involved in administering anti-smoking education, there was general consensus among the groups that it was primarily the responsibility of parents and relatives, teachers and other professionals associated with either education or health.

Their mums and dads

Teachers

People who come to school like you

The police

S25: Teachers

S24: the people in the hospital

S26: doctors

S25: mums and dads

S23: their aunts, cousins

Because if your mum was smoking and your mate went 'Don't smoke that's bad for you' I want to smoke like me mum and dad

S25: your brothers and sisters

It is interesting that children had the capacity to hold the opinion that parents were the primary anti-smoking educators concurrently with the tenet that they were also role models who inspired children to smoke. This incongruity did not seem to confound the children but rather was another dichotomous perspective which was central to the core of children's ideas about the function of the family in the smoking domain.

Moderator: Why do children try out smoking?

Cause their friends do it
Because if their dad smokes, they might say its good for them
S45: Because their parents do it
S44: They get an example from someone
.
.
.
Moderator: Who should teach children that smoking is bad for them?

I know, I know, there mum and dads
If they smoke and they want to .....grandma and grandpa
The teacher

The age at which smoking education should commence was perhaps the most divided issue to emerge in the focus group interviews. Age range varied significantly within groups as well as between groups. Some participants felt that the dangers of smoking should be taught to children as young as three, four and five ***'because then they can learn about it and they can realise how bad it is before they start'.***

S43: When they are about 5 or 6 so they won't smoke when they are older

S45: 4 or 5

S44: 5 and 4

I think 3, 4 and 5 cause then when they are older they um won't start to smoke

Most groups however, had mixed feelings about the appropriate age.

When they are 10 or 11 cause that's when they start

When they are about little so they don't do it when they grow up so they know what can happen to you

When they are 20 they should start smoking if they want to

S35: 7 or 8 because when they grow up they'll know that its bad for them

About 7 or 8 - when they are very young

So like you don't start when they are young

S33: When you are 18 cause that's when you are suppose to start

S34: I don't know

S31: About 11

Some other groups were more inclined to think that children should learn about the dangers of smoking when much older.

25

Should start when you are a teen

Should start when your 20

S27: 18

19

S30: 19

When asked to comment on what things children should learn about smoking, the content for each group was almost exclusively based on the health implications of smoking.

S1: Cause they'll die and they'll go to hospital

It could make your teeth all yellow

And it could damage your heart

It could damage your lungs

And all the blood will go bad

Its horrible

Get sick and then you'll have to go into hospital

Cancer

S19: Its bad

S20: It makes your friends sad

S22: And your friends won't be your mates cause they'll get disease from you

It makes you get asmtha

S22: Its bad for them

Interestingly, two individuals from different groups mentioned that children should learn ***'how to smoke' because 'like if they want to learn how to, cause some people might just suck up and not like know how to do it.'***

A visioning exercise, whereby focus group participants were asked to visualise themselves as teachers who had to educate Year 2 children about smoking was also included. Using paper and felt markers, the children were asked to write down the primary message they would teach their class and the accompanying activities that they would use to aid in the dispensation of their message. It was clear from the ensuing discussion surrounding the activity that the children understood what was required of them and certainly enjoyed the 'pen and paper' exercise but overall, little was gained from the procedure. Once again, most groups reiterated what had already been said. Consequently much of their notions were based on the health consequences associated with smoking. The dichotomous perspective of smoking, that it was bad for children but not adults also emerged on occasion.

S15: That it is bad for your lungs

S18: Bad for your body

S16: It is bad for your bones

S14: It could make you sick

S13: Don't smoke cause you could die

S12: Only grown ups can smoke

S11: If you smoke when you are young, you have to go to hospital and you might die

S10: Stop smoking because your teeth might go black

I would teach my class not to smoke

I would teach my children not to smoke

I would teach the children in my class that it's bad for your lungs and body

I would teach my class that it's bad for you inside and lungs and you could get cancer

I would teach my class that there's no smoking day and don't smoke

What was most disappointing about the outcome of this particular activity was the lack of imagination displayed by group participants. Their struggle 'to pretend' to be the teacher thwarted attempts to discover what teaching mechanisms children most enjoyed in the classroom, as those in turn, would be the more effective tools to impart the meaningful messages of health promotion. Perhaps this shortcoming was attributable to their lack of exposure to such activities or their cognitive development, often restricted to what is concrete and observable and what they have previously experienced. Hence, in response to the query *'what activities would you like to do in the classroom to make sure you do not smoke when older?'*, most groups cited activities that they are currently doing in other areas of study.

Write on the black board

Make posters or saying and telling them not to smoke and smoking is bad for you and the children have a go at it and put it up

You could have games

Write about it

S44: Take a photograph of someone smoking and write something um, don't smoke when I am older
S43: You write it on the blackboard and other children copy it into their books and then you copy it out onto a piece of paper and then hang it on their window
S46: Take a picture of someone who has just started smoking and one years on when they been smoking when they years on - that probably one will be in hospital because they have been smoking when they are old

6.7.4 *Conclusions*

The experience of conducting focus group interviews with seven year old children was an interesting and fruitful exercise. Because of the congruency of results between this method and the others involved in triangulation, the assumption is that focus group interviewing can be used with confidence as a tool to garner accurate information about children's perspectives on smoking.

However, execution of the method did bring to light some important issues. Focus group interviewing with young children requires high-moderator involvement (Morgan, 1997) because interaction between the participants was limited. The majority of interaction took place between the moderator and individual children, although ensuing comments were often stimulated by what had been previously stated. Also, the tendency for children to talk over one another or to shout out responses whilst others were talking despite being advised of the correct protocol was somewhat problematic. Although their exuberance was appreciated, it did make transcription difficult at times. Moreover, children had a tendency to latch onto one concept or impression and they often perseverated on it, mentioning it throughout the discussion.

S3: And you start blowing black bubbles out your mouth

S1: Cause it'll happen the same, it'll go all in their lungs and they'll start blowing black bubbles that [S3] said

S1: It would feel sad ..all bad cause it's in all your friends body I think because You feel sad because your friends start blowing black bubbles and your lungs go black and you start to die

S3: Saying to them you'll start blowing out black bubbles

S3: You'll end up with black bubbles

S3: That you'll start blowing black bubbles

Another issue often encountered throughout the discussions with the children was their need to succumb to group conformity or to repeat similar ideas to other group members. As a moderator, it was necessary to continuously probe the children, to stimulate and extend their thinking, to enable them to come up with new notions. By contrast however, this challenge to the usual parameters of children's thinking did occasionally happen spontaneously, when the participants' desire to come up with something better or original, impelled them to be more adventurous and thus surpass the confines of their traditional mode of thinking.

6.8 Summary of Focus Group Interview Results

- children's negative dispositions, their significant knowledge base, the centrality of the family and their dichotomous perspective of smoking were prevalent in all groups

- gender and school socio-economic status differences in responses were not perceptible

- children in this study believed that the health implications of smoking were much greater for children than adults

- there was a general consensus amongst groups that smoking education was the remit primarily of parents, then relatives, teachers and other health-related professionals

- suggested intervention strategies were verbal, visual or physical in nature

- the age at which children thought smoking interventions should be implemented varied significantly from early childhood to adulthood

- the content of such strategies it was suggested, should primarily be based on health implications of smoking

CHAPTER SEVEN

DISCUSSION OF THE LONGITUDINAL COHORT STUDY RESULTS

7.1 Chapter Overview

This chapter synthesises the results of the longitudinal cohort research study and discusses the subsequent changes that occurred over time. It posits explanations for new insights or significant trends that emerged from the findings and explores the salient ideas that reflected children's perspectives on smoking whilst giving consideration to the variables that impinged upon these views. The merits of utilising a multi-method approach in the light of the findings are also addressed.

7.2 Introduction

The principle aim of the longitudinal study was to document and subsequently assess changes in primary schoolchildren's knowledge, beliefs, perceptions and behavioural intentions that form the cornerstone of their attitudes about smoking, over a three year period. It was important to investigate these variables, which generally comprise the preparation and anticipation stage of the developmental process of smoking (Figure 1) in the light of the fact that the findings can have substantive implications on the development of effective school-based smoking intervention strategies.

There are few longitudinal smoking studies involving children under 8 years of age, thus making comparison and verification of results a difficult endeavour. The reality of the situation is that the oldest children in this sample are often younger than most subjects of other studies. This inability to compare cohort findings with similar studies was somewhat circumvented by contrasting the present research

results with the one or two cross-sectional studies designed to investigate age-related differences between year groups (Natapoff, 1978; Eiser et al., 1986).

The research findings from the cohort study demonstrated that for the most part, the 5 to 7 year old children in this investigation had as yet to take up the habit, had no intention to smoke and had a negative disposition toward smoking that did not dissipate with time. Their perspectives, which seemed to be relatively stable, were founded in a broad knowledge base that appeared to be influenced by cognitive development and socio-cultural experiences. Gender and school socio-economic status accounted for very few age-related variations. The children in this sample acknowledged the integral role of the family and perceived parents to be 'preventers' of smoking, at the same time as being 'promoters' of the habit. Also, there was unanimous consensus by the whole sample that the adverse effects of smoking were far greater for children than adults, which spawned a dichotomous perspective of smoking; namely that it was bad for children but acceptable for grown ups and was seen to be an intrinsic part of adulthood. This finding was not only distinctive to this study but appears to be unique in the literature on smoking as well.

The results of this longitudinal between-methods triangulated study reflected the outcomes of the cross sectional study upon which it was based and strongly supported the work of other researchers who have explored older children's perspectives on smoking (Oei and Burton, 1990; Bowen et al., 1991; Bhatia et al., 1993). Such congruence in results served to confirm the fact that the tools employed were viable means of accessing accurate information about children's perspectives of smoking. Furthermore, the outcomes of this research brought to light many significant issues. The facets of the study that merit particular consideration are the methodological approach taken, the aspect of change in children's responses over time, the prevailing themes and the influence of gender and school socio-economic status.

7.3 Methodological Approach

Over the last two decades, many smoking studies involving young people have been conducted. Most have utilised quantitative methods such as questionnaires, some have adopted a qualitative approach like interviewing, and one or two have even incorporated projective techniques like drawing into the methodological framework. Few however have taken a pluralistic approach, bringing together several research techniques in a triangulated manner, to maximise the inherent value of each individual approach and gain a much more holistic perspective of the subjects under investigation. This study, thus differed significantly from related works in the field of smoking because of its innovative research design, employed longitudinally, with a sample that had been largely neglected in previous research.

The success of the longitudinal cohort study authenticated the replicablity of the research design. Repeated assessment however, can result in 'measurement effects'; influences in attitude or behaviour that can arise as a consequence of the annual administrations (Cohen and Manion, 1994). It was not possible to estimate if any measurement effects occurred in this study. It can be assumed that the yearly administration of multiple tools did, in themselves have some influence. However, because the children were always giving but never receiving any information on smoking, measurement effects were not considered to be problematic. If anything, the annual event may have instigated spontaneous discussion on the issue of tobacco within the home and school environment.

As outlined in Chapter 3, the utilisation of a developmentally appropriate questionnaire established a much needed data base of information whilst the inclusion of interviews, Draw and Write and focus groups facilitated the exploration of meaning behind the quantitative findings. In addition to augmenting the developing profile of local children's perspectives on smoking, these tools provided further insight into the perceptions and beliefs that underpinned their attitudes on tobacco. It is apparent that this melange of tools used in triangulation, complemented each other. The negative perceptions that were highlighted by the

questionnaire results emerged and were further explained by the qualitative findings. Such cross-validation of results increased the validity of the study findings and substantiated the decision to adopt a triangulated approach.

This 'confirmation' of findings between multiple methods was the principle reason for using triangulation to collect data. In retrospect, it appeared that an additional benefit to incorporating such an approach into the research design emerged. The between-methods model also enhanced the 'completeness' of the study since the diverse methods exposed subtle but important differences that would have been missed if only one method were used (Nolan and Behi, 1995). For example, in the questionnaire and Draw and Write, the perception that smoking was bad for people emerged but it was only during the course of the interviews that the rationale behind this perspective surfaced and it was discovered that in actuality, children believed that smoking was really only bad for children but not so bad for adults. In this circumstance, the combining of methodological strategies added '*depth and breadth of understanding*' (Knafl and Breitmayer, 1991: 229) to the topic of interest.

Whether triangulation can foster both confirmation and completeness within the confines of a qualitative paradigm is a much contested argument. For some the concepts are complementary (Knafl and Breitmayer, 1991) whilst others believe them to be antithetical (Denzin and Lincoln, 1994). The findings of this study it would seem, supported those who advocate a complementary stance as the triangulated approach provided both convergence of results between the different methods used as well as contributing towards a more complete or holistic understanding of the phenomenon being investigated.

In light of the fact that one aim of this research was to identify children's perspectives on smoking, the methodological approach taken was of fundamental importance. As dictated in previous chapters, certain research tools are more effective in the context of childhood than others, hence selection of those most suitable was imperative. Tools that are developmentally inappropriate or not flexible enough to accommodate the range of cognition between and within year

groups could yield inaccurate information. Similarly, methods not child-centred in design, that is based on the needs of children and pitched at their level of comprehension could also produce futile results. In a study by Eiser et al. (1986), on young children's understanding of smoking for example, slightly less than half the 8 year olds in the study were unable to answer a question about why people smoked. However, when a similar inquiry was addressed during the Draw and Write session of the present study, the entire sample, almost without exception for each year group was able to come up with a response.

In addition to appropriate methods that enable data to be collected from the child's own viewpoint, implicit to the research process had to be the wholehearted acceptance of children's points of views as valid and true reflections of their perspectives. According children this legitimacy had connotations for the manner in which the research was designed and interpreted and subsequently how intervention strategies will be developed in future work. The process - a child-centred, 'bottom up' approach in collaboration with children, by which the results of this research were obtained is indeed the same process that should underpin the product - a proactive health promotion strategy that is developed, designed and implemented in association with the children themselves.

The value of using triangulation in this study was highlighted by the emergence of a discrepancy in responses to the questionnaire inquiry on sample smoking behaviour. Because smoking is proscriptive by nature, the validity of self-reports of smoking behaviour in children has been under scrutiny for many years (Evans et al., 1977; Williams and Gilles, 1984). In the questionnaire, assessment of smoking behaviour was conducted via a query asking whether or not the subjects had ever tried to smoke a cigarette, even just one puff. Subsequent analysis revealed glaring inconsistencies in response rates over time. Of those who reported having tried to smoke in Reception, none said they have ever tried to smoke in Year 2.

This matter was not deemed to be particularly problematic, in light of the fact that it pertained to an insignificant percentage of the whole sample (less than 10%),

and consequently any deleterious effects to the nature of the research study were innocuous. Such inconsistencies did however, threaten the validity of this particular question, making one reticent to draw any conclusion from the data based on this information. Perhaps this serves as a reminder that smoking is a contentious issue with moral implications and that children are a special population, thus such anomalies are endemic to research in this area and must be taken into consideration.

Such inconsistencies in responses also called into question the necessity of including measures of smoking prevalence for this population. Although it may be interesting to know if children in their early years had tried to smoke, it was far more important to know what their beliefs, feelings and intentions about the habit were, as these variables potentially provide a more accurate indication of future smoking behaviour. In light of this, the question could have been omitted. However, what there was to be gained by leaving the prevalence question in, was an affirmation that the majority of children in their early years were non smokers. Moreover, because it has been shown that children are starting to smoke at younger ages, this question, although not essential for this particular study, may one day be relevant for this age group.

Irregularities in the responses to this question did not arise in the analysis of the cross-sectional study. It was only as a consequence of the comparative analysis of the consecutive results over the three years that brought to light this issue. This not only highlights the merits of conducting research longitudinally, it substantiates the utilisation of triangulation in this study.

Because a between-methods triangulated approach was adopted, the efficacy of the other questions in the survey was not contested. The majority of the other questionnaire responses were fairly consistent across time and the results were in concordance with, and thus confirmed by those of the various qualitative measures. This, coupled with the findings of Shute and colleagues (1981) that young subjects do respond honestly to questions about their expected use of

tobacco suggests that self-reported data can be valid and thus elicited a high degree of confidence in the validity of those other responses.

7.4 Changes In Responses Over Time

The replication of the between-methods triangulation, over a three year period was both a feasible and successful endeavour and provided further support to the findings of the cross sectional study. The consecutive results created an age-related profile of local children's perspectives of smoking, that was considered to be reliable and valid. For the most part, very little significant changes over time were evident from the questionnaire results but some notable differences did emerge from both the Draw and Write and interviews. Such distinction between the quantitative and qualitative results, coupled with the methodological issues discussed above, substantiates the assertion that '*Question and answer techniques ... do not provide much reliable evidence with children under the age of 9.*' (Wetton, 1987:60) nor do they ' *...readily provide insights into children's changing perceptions'* (Wetton et al., 1998 : 265).

In general, the basic tenets upon which children's perspectives of smoking were grounded did not alter over time. They appeared to be mainly augmented by the process of maturation, in conjunction with social experiences, such that the ensuing variations were essentially differences in the depth and breadth of responses. Natapoff (1978) in her developmental study on children's health beliefs found similar quality and quantity differences between year groups.

The age-related differences in children's conceptions of smoking that did emerge were similar to the findings of Meltzer and colleagues (1984) and lends credence to Piaget's Cognitive Stage Theory of Development. For example, the catastrophic view alluded to by Meltzer et al.'s subjects was a belief held by most children in Reception, as was the idea that smokers partook in the habit *'because they like it'*. Similarly, some children in Year 2 demonstrated an understanding of the adverse affects of smoking, both inside and outside of the body, in conjunction

with an awareness that the causes and consequences of cigarette smoking were multitudinous, that was analogous to Meltzer et al.'s (1984) concrete operational explanations.

Whilst the findings of the longitudinal study '*are clearly congruent with the theoretical expectations regarding the qualitative differences in the cognitive processes relied upon by children...* '(Meltzer et al., 1984: 53), the responses of the children in this sample did not strictly adhere to the stage concept of Piaget's cognitive-developmental theory. In spite of cognitive development, there appeared to be little distinction in responses for some inquires and an overlap for others. ***'Yellow teeth'***, for example, a characteristic response for preoperational thinkers, was mentioned most often in Year 2, when children as concrete operational thinkers ideally should be referring to specific internal organs.

What is necessary then, is to be aware that the perspectives on smoking that children in this sample held, emulated to some extent, the stage-like process inherent to Piaget's cognitive-developmental theory. However, it is apparent that the children's perspectives, as detailed in Section 7.7 and 7.8 of this discussion were also determined by their personal experiences and socio-cultural factors. This notion (Eiser, 1989) involves many of the principles of Bandura's cognitive social learning theory and also needs to be considered in the development of interventions strategies for this age range.

The lack of significant differences in children's perspectives over time, a consequence of the high level of agreement between year groups upheld the pre-study decision to explore the perspectives of the cohort sample as a group rather than individual subjects. Similar conformity in responses across age groups have been noted in studies on older children by Cohen et al. (1990) who surmised that the expected rate of change within some age ranges may not be sufficient to be perceived and Bhatia et al. (1993) who discovered little change in attitudes toward smoking between grade school children and adolescents, with regards to knowledge about health consequences of smoking. In contradiction, Kishchuk et al. (1990: 230) reported '*little intra-individual consistency in responses*' in their

sample of 6 year old children. They questioned the reliability of the methods used, which were quantitative in nature and expressed uncertainty about children of this age having stable attitudes and intentions to smoke that are indeed measurable. In light of what is known about the relevance of quantitative tools used on young children, it can be postulated that a qualitatively based methodology may have provided a more reliable means of assessment for their study .

The intra- and inter-consistency of responses found in the results of the longitudinal cohort study served to validate the efficacy of the tools chosen for the triangulated methodology. Evidently children interpreted the meaning of questions asked of them in a like manner, each year, despite maturity or increasing rapport with the researcher that inadvertently developed with each administration. This suggests that the variety of tools selected enabled the children to communicate in their own terms, at their own level, in a non-threatening way (Backett and Alexander, 1991), thus ensuring a true representation of their perspectives on smoking.

7.5 Changes In Patterns of Negativity

Over the three year period, the questionnaire results illustrated that the majority of the sample had as yet to establish regular patterns of smoking behaviour (non triers for each year group in ascending order = 90%, 95%, 95%), had extremely negative beliefs about children smoking (95% in Year 1 and 96% in Year 2 thought smoking was bad for children) but less negative beliefs about grown ups smoking (62% in Year 1 and 77% in Year 2 thought smoking was bad for grown ups) and generally had no intention of smoking when older (in ascending order = 67%, 81%, 90%). As previously mentioned, most of these results supported the findings from diverse research studies on an older population. For instance, Oei and Burton (1990) and (1991) Bhatia et al. (1993) concluded that most children between the ages of 7 and 9 are non smokers and hold negative attitudes about the habit and Bowen et al. (1991), in accordance with Young and Foulk (1985) attested that most children have no intention to smoke when older. Such findings

provide ample ammunition for advocates of early intervention, because it is common knowledge that it is easier to maintain an attitude than change one.

In a like manner to the questionnaire results of the cross sectional study, responses between year groups, albeit statistically insignificant, became more negative with the passage of time. This pattern was not prevalent in the research findings of the qualitative methods where perceptions of smoking remained negative but relatively stable over time. Such differences once again, illustrated the value of using a triangulated approach that enabled diverse aspects of the study to emerge from the different tools employed.

Although smoking research studies on older children, also indicate that children generally express negative attitudes about smoking (Goddard, 1990; Bhatia et al., 1993, Oei and Burton, 1990), by contrast, many reveal that these perspectives become increasingly more favourable with age (Schneider and Vanmastright, 1974; Botvin et al., 1983; Chassin et al., 1987; Michell, 1989). Only the Somerset Health Education Authority and Somerset Education Consultants with the Best of Health Project (1994) demonstrated a similar attitudinal trend whereby perceptions of smoking were most favourable for the younger age groups but less so for the older ones.

Several different reasons can be purported to explain this pattern. One possibility stems from the process of maturation. As children develop both cognitively and morally, they become aware of cultural expectations, of what society deems to be right and wrong. Since it is in their best interest to obey societal norms, they respond in a more socially appropriate manner, thereby according smoking with negative connotations. This may explain why some children reported smoking in Reception or Year 1 of the study but not in Year 2. Additionally, the concept of maturation could explain a similar phenomenon with regards to children's intention to smoke, whereby the percentage of children who intended to smoke decreased with age. Over time, the children probably realised that it was more appropriate or socially acceptable to say that they did not want to smoke when grown up and thus responded in a manner that conveyed this sentiment.

Another reason for the noted pattern of negativity could be an issue of methodology. The findings for this particular study seemed to suggest that more detailed and reliable data was accrued from the qualitative methods as opposed to the quantitative measure. One can speculate that survey research, already deemed the least appropriate method for gaining accurate information on the perceptions of young children did not provide a sensitive or suitable ambience that enabled children to put forth their point of view in a meaningful manner, thus the increasing pattern of negativity found in the questionnaire results could be a distorted perception.

It is difficult to posit explanations for the increasing negative trend towards smoking evident in the questionnaire results of the longitudinal cohort study because this area of research is uncharted territory. Perhaps it is a natural phenomenon that all children go through. It could well be that children starting their educational career had a more positive view of smoking because the majority of their time had been spent at home, under the influence of their parents, many of whom were smokers. Exposure to other influences, increased knowledge and the development of moral reasoning possibly fosters a change in perspective. Unfortunately, because there are no other studies that document the perspectives on smoking of children in their early years, a comparison cannot be made and this research to some extent is limited by its uniqueness. Research of a similar nature, with an identical cohort needs to carried out if an explanation for this pattern of negativity is be to found.

What is also necessary, on the other hand, is the continued tracking of the children involved in the longitudinal cohort study. It is highly probable, in light of Palmer and Lewis' (1976:402) promulgation that age 8 represents *'a critical period of change in children's health attitudes and behaviours'*, a supposition endorsed by Natapoff (1982: 139) on the basis *that '... children's health beliefs begin to differentiate into a coherent belief system ...'* around this age that the noted pattern will in all likelihood, alter as the children in the sample mature. In order to discover if this postulation holds true, it is imperative that the longitudinal study

continues to document the perspectives of these children, to discover if the prevailing negative trend is sustained or if indeed, the pattern falls in line with most research on older children, such that these children's attitudes toward smoking become more positive with the passage of time.

7.6 Changes in Knowledge and Perceptions

Although change in responses over time were essentially restricted to variations in the quality and quantity of answers, they were much more evident in the salient themes to emerge from findings of the qualitative methods. The Draw and Write Investigative Technique in particular, was sensitive to the subtle developmental changes that were occurring, an inherent strength of this research tool. However, age-related differences in responses pertaining to children's perspectives of smoking were also noted in the interviews. As children progressed from Reception to Year 2, their replies became more knowledgeable, more elaborate, and, in some instances more profound.

Despite the absence of any formal education on smoking, as verified during interviews with head teachers at all participating schools, the children in the sample demonstrated a broad understanding of the nature of the habit, one that became more sophisticated and accurate as they got older. Although these age-related differences were subtle, this evolution of knowledge can be attributed to cognitive development and social learning, the two mechanism that have much signification on children's attitudes towards smoking and has implications for when interventions need to be implemented; as early as possible and what they should include; more than just knowledge about the health consequences of smoking.

The findings from the study confirmed that much of what the children knew about smoking was based on what they saw and what they experienced; what was concrete and observable. Such reliance on perceptual data, was also recognised by Natapoff (1978) in her developmental study on children's views of health. This

notion applied in particular, to younger children and seemed to diminish with intellectual maturity; because children, as they experience new information, construct and reconstruct new meaning to their social world (Piaget, 1970). It was especially noticeable in responses relating to queries about the health implications of smoking or to inquires about where cigarette smoke went. For example, when in Reception, the children relied almost exclusively on what they could discern and thus, the majority responded accordingly; that smokers looked sick and that the smoke disappeared into the air. However, by the time they were in Year 2, some had the cognitive capacity to think abstractly and rationalised that the smoke entered the body and affected specific internal organs like the lungs and heart.

A similar *'transition of belief'* was noted by Eiser et al. (1986:122) in their assessment of age-related differences in the knowledge of the physiological effects of smoking in young children. Correspondingly, Bhatia et al. (1990) also discovered that 7 to 9 year children's awareness of the health hazards of smoking were correlated to different stages of cognitive development. Interestingly, Meltzer and colleagues (1984: 53), in examining children's understanding of the causes and consequences of smoking asserted *that 'the consequences or effects of smoking are more salient dimensions of this activity for our subjects than its definition and cause'*. Such a presupposition was also supported by the outcomes of the longitudinal cohort study. There was a consensus amongst all focus groups, that what children should learn about smoking should be centred around the health consequences of the habit. Incidentally, they felt that any smoking intervention strategies should be based on the health implications as well.

7.7 The Role of the Family

According to the theoretical causal model of the major influences on stages of smoking behaviour (Figure 1), the family is considered to have significant persuasion on children's attitudes, beliefs and smoking behaviour. The family furnishes an ideal social learning milieu for children. Parents, as the most

important significant others in young children's lives become effective role models both for healthy and unhealthy behaviours and attitudes. This axiom is endorsed by a myriad of research although Backett and Alexander (1991: 34), allege that '*... a lack of detailed empirical evidence about the processes involved*' in familial influence on health-related behaviours, in particular with young children exists, thus rendering the significance of the association inconclusive.

From the results of their study, Baric and Fisher (1979) maintain that parents serve as important role models and by observing them smoking, children are influenced to accept tobacco as a part of normal adult behaviour. In agreement are Shute et al. (1981), who contend that parents and siblings have a powerful effect on both the behaviour and desires of young children with regards to smoking, once again, via role modelling, as well as the ease of access to the habit. Oei and Burton (1990) discovered that parent's attitude toward smoking and their subsequent smoking behaviour influenced children's decision to try out smoking whilst Fidler and Lambert (1994), in assessing the impact of the adult role model, also gleaned that parents have the capacity to influence children's perceptions of smoking, to the extent that children who have smoking parents are more likely to intend to smoke when older. Charlton (1996) postulated that children's smoking behaviour is circularly related to that of their parents, such that children of smokers are more likely to become smokers themselves.

The results of the longitudinal cohort study generally paralleled to some degree, the research findings of the above mentioned studies. According to the results of the questionnaire, the smoking prevalence rates for parents remained relatively stable over the three years, on average 41% of mothers and 47% of fathers smoked, with the majority of smokers coming from the low to mid socio-economic classes. Interestingly, many of the children in the sample based their reports of parent's perspectives about smoking on their actual behaviour rather than their personal point of view. Hence, children of smokers were more inclined to believe that their parents had a positive disposition toward smoking. This finding lends credence to the old adage *'actions speak louder than words'* and

confirms Baric and Fisher's stipulation (1979) that the best way parents can influence children is by their own example.

This tenant holds true because, according to social learning theory, observation can lead to the imitation of models with whom children identify, those they admire and want to be like. It can be postulated that most children aspire to be grown up, like their mother or father, and thus they will learn to imitate the behaviours they perceive to be intrinsic to this time of life. Smoking, as the children themselves have attested is perceived to be such an activity. Although the children have as yet to take up the habit of smoking, they have assimilated the nuances of the habit vicariously and long after this exposure, when the proper context to perform the behaviour arises, they will potentially imitate the behaviour (Pellegrini, 1987).

Because of the inconsistent reporting for the question on prevalence, it was impossible to ascertain if parental smoking behaviour had any impact on the smoking behaviour of the children in this study. With regards to the other questions on the survey however, it would seem that parental smoking behaviour did have some impact on the sample's intention to smoke but for the most part, had little influence on children's beliefs about smoking. This is understandable in light of the fact that the negative beliefs, in particular for those pertaining to children smoking, were so pervasive, for each year group that it was impossible to detect the impact of any intervening variables.

Parental smoking behaviour did however, appear to have some sway, albeit indirectly on children's perspectives of smoking. It was discovered that the highest proportion of parents who smoked had children attending low SES schools and it was these children who were twice as likely to have positive beliefs about grown ups smoking and were more inclined to express a desire to try out smoking and to want smoke in the future. Additionally, the findings from the qualitative methods suggested that children themselves, had discerned the importance of familial influences on habit acquisition and further, had acknowledged that much of this was actualised via the mechanisms of social

learning, as a result of role modelling. The subjects of this study cited the imitation of mother and father most often as the rationale for where young people learned to smoke: *'off their parents'* as well as one of the main incentives for why young people want to smoke: *'to copy their mum or dad'*.

With regards to the qualitative findings, there was a lack of significant differentiation of responses within and even between each year group, in spite of familial smoking habits. It would seem that children from 5 to 7 years of age tended to think about smoking in a similar manner, regardless of the smoking context of their home environment. This lack of difference was a valuable finding.

Although the impact of television is often cited as an explanation for the elimination of such differences (Wetton and McWhirter, 1998), few children alluded to this medium as an influential factor in the longitudinal study. Perhaps this consistency of perceptions about smoking between all the children can be explained by Bandura's notion that imitative learning is based on 'configurations,' a combination of various different models (Pelligrini, 1987). Thus the observation and imitative learning process exceeds the confines of the family, especially as children get older, to the larger community. Children learn how to behave in this context by observing how others behave in that same context. Smoking is pervasive in our society and the constant exposure to the habit and observation of diverse models indulging in it enables the children to assimilate a universal perspective on the nature of smoking.

This universal perspective reflects the philosophical orientation of 'community approaches' to health promotion which are based on the principle that *'... the culture of a community has a deep and abiding influence on health'* (Steuart in Steckler et al., 1995:313) and acknowledges that ' ... *local values, norms and behaviour patterns have a significant effect on shaping an individual's attitudes and behaviours* (Thompson and Kinne in Steckler et al., 1995:313). The findings from the longitudinal cohort study demonstrated the pervasivness of cultural influences on all members of society, even those like children who occupy the least powerful positions in the wider community. They also support Eiser's (1989)

supposition that experiences and socio-cultural factors influence children's perceptions as much as cognitive development. Such revelations suggest that the way forward to effective health promotion interventions for children might well need to encompass the theoretical underpinnings of community development approaches to health.

7.8 Dichotomous Perspectives

Children's perceptions of the role parents play in the domain of smoking were coherent, ubiquitous and principally dichotomous in nature. Most of the subjects held divergent views simultaneously, namely that parents were seen to be the prime preventers of smoking, that is the main educators of anti-smoking messages at same time as being seen as the predominate reason why young people start to smoke. This view abounded, regardless of parental smoking status. Such an outcome confirmed the study findings that parental smoking behaviour was only indirectly associated to children's beliefs about smoking and advanced the postulation that the wider social world in which children interact also had significant influence on their perspectives on smoking.

Furthermore, it can be surmised that this finding was most likely a function of the innovative methodology used to acquire data from children. Because diverse tools were used, drawing on the individual results of each method to inform the protocol of the next, perceptions and ideas that emerged in the Draw and Write Technique for instance, could be extended and probed in further detail in the interviews and focus groups that followed. Hence, it was this process that enabled this dichotomous perspective to emerge.

Another dichotomous view, unique to the findings of this study that arose in relation to children's perceptions of smoking, had to do with children's beliefs about the adverse effects of smoking. Almost without exception, the children believed that smoking was far worse for them than adults. This two-tiered notion about smoking seemed to be founded in the perceived size differential between

children and adults. Children felt that the smallness of their bodies made them physically vulnerable to the health consequences of smoking whilst those of grown ups were big, thus strong enough to cope with the subsequent health implications. Moreover, the children in the sample were in tune to the fact that in a culture that condones smoking as adult behaviour, there were significant social taboos associated with young people smoking. The combination of these notions, in all likelihood, accounted for the prevailing perception that children in this age range considered smoking to be bad for children but an intrinsic part of adulthood. '*The social climate is crucial in reinforcing the idea among children that smoking is still a socially acceptable practice*' (Rylands et al., 1993:32).

These differences of opinion that children accorded to children smoking and adults smoking have not been explored in any research to date. They emerged initially from the results of the cross sectional study, spurring a modification of some questions in the longitudinal study, to enable an in-depth exploration of this two-tiered concept to take place. Subsequent findings in the cohort study for both the quantitative and qualitative methods highlighted the various dichotomous perspectives and justified the rationale for pursuing this line of thinking. This unique outcome which shed valuable insight into the manner in which children perceive smoking may well be rooted in cognitive or moral development but certainly demonstrated conclusively, that children's perspectives were also influenced by their wider social world.

The persuasiveness of these dichotomous perspectives of smoking suggests that they are crucial to the manner in which the concept of smoking unfolds in the minds of children and thus, must be taken into consideration when developing interventions. Further, their existence supports the advocates for early intervention. Children as young as 5 evidently harbour some deep-rooted ideas about smoking. They believed smoking to be exclusively an activity for grown ups because unlike children, adults are safeguarded from its adverse health effects by the invincible nature of adulthood. Such prevailing misconceptions need to be dispelled.

7.9 Influence of gender

The results of the cross-sectional study highlighted the need to assess the influence of two particular intervening variables related to children and smoking, namely gender and socio-economic status. Previous research has shown that both these factors have some impact on attitudes, beliefs and behaviour, at different stages of the developmental process of smoking. The findings from the longitudinal study were at best, inconsistent for gender and inconclusive for socio-economic status, which in essence, are similar to findings from previous work in this area.

In general, the findings from the questionnaire indicated that gender was somewhat related to smoking behaviour, and smoking intention but not to beliefs about the habit. Boys were most likely the ones to report having tried to smoke a cigarette and those most likely to cite intention to try out smoking now and in the future. Such results concur with risk behaviour theory (Hill, 1994) and the work of Baugh et al, (1982) and Cohen et al. (1990) to name a few, who found sex differences with regards to experimentation; boys it seems start to smoke earlier than girls. The current pattern whereby females not only equal the prevalence rates of males, but often surpass them did not appear in the findings of this study because most children in this age range had as yet to start smoking.

Although a slight gender bias did emerge from the quantitative data, no sex-based differences were perceptible in the resultant themes of the qualitative methods. As was the case with familial influences, gender did not have any discernible impact on these children's perspectives of smoking. Thus it seems that children of both sexes approach the age of experimentation with a similar mind set on smoking. Which factors impinge on this universal viewpoint that eventually lead to divergent patterns of prevalence in the future needs further exploration.

Interestingly, the children in the sample themselves had distinct impressions about the gender of smokers, which changed slightly but did not alter meaningfully over

time. Twice as many children thought men smoked more than women in Reception and Year 2, and at least one and a half times in Year 1. Although the responses were similar, the rationale behind the answers demonstrated age-related differences. With time, the reasons children had for this perceived gender bias became more elaborate, more diverse but also, more realistic. In addition, when in Year 2, the subjects were more likely to express uncertainty with regards to who they believe smoked more or proffered a neutral answer, saying both men and women smoked the same. Meltzer et al. (1984), contend that children are limited by absolutist thinking and personal experiences with regards to their opinions about who smokes such that if they see a certain person smoking, all members of that same group, in the minds of children smoke.

7.10 Influence of Social Class

Social class, as defined by the school the children in this sample attended accounted for very little variation in the sample's perspectives on smoking, despite its designation as a major influencing variable on the smoking behaviour of children (Figure 1). This finding was similar to others (Oakley et al., 1992; Glendinning et al., 1994) and comparable to those of the cross sectional study where no significant differences between children's responses were found, based on parental socio-economic status. However, the stated hypothesis that socio-economic status is an important intervening variable that indirectly influences children's perspectives on smoking did manifest itself in the findings of the questionnaire. Parents who smoked generally had children attending schools of low socio-economic conditions and it was these children who were twice as likely to have positive rather than negative beliefs about smoking. Further, it was mainly these same children who expressed an interest in smoking when grown up. It can be said then, that socio-economic status influenced the smoking behaviour of the parents in this sample, which in turn had some impact on the perspectives children had about smoking.

Subtle school differences were also noted and could perhaps account for some socio-economic differences found in the results of the study. It was the experience of this researcher that children from the low and mid socio-economically defined schools seemed to be more open, honest and much more worldly in their responses which were generally based on personal accounts. The experience of participating in the study was something new and exciting and consequently their approach was one of enthusiasm. Few discipline problems arose.

The children from the school with high socio-economic conditions, although much more articulate were also more difficult to work with. These children were more confident and inquisitive by nature but also less respectful. Interestingly these same children were the only ones who, for Inquiry Four in the Draw and Write Technique questioned or acted against a smoker. The girls from this school generally cited the 'right' responses, those most expected and those most appropriate whilst the boys, in particular in Year 2 seemed to be less serious about their participation and more inclined to give silly responses. For example, in the focus group interviews, when the boys were asked to comment on who they thought should teach children that smoking is bad for them, the response was *'us'*, followed by much laughter.

This lack of respect for the research process, is one possible explanation for some of the anomalies that emerged in the responses of the male subjects from high socio-economic conditions whereby their intentions to smoke increased rather than decreased over time. Because the greatest differential in responses seemed to occur specifically between Year 1 and Year 2, perhaps it was an attempt on the part of these male subjects to exert some sort of authority or control over the circumstance, thus they responded contrary to expectation.

Another particular insight of interest that did emerge occasionally from the results of the longitudinal cohort study in relation to school socio-economic status was the polarisation of responses between the sample in attendance at schools of low and high socio-economic status. For example, with regards to current intention to smoke, as expected half of all children who intended to try out smoking in the first

two years were in attendance at schools characterised by low socio-economic status. In Year 2 however, those expressing interest in trying a cigarette were equally divided among those children from the low and the high ends of the socio-economic spectrum. There did not seem to be any plausible explanation for this pattern, although when it did appear, it generally did so in Year 2, which suggests that it might be linked to the gender differences postulated above. Such a conundrum requires further investigation.

7.11 Overall Summary

The findings from the longitudinal cohort study provided a profile of local primary schoolchildren's perspectives on smoking and thus, facilitated greater understanding for the development of effective smoking prevention measures for local primary schools. Significant insights that emerged from the results highlight the need to implement smoking prevention strategies from Reception onward and reinforce the imperative that any programme created must be developmentally appropriate and more than just knowledge based. Further, the outcomes dictate that parents must play a role in any health promotion strategy that is developed.

The findings from the longitudinal cohort study were:

- this sample of children in their early years were essentially non smokers and expressed little intention try out smoking in the present or in the future

- the children in the study had negative attitudes about smoking which did not dissipate over time

- their understanding of smoking was rather comprehensive and fairly homogenous, influenced mainly by cognitive development and socio-cultural influences

- other variables that shaped children's thinking about smoking, to varying degrees, included parents, gender and school socio-economic status

- the sample held dichotomous views of the role parents play in the realm of smoking

- the children from this sample believed smoking to have greater health consequences for children than adults

- many of these children perceived smoking to be an inappropriate activity for children but an acceptable one for grown ups

CHAPTER EIGHT

SUMMARY AND CONCLUSIONS

8.1 Chapter Overview

This final chapter reflects back on the main aims of the study and elucidates on how the resultant findings add to the existing body of knowledge in the field of smoking research, child studies and health promotion. A reflection on what was learned about conducting research with children in their early years, what was discovered about children's perspectives on smoking and how the outcomes can contribute to the development of effective anti-smoking health promotion strategies is provided. Limitations to the study are articulated and finally, the chapter concludes with recommendations for further research.

8.2 Introduction

The aim of this thesis was multi-purpose: 1) to develop an appropriate methodology that would furnish the means to explore the perspectives that Liverpool primary schoolchildren have about smoking and 2) to provide greater understanding for the creation of an effective smoking prevention model. The findings not only contribute to the existing body of knowledge but challenge some of the prevailing assumptions about the ability to conduct valid research with young children.

8.3 Conducting School-based Research

Although a multi-method approach is common practice in research with young children ' ... *in an attempt to increase the accuracy, completeness, and understanding of the phenomena being studied*' (Deatrick and Faux, 1991: 205)

few, if any smoking studies have linked together the diverse child-centred methods implicit to this study. The value of utilising such an approach is immense.

The use of child-centred participatory methods made it possible to start where the children were at in their thinking about tobacco, to discover what their perspectives were about the nature of the habit. This is important because *'starting where people are at... is perhaps the most fundamental tenet of health education practice'* (Raeburn and Rootman, 1998: 91). Since each method chosen drew on a different dimension of the problem being investigated, the findings resulted in a 'world view' (Raeburn and Rootman, 1998) of how Liverpool children in their early years conceptualised and experienced smoking in the context of their own lives; one that differs significantly from adults. Such differences confirmed the need to conduct research within a child-centred paradigm that was conducive to and thereby gave value to children's perspectives.

This study has verified that children in their early years can be competent and legitimate constituents of the research process. This confirmation of their abilities to be 'reliable historians' (Gorman, 1980) has established the feasibility of conducting research with young children and the viability of adopting a 'grass roots' approach with this sample. It has also raised issues concerning the way models of health promotion are implemented in childhood . Kalnins et al. (1992) cite several examples of good practise from Canada and the United States. Others, like Child to Child Activities (1993), Empowerment Education (Wallerstein and Bernstein, 1988) and Shared Learning in Action (King and Occelstone, 1998) widely used in developing countries, have been inspired by Paulo Freire's theoretical perspective on empowering education. There is a need for the development of a child-centred health promotion strategy which acknowledges that children occupy a unique and vital role in society and that their needs should to be accommodated in a manner that best befits them.

Triangulating child-centred participatory tools is not only methodologically strategic, it has social and psychological advantages as well. The children

involved were made to feel that their contributions were crucial to the success of the study. The importance of what they thought was constantly stressed which was empowering. The entire process was enjoyable, non-threatening and worthwhile, as confirmed by the number of children who asked if they could be involved to a greater extent. Moreover, it was noted that the nature of the questions asked; questions that address the feelings and emotions of children such as *How do you feel when somebody smokes near you?* could in fact, help prepare children for similar type questions on school examinations.

The findings did bring to light some salient issues surrounding research methodology. In retrospect, it was obvious that the quantitative method was used to embellish a principally qualitative study rather than the equal and parallel integration of different methods, as originally outlined in Chapter Three. This inductive process is better exemplified by the model of integrating methods depicted below.

Figure 61. A Model of Integrating Methodologies (Steckler et al., 1992)

8.3.1 *Questionnaire*

Previous research has noted that questionnaires are ineffective means of measuring perceptual change in studies involving young children (Wetton and McWhirter, 1998). This, to some extent, was supported by the results of the longitudinal cohort study. Although it would be easy to dismiss the questionnaire completely, it did have a role to play in this study. The utilisation of the

questionnaire as the only tool to explore children's perspectives on smoking would have been inappropriate because using a singular quantitative method, in the context of childhood, is limiting and potentially unreliable. Within the triangulated framework however, the questionnaire provided a glimmer of children's thoughts about smoking rather than a panoramic view of their perspectives on the habit. The quantitative findings also determined the scope and direction for the qualitative methods.

One question that warrants further deliberation is how the questionnaire could be made to be a more useful instrument for assessment in child studies. The key may be the involvement of children in the process of questionnaire design. It is suggested that if the questionnaire was developed 'bottom up', constructed in collaboration with the subjects themselves, thereby giving them the latitude to define the issues of smoking that are important to them, it could become more reliable.

Children in their early years may lack the cognitive ability to develop an appropriate questionnaire without significant guidance but it would be possible to commence with a brain storming session, to help them focus to the task at hand and generate some ideas about the kinds of questions that they think need to be asked and answered. Certainly older children could accomplish such a feat. This questionnaire could then be administered to the younger children in a peer-led initiative. This participatory approach is a reflection of the 'child-centred' ethos that predominated this research and will be recommended as the best course for action, in any future work that is to evolve from this research study.

8.3.2 *Draw and Write Technique*

As a true child-centred participatory approach, the Draw and Write Technique provided invaluable information about children's perspectives on smoking and clearly illustrated how these ideas are influenced by the developmental process. There were however, some drawbacks to using this method. It was time consuming and labour intensive and the expectation of completing a picture and

a written response within a time limit was occasionally stressful. Further, the lack of time to colour in their drawings left some children unsatisfied or frustrated.

Because young children are limited by their inability to write down all their thoughts in detail, many were not documented. It can be assumed that they would probably provide more extensive responses given the opportunity to talk about rather than write down what they think. 'Drawing and Dialogue' (DAD) is a similar concept that has been used successfully by Shaver and colleagues (1992). The feasibility of adopting this approach with children in their early years, to explore their perspectives on smoking needs further investigation.

One issue that did emerge from the Draw and Write results but was not explored further was the role of 'image'. As a factor that motivates young people to start smoking, image was mentioned with increasing frequency as the sample grew older. According to Chapman and Egger (1993), anti-smoking campaigns must focus more on image and less on knowledge. They contend that such strategies need to convey an appealing non-smoking image, one to which children can identify. Farrell (The Sunday Telegraph, Sept. 25, 1994: 9) believes that health campaigns tend to forget about the cool image perpetuated by smokers. *'The anti-smoking message may be everywhere ... but a single supermodel with a cigarette in her mouth cancels out a thousand health promoters.'* Broaching the issue of children's image of smokers and establishing who their role models are and why they appeal to them might provide greater insight into who and what children value as important and possibly could furnish the image needed to front an effective smoking prevention campaign.

8.3.3 *Semi-structured Interviews*

The interviews provided an ideal forum for the in-depth exploration of children's perspectives about smoking. Content analysis was done thematically, grouping the salient ideas that emerged from the transcribed discussion under common headings. Such a task was feasible because the numbers involved were small and the interviews were relatively short. If this study were to be conducted with a larger sample, content analysis would be rather difficult. The utilisation of

computer programmes like NUDIST which are specifically designed to code, retrieve and make connections between categories of information and then formulate propositions (Miles and Huberman, 1994) would simplify the job but the workability of utilising such a programme in the context of this study needs to tested.

8.3.4. *Focus group interviews*

The viability of conducting focus group interviews with children in their early years was tried and tested in the longitudinal cohort study. Although the original impression was that little was gained, in hindsight, this proved to a productive endeavour. Because there is 'safety in numbers', the group environment was less intimidating than the one-to-one circumstances of semi-structured interviews and as such, it was found that the children were more verbose and in general, more responsive to the queries being posed. In circumstances where the aim of the research is not to examine individual differences in children, it is proposed that focus group interviews could be used with confidence, in place of traditional semi-structured interviews.

8.3.5. *Facilitating the Research Process*

School-based research with children in their early years can be complex and difficult. There are issues of access, administration, ethics, timing, and resources to name a few, that need to be dealt with on an on-going basis. As a consequence of conducting this research, the following valuable lessons were learned:

➢ Establish good lines of communication. As the gatekeeper to the school, little is possible without the approval and support of the head teacher. It is essential to develop rapport with the classroom teacher. Outline clearly what you need, who you need, when you need them and how long the process is expected to take. Maintain a sincere relationship with the children themselves, for without their willingness to participate, field work in schools would not be possible.

➢ Select appropriate methods that are easily accommodated within the confines of the school system and that are attractive to children.

➢ Be organised. Time is of the essence and it must coincide with that of the school day. Children are entitled to several breaks and such factors need to be considered. Implement time saving measures like the pre-coding of materials and the recruiting of assistants.

8.4 Children's Perspectives On Smoking

Some of the fundamental points about children's perspectives on smoking that emerged from the research were not surprising nor did they reflect new insights. In fact, many of the findings were similar to what is currently known for older children. That these outcomes concurred only strengthened the belief that the chosen methodology was a valid and reliable means of collecting information about children's perspectives and because the process by which this information was garnered was novel, the outcomes were substantive. Furthermore, the dearth of smoking information for the early years means that the results are filling a void, providing much needed empirical evidence on a previously neglected subject group.

The study findings established that the majority of children in the sample were non smokers, expressed little intention to smoke and had attitudes and beliefs about smoking that were eminently negative and unwavering in nature. Collectively, these children possessed a tremendous amount of smoking-related knowledge, far more than is recognised by most educationalists. This knowledge base was very similar within age groups suggesting that the environment had a significant impact on children's thinking about smoking. Because young children rely mainly on external cues to inform their thoughts processes, their perspectives are learned from observation and experience, in line with their own cognitive abilities. Most of the subsequent changes between age groups were largely in depth and breadth of understanding about smoking; much of which

could also be accounted for by cognitive development and socio-cultural influences.

The results shed light on certain aspects of children's perspectives about smoking that are not documented in the literature. The children in the sample harboured several dichotomous views of smoking. Firstly, they believed that smoking was much worse for children than adults because adults were big enough to cope with the health implications. Secondly, they were of the opinion that smoking was inappropriate for children but often, an acceptable activity for adults. Lastly, the children viewed parents as the primary agents of smoking prevention as well as the primary influence behind young people's motivation to smoke.

It is now evident that children in their early years have a distinct point of view about smoking, one that is influenced by age, experience and environment. It means that they think about tobacco in a manner different to older children and adults. This finding is important and has significant implications on the development of effective anti-smoking interventions. Traditional health promotion strategies that aim to educate children about abstract concepts like the consequences to health would be meaningless to young children. Ironically, it is precisely this type of education that the Government is advocating in their new drugs strategy.

8.5 Implications For The Development Of Smoking Prevention Strategies

The research findings have made it possible to identify elements that may be important to the development of effective smoking prevention strategies. In particular, knowledge was enhanced and understanding clarified on issues of timing, focus and content, the conceptual and contextual framework and the delivery process of an intervention.

8.5.1 *Timing of Intervention*

The depth and breadth of children's knowledge about smoking, substantiates the premise that smoking prevention should commence early. It is evident that children come to school well informed about the nature of smoking, coupled with largely negative attitudes about the habit. It is imperative that efforts to maintain this negativity are maximised, such that children's attitudes toward smoking will continue to remain negative, as they approach the age of experimentation.

The implementation of early intervention has yet to be embraced wholeheartedly in the United Kingdom. Few actually endorse the notion. The reluctance to involve young children in anti-smoking activities is fuelled by the fear of raising greater awareness which in turn, might stimulate interest and lead to experimentation (Hurry and Lloyd, 1997). The research findings from this study clearly indicated that the awareness is already present in young children, thus this apprehension is unfounded. In fact, it is imperative that we acknowledge this awareness, that we implement 'proactive' measures focused on addressing the problem of smoking before the habit manifests itself, to avoid the 'limited contribution' (Reid, 1996) of conventional models of smoking prevention that traditionally target older children.

8.5.2 *Focus and Content of Intervention*

The prevalence of smoking in society and its impact on children's perspectives about the habit suggests that tobacco needs to be acknowledged in the curriculum as an issue of significance within its own right. To some extent this is happening already. The new drugs strategy provides a framework for implementing a proactive health promotion initiative from age five onward. However, unless this action is included as a specific target in Key Stage 1 of the National Curriculum and supported by the appropriate policies, the likelihood of success is minimal.

The issue of addressing tobacco within a drugs programme has bearing on the focus of the intervention developed, either tobacco-specific or comprehensive. There is evidence to suggest that both concepts have particular strengths and

weaknesses (Health Canada, 1994), but there is significant support for the comprehensive approach, in light of evidence that health risk behaviours are related and thus could be tackled by a broad substance misuse initiative (Reid et al., 1995; Little, 1997). The appropriateness of tackling smoking in this broader context merits consideration.

Tobacco and alcohol hold an esteemed position in society and as a consequence, children and adults generally do not consider them to be drugs. The preferential treatment given to these so called 'acceptable' narcotics needs to be addressed. Situating smoking in the broader spectrum of drug misuse may have little impact if it is not perceived as such. Perhaps a smoking-specific preventative measure, set within the larger context of a comprehensive drugs programme would be a more effective health promotion strategy; thereby giving tobacco the special attention it deserves whilst enforcing the message that it is in fact, a drug.

Without question, any smoking prevention endeavour for the health promotion of children must be developmental in nature. This research study verified that children's perspectives on smoking move from the concrete to the abstract over time and thus, prevention strategies should be tailored accordingly. Furthermore, the proposed intervention should also parallel the changes in children's stages of smoking. The different influences on smoking behaviour that prevail at the different stages need to be accommodated.

The development of any health promotion initiative must reflect the intrinsic characteristics of the target group. Children for example, are egocentric, cognitively limited, perceptually oriented, easily influenced and easily distracted, making them more receptive to concrete, hands-on activities. These distinctive features of childhood need to be taken into account in the fabrication of an effective prevention measure.

Children are *'bound up in the world as it is'* (Flavell in Oei and Baldwin, 1992: 161), so that much of what they believe about smoking is based on what they see. An anti-smoking initiative will need to focus on tobacco issues that have been identified by and thus are meaningful to children, such as not getting burned,

being a better sports person, not smelling like smoke, easing their asthma or not being bullied into having a cigarette. The model must attempt to dispel the misconceptions that children have about smoking, such as the belief that tobacco is less harmful to grown-ups because of their size, in a compassionate manner so as not to distress the children whose parents smoke.

This research work has confirmed the fact that children view smoking as an intrinsic part of adulthood. Many, as they age also become conscious of the positive image that smokers perpetuate. To combat this normalisation of tobacco, to make young people see that it is 'cooler' to be a non smoker than a smoker, it is proposed that a 'social denormalization' philosophy underpin any conventional strategy that is created. The concept of social denormalization, *'... an all-out campaign to take the normality out of smoking ...so smoking is not a normal behaviour by rational people'* (Carey, 1996: F7) is au courant in North America. For maximal success, it is essential that such community-based campaigns must complement whatever strategies are occurring within the school setting.

Because children have short attention spans, anti-smoking messages should be largely visible and continuously reiterated for increased effectiveness. Consequently, any programme developed needs be embedded in the spiral curriculum and revisited constantly throughout the children's scholastic career. It is recognised that the time constraints imposed by the demands of the national curriculum make it difficult to implement a comprehensive prevention programme which receives continual attention. Greater parental and community involvement in programme delivery may ease the workload on the teacher and could foster a more successful initiative (Cushing, 1998). Interestingly, simple ways to reinforce anti-smoking messages without intensive instruction whilst recognising children's penchant for visual cues were put forth by some children at a conference *Addressing The Issue Of Tobacco And Young People* (London: June 12, 1998). Their suggestions included putting up posters in schools and shops, passing out leaflets to children in school, the dispersal of free computer discs detailing the dangers of smoking and the installation of anti-smoking screen savers for school computers; to remind children not to smoke every time they use the computer.

The perception of what health promoters and educationalists see is needed in an intervention may not be what children themselves perceive is needed. Historically, a *'softly softly'* approach to smoking prevention has been taken with children. Previous research (Dalli, 1996) has shown that some teachers are hesitant to teach about certain aspects of smoking for fear of causing distress to children by insinuating that their parents will die. Based on the study findings, such reservations may be unfounded. Many children do not believe that smoking is necessarily bad for grown ups. This of course, is confirmed every time they witness someone who is alive and well, light up a cigarette and smoke. The visual message, in this case: *I am fine and I look healthy even if I smoke* has far more relevance to children than the abstract message that it is bad for one's health.

It is interesting to note that when asked to consider the best ways to keep the young from taking up the habit, most children suggested a far more radical approach to smoking prevention than is currently accepted in the realm of health promotion. Heavy emphasis on the health implications was deemed to be the best strategy in the minds of children in their early years. ' ***I'd teach them not to smoke because all black stuff goes all your lungs ...the heart will stop beating and your teeth could go all horrible.' 'The man might shout at them and say never ever smoke cause its bad for you and you might die.'***

Young people themselves condone a similar course of action. At a conference on young people and smoking, Jones (1998) suggested that the key to prevention is to *'let them see things for real ... getting someone with a smoking related disease like lung cancer to go and visit the schools and talk to the children about how they feel now ... I dare say that this will affect their thoughts on smoking.'* This perspective cannot be ignored and requires further investigation on what should be taught and how it should be done, now that the outcomes of this research study have established why anti-smoking measures are necessary for children in their early years.

This fascinating insight into children's perspectives of smoking gives ammunition to those who advocate 'scare tactics' as a method of prevention. Since young children rely so heavily on perception then maybe they need to 'see' the implications to health caused by smoking rather than just hear about it. Once a popular prevention strategy, such an aggressive approach which is fraught with numerous ethical and psychological connotations is now experiencing a resurgence (Hill et al., 1998) as evidenced by the Health Education Authority's National Smoking Education Campaign that uses shock tactics in a television campaign aimed at young people (Breakfree Bulletin, January 1998).

The overall findings from the research emphasised the homogeneity in children's thinking about smoking and this implies that the strategy developed can be based on a core of messages distinguished by the children which are extended and expanded upon, in the ensuing years. It will need to provide the children with the skills, the knowledge and the confidence to be decisive about smoking and should offer other alternatives to such health risk behaviour. Further, involvement and participation on the part of the children should be maximal and activities need to be interactive so as to foster interest and empowerment.

Although smoking is a ubiquitous influence in their lives, most children do not perceive it to be an issue relevant to them. Smoking is something grown ups or people who want to be grown up do. In view of this perspective and coupled with the knowledge that children are egocentric, it is surmised that any anti-smoking strategy that is devised needs to personalise the problem of tobacco, to make it an issue pertinent to children, to demonstrate how smoking impinges on their lives, to highlight how their choice of behaviour affects those around them and to help them decide what they can do about it.

8.5.3 *Conceptual Framework of the Intervention*

Smoking is not an isolated behaviour and should not be addressed by a single isolated health promotion approach. It would seem that a combination of several might produce the most conducive anti-smoking strategy. Oei and Baldwin (1992) contend that an effective smoking prevention initiative must be structured

to incorporate aspects from four theoretical bases: rational basis, social reinforcement basis, social norm basis and developmental basis. This recommendation is sound and should be used as a guide to intervention development.

This study has shown that children have the capability to participate meaningfully in their own health promotion. Their inclusion in the research process has enabled the children to identify relevant issues and perceived needs, now the children need to acquire the skills and the confidence to act upon them. This process perpetuates the notion of empowerment.

Empowerment, according to Tones (1997), is concerned with the reciprocal relationship between individuals and their environment. The study illustrates that there is little reciprocity between children and their environment as the children are largely influenced their social world but have little impact on it themselves. This imbalance of power needs to be redressed and it is suggested that the way forward is the creation of a smoking prevention strategy that attempts to amend this powerlessness.

One approach that embraces the notion of empowerment and caters to the amendment of powerlessness is community development. Other principles central to the concept of community development include the collective and active participation and involvement of individuals in issues that directly affect them, the development of power, skills, knowledge and experiences to enable them to tackle their own problems, a holistic process that allows people to identify and prioritise their own needs and the provision of an infrastructure to help meet their needs and achieve the desired outcomes (Sidell, 1997).

Upon reflection, it becomes apparent that many of the notions inherent in this research study embody the fundamental tenets of community development. The research design was holistic, involving the participation of the children themselves, allowing them to identify their own perspectives and to highlight the issues that were relevant to them. Further, the recommendations for intervention development based on the outcomes of the study findings also purport some of

the notions intrinsic to such an orientation. It has been asserted that any strategy developed needs to involve the active participation of the children themselves, that it should foster empowerment and ameliorate powerlessness, that it should involve the development of skills and knowledge and confidence. The success of this research study has confirmed the viability of using a 'grass roots' approach with children in their early years. On this basis, it is asserted that a smoking prevention model developed should be underpinned by the philosophical tenets of community development approaches.

8.5.4 *Delivery of the Intervention*

There is much debate about who should deliver smoking prevention messages. Some like Oei and Baldwin (1992) contend that parents of children under 10 are the 'best agents' of education primarily because of their role modelling influence. In theory, this course of action seems appropriate considering the research findings which indicate that the children themselves recognise parents as the primary anti-smoking educators. In practise however, such a ideal is much more difficult to implement.

Parents may not see themselves in the role of smoking education and may not have sufficient knowledge, time or confidence to act in this capacity. According to study results, few parents actually talked to children about smoking. Much of what was learned was vicarious rather than the consequence of in-depth discussions about the habit. Furthermore, parents like most adults, probably underestimate the depth and breath of children's knowledge about smoking and possibly, would not address the issue spontaneously. In addition, the hypocrisy of telling children not to smoke when many parents themselves smoke may be an unreasonable expectation.

The practicality of having parents deliver anti-smoking education is also questionable and has been found to be unfeasible in some programmes (Nancy Hobbs, personal communication, July 1998). However, in a review of innovative health promotion strategies that try to integrate school activity with wider community practice, Nutbeam (1992) concluded that parental involvement is

possible and beneficial, not only to school health education but to the health of the parents as well. Moreover, this strategy would alleviate rather than add to a teacher's work load, a benefit that all teachers would gladly appreciate.

It is imperative that parents become partners in the health promotion process, to bridge the interface between home and school so that the health messages learned in school are reinforced in the home. Such congruency of information alleviates the disparity that many children encounter; that what they are taught in school (*smoking is bad*) is in contradiction to what they perceive at home (*mum and dad enjoying a cigarette*). Based on the well known adage that *'actions speak louder than words'* it is easy to surmise which message has a more resounding impact on young children.

In view of the fact that almost half of the parents of children involved in the study were smokers, a more practical approach to health promotion may be the provision of smoking cessation programmes for parents. It can be presumed that as long as parents continue to smoke, children will continue to take up the habit so that they can ***'be like mum and dad'***. To break this family cycle of smoking (Charlton, 1996), the needs of the parents must be addressed along side the needs of the children. This course of action is sanctioned by Vartiainen et al. (1998) who conclude that the efficacy of school-based prevention programmes are increased when associated concurrently with a community-based cessation programme for adults.

Teachers traditionally are given the task of educating children about health. There was little scope in the present programme of research to involve teachers and this is now considered to be a limitation to the study. With a view to providing greater understanding for intervention development, involving teachers would be a good idea and certainly recommended for future work. According to Macdonald (1997), it is necessary to understand the value system that is operating in the school and teacher's own attitudes, beliefs and behaviour, to facilitate the adoption and dispersal of new health promotion tools within the educational system. Green (1998) confirms that teacher involvement encourages acceptability and fosters empowerment and adds that their input is crucial to the

development of a successful strategy that can work within the boundaries of the current national curriculum.

8.5.5 *Context of the Intervention*

In light of the premise that one's physical and social environment endows them with their health beliefs and behaviour (Baric, 1998), it is suggested that any smoking prevention measure, to be successful needs to be set within the context of a health promoting school. In agreement are McWhirter and colleagues (1996) who maintain that strategies are most likely to be effective if they are grounded in the ethos of the health promoting school.

> *The health promoting school aims at achieving healthy lifestyles for the total school population by developing supportive environments conducive to the promotion of health. It offers opportunities for, and requires commitment to, the provision of safe and health-enhancing social and physical environment. A health promoting school will, through its management structures, its internal and external relationships, the teaching and learning styles it adopts and the methods it uses to establish synergy with its social environment, create the means for all who live and work within it to take control over and improve their physical and emotional health* (Rasmussen et al., 1996:3).

The main tenets of the health promoting schools are similar to those purported by community-oriented approaches and thus would complement the philosophical underpinnings of a strategy developed within this theoretical framework.

School based strategies are limited (Reid et al., 1995; Stead et al., 1996) and should not be expected to be the panacea for deterring children from starting to smoke. Because health promotion is a shared responsibility, any school-based health promotion strategies developed should be multi-agency, a coalition comprising the individual, the school, the home the community and the media. Ideally what is needed is a collaborative effort from all so that one congruous

message is being delivered. Findings from the Minnesota Heart Health Programme of 1989, a community-wide smoking prevention strategy has shown that a community focus to anti-smoking education diminishes the inconsistency between what is taught in the classroom and what transpires in the real world (Lynch, 1995).

Health promotion strategies, in order to be effective are also contingent upon the political process. Tackling the issue of smoking among the young requires more than the 'right' intervention, it must be sanctioned by the Government. Policies that address the problem need to be developed, implemented and adhered to if there is to be any hope of combating the increasing prevalence of smoking. Moreover, if early intervention is to have any hope of succeeding, smoking prevention education needs to be given priority in Key Stage 1 of the National Curriculum.

8.6 Limitations Of The Research

This research study has been instrumental in providing much needed information about the perspectives children in Liverpool have about smoking. Whilst such knowledge will eventually be used to underpin the development of smoking prevention strategies for the primary schools in the area, the extent to which the findings are generalisable has not been measured. Local knowledge may not have any relevance beyond the Liverpool area and therefore any aspirations to develop interventions nationally would be inappropriate.

As previously discussed, this research study is to some extent, also limited by its own uniqueness. The age range of the present study has meant that a comparison with other work has not been possible and thus it is difficult to assess if the resultant findings are indeed universal to all primary schoolchildren in their early years or just particular to children living in Liverpool. To authenticate the results, it is imperative that the study be replicated elsewhere. In addition, it is necessary to continue to track the perspectives of the children in the present study, to see if their attitudes toward smoking eventually align themselves with those of older

children. If this is the case, the findings from the early years research will have great significance.

The sampling frame may also be considered an impediment to this work. Contrary to the questionnaire findings of the cross-sectional study where most of the associations explored were statistically significant, such significance did not emerge in the questionnaire results of the longitudinal cohort study. The best rationale proffered for this difference is sample size. It may be that the sampling frame (N=145) was insufficient. Alternatively, as proven by the other methods, few changes occurred over time therefore changes of significance would be imperceptible.

The role of significant others in this research needs to be reconsidered. Parents were involved to a limited extent in the cross-sectional study and teachers were excluded completely. As outlined above, these omissions should be rectified in any further developments from this work. Ironically, although data was collected on both siblings and peers, neither group figured prominently in the results of this study despite their known influence in the process of smoking acquisition. It is expected that the peer group will become a major determinant as the subjects approach the age of experimentation but this certitude does not extend towards brothers and sisters. It is suspected that one reason why the impact of siblings was negligible for this study is because the majority were younger than the subjects themselves and thus did not factor into the equation at all. The only way to authenticate this premise is in future, to document the ages of the sample's siblings. Asking the ages of peers would also be useful as it is probable that children who report having friends who smoke, interact with older children.

8.7 Recommendations For Future Research

Suggestions for further work based on the outcomes of this research mainly concern the extension and expansion of the study. The necessity of extending the longitudinal cohort study is crucial in view of the possible changes in health beliefs and behaviours they may arise as the sample approaches age nine. As the

children in this sample inadvertently progress through the stages of smoking initiation and experimentation, it is important to document who become smokers and who do not. If children who do take up the habit are indeed the same children who expressed intention to do so in their early years, this would suggest the need to target smoking prevention programmes specifically for this high risk group.

Extending the present study would also enable the investigation of other influencing variables in the stages of smoking to be taken into account. The effect of intrinsic personal factors like self-concept, self esteem, self efficacy, self-image and personality on attitudes, beliefs and smoking behaviour of these subjects could to be determined. Furthermore, a follow-up study of the children in the longitudinal cohort study could culminate in a 'indicators of risk' profile whereby a composite score assigned to each child based on a range of risk factors could possibly predict which children are most likely to become future smokers. It would be prudent however, to 'top up' the original longitudinal cohort sample involved in the qualitative components of the study (N=30) with an equal number drawn from the same population, to avoid attrition and to extend the possibility of tracking individual differences over time.

Another recommendation would be the conduction of similar work, at the regional or even national level. The expansion of this study is needed to see if the congruence in children's perspectives on smoking are universal or heavily influenced by their socio-cultural experiences. Based on Lynch's assertion that *'We all have personal constructs - our own set of values - through which we interpret our experiences and which we use to describe the world we live in. Different life experiences lead us to develop alternative perspectives'* (Lynch, 1995: 5), it can be hypothesised that children living in areas with different socio-demographics from those found in the Liverpool region (high deprivation, high unemployment and high smoking prevalence) may have different perspectives on smoking. The documentation of such differences in children's thinking about smoking is imperative if any effective school-based interventions developed are to be tailored according to the perspectives that children have about the habit.

As the outcomes of this research have contributed to a better understanding of how smoking interventions should be developed for primary schoolchildren, it is surmised that the development of such strategies could begin. It is suggested however, that the definitive work be delayed until such time as the data has been analysed for age nine. If significant differences are discerned for at this age, it would suggest that one developmentally-based smoking prevention strategy could be constructed for the early years and that different ones would need to developed for the ensuing years.

8.8 Conclusions

If we endeavour to provide the children of today with the tools to make informed choices about smoking and the motivation to remain smoke-free, it is imperative that we give them a voice. We need to engage them in dialogue, give them the opportunity to express their views from the context of childhood. We must accord these views with the respect and legitimacy that they deserve. We need to listen to what children have to say, and we need to utilise their perspectives as the foundation on which to develop appropriate and effective anti-smoking interventions. To accomplish this end successfully, we must collaborate with children. We need to involve them at all levels of the research process. We must allow them to have ownership of the issue of tobacco, an issue that is endemic to this period of their lives and thus, needs to be defined by them, directed by them and driven by them.

Affording children the opportunity to take responsibility for the issue of tobacco, engenders the notion of empowerment which in turn, should foster the development of more effective strategies that will help stem the growing tide of increasing prevalence in the rates of smoking among the young. This process however must not become an act of tokenism.

Tessa Jowell, the Minister for Public Health recently announced a national competition for children to design the cover of the Government's forthcoming White Paper on Tobacco because she '... *want[ed] to involve children in the*

production of our anti-smoking strategy from the start - if they feel that they have made a contribution and have a stake in it, they are more likely to identify with the messages we want to communicate' (ASH, 1998b: 22-23). If the Minister for Public Health wants children to contribute to and identify with the messages in the White Paper, then it is imperative that the children are asked to contribute to and identify these messages themselves, not just to colour the front page. This is a poor and denigrating attempt at involving children in the process. It ignores children's ability to articulate their own ideas about smoking and is likely to fail in its attempt to reach the children.

In conducting this research on the perspectives that Liverpool primary schoolchildren in their early years have about smoking, much was learned and the quintessential aim, to provide understanding to facilitate the development of effective health promotion smoking prevention initiatives was achieved. We now know that local primary schoolchildren have well informed perspectives on smoking that are influenced by their own cognitive development and their own experiences in the wider social world. In general, these perspectives are negative, homogenous and in some aspects, dichotomous. Such perspectives are intrinsic to childhood and this point of view needs to be accommodated if we hope to succeed in overcoming the 'paediatric epidemic' of tobacco with effective health promotion strategies.

To best facilitate this process we, the 'so called' experts need to heed the words of an ancient proverb which says '*Here's to the child and all he has to teach us*' and to recognise that those most qualified to create an effective model for smoking prevention in the primary schools are in reality, the children themselves.

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Appendix One

Letter of Introduction

Liverpool John Moores University
School of Human Sciences

Dear Parents of St. Patrick's School:

As you may know, smoking has become a serious health issue. Liverpool in particular, has a very high lung cancer rate which is mainly due to smoking. There is a growing concern about the number of children who start to smoke while still at school. Therefore, the Institute For Health at John Moores University is undertaking a research project funded by **The Lung Cancer Fund-Roy Castle Cause For Hope Appeal** to look at *attitudes, beliefs and smoking behaviour in local primary schoolchildren* (5 to 8 years of age), in hopes of developing an effective smoking prevention programme for health education.

The smoking project requires children to fill in a short questionnaire. It will take place at the school and we would like permission for your child to participate in this research. Please fill in the form attached and return it to the school as soon as possible. We would also be grateful if you would fill in the brief questionnaire found below the permission form. This information will help us to better understand how children develop their attitudes and beliefs towards smoking. As agreed with your Head Teacher, if this form is not returned, your child will automatically be included in the project.

All information gathered from both you and your child for this research will be confidential and treated as anonymous. Please feel free to contact me at the Institute For Health (051-231-4072) at any time if you have any questions or concerns about the smoking research project.

Thank-you for your help and co-operation.

Yours Sincerely,

Lorna Porcellato

Director of School | **Professor Tom Reilly** BA Dip PE MSc MIBiol PhD FErgS | Trueman Building 15-21 Webster Street Liverpool L3 2 Telephone 051-231 2121

Appendix Two

Consent Form and Parental Questionnaire

Liverpool John Moores University

CAUSE FOR HOPE APPEAL

Roy Castle

I **DO / DO NOT** (please delete as appropriate) GIVE PERMISSION

FOR _____ TO PARTICIPATE
(child's full name)

IN THE SMOKING RESEARCH PROJECT.

_____ _____
(parent's signature) (date)

PARENTS QUESTIONNAIRE

YOUR REPLY WILL REMAIN CONFIDENTIAL AND ANONYMOUS

- My child's name is: _____
- My child's school is: _____
- My child's date of birth is: _____
- I am the child's:

  mother ☐ father ☐ other _____ ☐

- My occupation (if any) is: _____
- My husband/ wife/partner's occupation (if any) is: _____

(PLEASE TURN OVER)

•Tick the box which best describes you.

I have never smoked a cigarette/cigar/pipe ☐

I have only tried smoking a cigarette/cigar/pipe a few times in my life ☐

I used to smoke cigarettes/cigars/pipe but I do not smoke at all now ☐

I usually smoke less than 1 cigarette/cigar/pipe each day ☐

I usually smoke 1 to 6 cigarettes/cigars/pipe each day ☐

I usually smoke more than 6 cigarettes/cigars/pipe each day ☐

•Tick the box which best describes your husband/wife/partner.

He/She has never smoked a cigarette/cigar/pipe ☐

He/She have only tried smoking a cigarette/cigar/pipe a few times in their life ☐

He/She used to smoke cigarettes/cigars/pipe but does not smoke at all now ☐

He/She usually smokes less than 1 cigarette/cigar/pipe each day ☐

He/She usually smokes 1 to 6 cigarettes/cigars/pipe each day ☐

He/She usually smokes more than 6 cigarettes/cigars/pipe each day ☐

•Tick the boxes to indicate which members of your family smoke cigarettes/cigars/pipe.

	YES	NO	DON'T KNOW
daughter (s) smoke	☐	☐	☐
son (s) smoke	☐	☐	☐
mother (s) smoke [child's grandmother]	☐	☐	☐
father (s) smoke [child's grandfather]	☐	☐	☐
other relative (s) smoke	☐	☐	☐

•How many smokers live in the same house as your child?

none ☐

1 ☐

2 ☐

3 or more ☐

COMMENTS: _____

_____

THANK YOU FOR FILLING IN THIS QUESTIONNAIRE

LIVERPOOL JOHN MOORES UNIVERSITY•15-21 WEBSTER ST.• LIVERPOOL L3 2ET• 051 231 4072

Appendix Three

Children's Questionnaire

SCHOOL: _____ NUMBER: _____

Liverpool John Moores University

CAUSE FOR HOPE APPEAL Roy Castle

TICK **ONE** BOX FOR EACH QUESTION ☑

1. I AM A ☐ GIRL ☐ BOY ____

2. I AM _____ YEARS OLD. ____

3. HAVE YOU EVER TRIED TO SMOKE A CIGARETTE, EVEN JUST ONE PUFF?

☐ YES ☐ NO ____

4. HOW MANY TIMES HAVE YOU TRIED TO SMOKE A CIGARETTE, EVEN JUST ONE PUFF?

_____ **TIMES** ____

5. DO YOU WANT <u>TO TRY</u> TO SMOKE A CIGARETTE, EVEN JUST ONE PUFF?

☐ YES ☐ NO ☐ DON'T KNOW ____

6. DO ANY OF YOUR SCHOOL FRIENDS SMOKE?

☐ YES ☐ NO ☐ DON'T KNOW ____

7. DOES YOUR MOTHER SMOKE?

☐ YES ☐ NO ☐ USED TO SMOKE ____

8. DOES YOUR FATHER SMOKE?

☐ YES ☐ NO ☐ USED TO SMOKE ____

9. IF YOU HAVE SISTERS, DO ANY OF THEM SMOKE?

☐ YES ☐ NO ____

10. IF YOU HAVE BROTHERS, DO ANY OF THEM SMOKE?

☐ YES ☐ NO ____

11. DO YOU THINK SMOKING IS GOOD OR BAD FOR PEOPLE?

☐ GOOD ☐ BAD ☐ DON'T KNOW ____

12. DO YOU WANT TO SMOKE WHEN YOU GROW UP?

☐ YES ☐ NO ☐ DON'T KNOW ____

THANK YOU FOR FILLING IN THIS QUESTIONNAIRE

Appendix Four

The Draw And Write Technique Guide

INSTRUCTIONS FOR DRAW AND WRITE

- **EXPLAIN TO CHILDREN HOW THE ACTIVITY WILL BE ORGANIZED**
- **REMIND THEM OF THE IMPORTANCE OF THE ACTIVITY**
- **THERE ARE NO RIGHT OR WRONG ANSWERS-TRY YOUR BEST**
- **REMIND THEM TO WORK QUIETLY SO THEY CAN HEAR THE QUESTIONS**
- **READ INSTRUCTIONS 2 TIMES AND DRAW AFTER THE SECOND TIME**

INSTRUCTIONS TO DRAW AND WRITE	REMINDERS TO THE CHILDREN	POINTS OF CAUTION
INQUIRY 1: Draw a person smoking a cigarette. Think about the smoke and where the smoke is going. How does your person look and feel? •Write where the smoke is going? •Now write how your person looks and feels.	•Draw as quickly as you can. •Don't spend too much time on drawing the background. It is the people and what they are doing that we want to see. •Do not shout out your thoughts-keep them to yourselves. •If you need some help, raise your hand, and your teacher or I will come to see you.	•Do not give hints, reminders or suggestions. •Write down exactly what the child says even if it does not make much sense.
INQUIRY 2 This time draw a person who has been smoking for a <u>long</u> time. How can you tell from the inside of the person's body that your person has been smoking for a long time? •Write down how you can tell?	•Remind children of the task by repeating the question-HOW CAN YOU TELL? •Emphasize <u>INSIDE</u> the person's body.	•Remind them to raise their hand if they need help with the writing. • They can colour the pictures at the end if there is time.

INQUIRY 3		
Now turn the paper over. This time draw a young person who has <u>just started</u> to smoke. Why has your person started to smoke? Where did your person learn about smoking? •Write down things that might make your person try to smoke. • Write down where your person has learned about smoking,	• Emphasize phrase <u>just started</u>	• Do not suggest anything. • Do not indicate approval or disapproval

INQUIRY 4		
Almost finished-last box. Now I want you to think about yourself for a moment. Draw yourself in a room where other people are smoking. • How do you look and feel? • What would you say to them about their cigarette smoking and what it is doing. • Write down what you would say.	• Remind children that they are in a room where other people are smoking. • What would you say to them? • Suggest the use of a speech bubble. • Remind children to raise their hand if they need help writing.	• Try to keep voice neutral.

* The Draw and Write Investigative Technique has been adopted from The HEA Best of Health Project and Somerset Health Authority "No Ifs, No Butts" Study, 1994 (@ Noreen Wetton).

Appendix Five

Frequency Tables For The Draw And Write Technique

TABLE 1. DRAW AND WRITE FREQUENCY RESPONSES OF RECEPTION AND YEAR 1 CHILDREN FOR INQUIRY ONE

Year & School	Subject N	Positive Feelings	Negative Feelings	Both	Nicotine Addiction	Death	Cancer	Heart	Lung	Smoke in the body	Smoke other places	Pollution	No Data
REC 1	22	6	14								22		2
REC 2	14	5	8	1		1					14		
REC 3	60	22	34							38	31		1
REC 4	72	16	46					1	1	15	54		3
REC 5	39	10	29			1			2	10	26		2
REC 6	28	6	13							1	22		2
TOTAL	235	65	144	1		2		1	3	64	169		10
(%)		27.65	61.27	0.42	0	0.85	0	0.42	1.27	27.2	71.9	0	4.25
YR 1-1	14	5	7			2				1	13		
YR 1-2	10	4	6						2		8		
YR 1-3	62	19	41							10	55		2
YR 1-4	70	23	44			1		1	7	26	35		2
YR 1-5	44	5	36						7	8	30		
YR 1-6	42	14	18	2						5	33		2
TOTAL	242	70	152	2		3		1	16	50	174		6
(%)		28.9	62.8	0.83	0	1.23	0	0.41	6.61	20.66	71.9	0	2.47

TABLE 2. DRAW AND WRITE FREQUENCY RESPONSES OF YEAR 2 AND YEAR 3 CHILDREN FOR INQUIRY ONE

Year & School	Subject N	Positive Feelings	Negative Feelings	Both	Nicotine Addiction	Death	Cancer	Heart	Lung	Smoke in the body	Smoke other places	Pollution	No Data
YR 2-1	27	11	16						5	1	20		
YR 2-2	23	5	15						1	5	19		
YR 2-3	52	6	45						2	4	46		1
YR 2-4	67	12	51		1			1	20	11	33		
YR 2-5	47	9	32	1		1			6	5	33		3
YR 2-6	44	9	28	2	1	2			1	7	32		3
TOTAL	260	52	187	3	2	3		1	35	33	183		7
(%)		20	71.9	1.15	0.76	1.15	0	0.38	13.46	12.69	70.38	0	2.69
YR 3-1	17	8	8						11	3	3		
YR 3-2	13	3	9					5	6	1			
YR 3-3	59	9	44	1		1		1	5	19	32		1
YR 3-4	70	22	37	1		1		1	28	9	28	3	3
YR 3-5	40	16	18	3	1	1			19	5	15	2	
YR 3-6	40	9	20	3	1				5	6	25		3
TOTAL	239	67	136	8	2	3		7	74	43	103	5	7
(%)		28	56.9	3.34	0.836	1.25	0	2.92	30.96	17.99	43.09	2.09	2.92

TABLE 3. DRAW AND WRITE FREQUENCY RESPONSES OF RECEPTION AND YEAR 1 CHILDREN TO INQUIRY TWO

Year & School	Subject N	Physical Appearance	External Observable Factors	Internal Physical Factors	Age or Time	Lungs	Heart	Death	Cancer	Addiction Tar Nicotine	Personality	No Data
REC 1	22	9	8		4			1			1	
REC 2	14	4	3	1	1	1				1	2	2
REC 3	60	28	20	5	14		2	1			1	1
REC 4	72	26	13	4	15	4	1	1		1	4	13
REC 5	39	18	10		5		2			1	6	2
REC 6	28		7	1	5		1					17
TOTAL	235	85	61	11	44	5	6	3		3	14	35
(%)		36.2	26	4.7	18.7	2.1	2.6	1.3	0	1.3	6	14.9
YR 1-1	14	6	7	1	1	1	1	1				
YR 1-2	10	9	1								1	
YR 1-3	62	37	10	7	2	1					8	
YR 1-4	70	31	19	1	7	6	3	1		1	4	5
YR 1-5	44	21	10	3	7	1	3	1	2		1	1
YR 1-6	42	23	7		9	5	1	4	1	1	5	1
TOTAL	242	127	54	12	26	14	8	7	3	2	19	7
(%)		52.5	22.3	5	10.7	5.8	3.3	2.9	1.2	0.83	7.9	2.9

TABLE 4. DRAW AND WRITE FREQUENCY RESPONSES OF YEAR 2 AND YEAR 3 CHILDREN TO INQUIRY TWO

Year & School	Subject N	Physical Appearance	External Observable Factors	Internal Physical Factors	Age or Time	Lungs	Heart	Death	Cancer	Addiction Tar Nicotine	Personality	No Data
YR 2 -1	27	13		5		9					2	
YR 2-2	23	9	4			7	2	2	3			2
YR 2-3	52	25	5	3	4	7	6	4			2	
YR 2-4	67	46	4	1	2	15				1	2	2
YR 2-5	47	23	5	3		13	4	1			1	2
YR 2-6	44	21	6	1	4	3	9	9		1		2
TOTAL	260	137	24	13	10	54	21	16	3	2	7	8
(%)		52.7	9.2	5	3.8	20.8	8.1	6.2	1.2	0.8	2.7	3.1
YR 3-1	17	5			1	9					1	
YR 3-2	13	9				2			6			1
YR 3-3	59	30	11	4	1	11	7	2	2	1		1
YR 3-4	70	48	3	3	1	16	3		2	4		1
YR 3-5	40	13		2		30	1	1	5	3		
YR 3-6	40	26	5	3	2	7	1			1	1	2
TOTAL	239	131	19	12	5	75	12	3	15	9	2	5
(%)		54.8	7.9	5	2.1	31.4	5	1.3	6.3	3.8	0.83	2.1

TABLE 5. DRAW AND WRITE FREQUENCY RESPONSES OF RECEPTION AND YEAR 1 CHILDREN FOR INQUIRY THREE

Year & School	Subject N	Mother	Father	Both Family	House Home	Sister Brother	Grandma Grandpa	Aunt Uncle	Other People	Friends	School	Place Shop	TV
REC 1	22	3	8		2	1	1		3		1	4	
REC 2	14		2	1	1				2			6	
REC 3	60	2	2		14		2	2	5			25	
REC 4	72	7	4		9	4	6	1	7	2	5	16	1
REC 5	39	3		1	10		2		6		3	11	
REC 6	28	3		1	2	1			3			1	
TOTAL	235	18	16	3	38	6	11	3	26	2	9	63	1
(%)		7.7	6.8	1.3	16.2	2.6	4.7	1.3	11.1	0.85	3.8	26.8	1.3
YR 1-1	14				2				1	1		2	
YR 1-2	10			1	1				2			5	
YR 1-3	62	16	6	3	10	3	1	3	6	6		6	3
YR 1-4	70	6	5	4	7		6	3	9	4	5	13	3
YR 1-5	44	3	6	5	3		3	1	9	2	4	6	1
YR 1-6	42	8	5	4			2	2	9	4	2	1	2
TOTAL	242	33	22	17	23	3	12	9	36	17	11	33	9
(%)		13.6	9.1	7	9.5	1.2	5	3.7	14.9	7	4.5	13.6	3.7

TABLE 6. DRAW AND WRITE FREQUENCY RESPONSES OF YEAR 2 AND YEAR 3 CHILDREN FOR INQUIRY THREE

Year & School	Subject N	Mother	Father	Both Family	House Home	Sister Brother	Grandma Grandpa	Aunt Uncle	Other People	Friends	School	Place Shop	TV
YR 2-1	27	4	4	5					4	2	5	1	
YR 2-2	23	6	3	2					6	2		3	
YR 2-3	52	12	3	11	3		1		9	5	3	6	
YR 2-4	67	7	4	14		2			17	5	3	7	2
YR 2-5	47		2	6	2	2			15	6	2	11	1
YR 2-6	44	4	2	7	3		6		1	11	3	2	3
TOTAL	260	33	18	45	8	4	7		52	31	16	30	6
(%)		12.7	6.9	17.3	3.1	1.5	2.7	0	20	11.9	6.2	11.5	2.3
YR 3-1	17		1	5					6	4	1		
YR 3-2	13		3	4						3	1		
YR 3-3	59	13	7	10	3				12	11	1	2	1
YR 3-4	70	7	3	16			1		14	19	6	1	
YR 3-5	40	3	4	11					6	11	2	6	
YR 3-6	40	7	5	6			1		7	8	2	2	
TOTAL	239	30	23	52	3		2		45	56	13	11	1
(%)		12.6	9.6	21.8	1.3	0	0.83	0	18.8	23.4	5.4	4.6	0.42

TABLE 7. DRAW AND WRITE FREQUENCY RESPONSES OF RECEPTION AND YEAR 1 CHILDREN FOR INQUIRY THREE

Year & School	Subject N	Under 10	11-20 Years	Over 21	Personality	Self Image	Desire Pleasure	Copy Parents	Copy Mates	Copy Others	Adults	No Data
REC 1	22	10	3	5	6	1	8	3		1	1	4
REC 2	14	5	5	4		1	5	1		1	3	5
REC 3	60	23	19	15	3	3	27	3	3	7	5	23
REC 4	72	41	20	7	3	7	38	3	2	8	2	12
REC 5	39	25	5	6	6	9	19	1	1	2		8
REC 6	28	3					3				1	36
TOTAL	235	107	52	37	18	21	100	11	6	19	12	88
(%)		45.5	22.1	15.7	7.7	8.9	42.5	4.7	2.6	8.1	5.1	37.4
YR 1-1	14		7	4			6	2	1	5	2	
YR 1-2	10		10			2	3			3		3
YR 1-3	62	27	24	7	2	11	20	9	3	7	9	9
YR 1-4	70	17	26	22	2	6	18	3	5	15	4	19
YR 1-5	44	22	14	6	2	6	14	6	2	7	2	
YR 1-6	42	4	5	4	4	5	11	5	3	4		10
TOTAL	242	70	86	43	10	30	72	25	14	41	17	41
(%)		28.9	35.5	17.8	4.1	12.4	29.8	10.3	5.8	16.9	7	16.9

TABLE 8. DRAW AND WRITE FREQUENCY RESPONSES OF YEAR 2 AND YEAR 3 CHILDREN FOR INQUIRY THREE

Year & School	Subject N	Under 10	11-20 Years	Over 21	Personality	Self Image	Desire Pleasure	Copy Parents	Copy Mates	Copy Others	Adults	No Data
YR 2-1	27	2	21	3	1	6	6	8	2	2		2
YR 2-2	23	6	15	2	2	2	10	1	1	3	5	6
YR 2-3	52	8	41	2	2	13	14	10	8	3	1	3
YR 2-4	67	17	47	4	1	12	19	8	10	5	5	10
YR 2-5	47	7	38	1	1	19	10	6	5	5		4
YR 2-6	44	10	30	2	1	10	7	6	8	1	1	13
TOTAL	260	50	192	14	8	62	66	39	34	19	12	38
(%)		19.2	73.8	5.4	3.1	23.8	25.4	15	13.1	7.3	4.6	14.6
YR 3-1	17	1	16		4	3	2	3	3	3		
YR 3-2	13	1	11		3	6	2		1	1		4
YR 3-3	59	9	48	4	6	12	16	8	11	4	2	6
YR 3-4	70	13	49	5	2	24	5	9	17	4	2	7
YR 3-5	40		40		6	17	3	2	7	4	1	2
YR 3-6	40	10	30		2	13	6	2	7	4		6
TOTAL	239	34	194	9	23	75	34	24	46	20	5	25
(%)		14.2	81.2	3.8	9.6	31.4	14.2	10	19.2	8.4	2.1	10.5

TABLE 9. DRAW AND WRITE FREQUENCY RESPONSES OF RECEPTION AND YEAR 1 CHILDREN FOR INQUIRY FOUR

Year & School	Subject N	Negative Feelings	Positive Feelings	Own Health Concern	Specific Illness	Request or Command	Dislike	Like	Question	Draw Defiance	Action	Scold	Silence	No Data
REC 1	22	19	3		2	17	2		2			2		1
REC 2	14	13	1	1	2	11	2							
REC 3	60	48	9	2		46	1	1	1		2			11
REC 4	72	52	15	4	1	52	7	3			1	3	2	5
REC 5	39	29	8		2	30	4	3	1			2		2
REC 6	28	7	6	5	2	10					1			9
TOTAL	235	168	42	12	9	166	16	7	4		4	7	2	28
(%)		71.5	17.9	5.1	3.8	70.6	6.8	2.9	1.7	0	1.7	2.9	0.9	11.9
YR 1-1	14	13		2		11	2		1				2	
YR 1-2	10	10	1			9		1		2				
YR 1-3	62	53	6	5	1	35	3	5	2		1	9		6
YR 1-4	70	60	3	7	3	53	2		3			2		7
YR 1-5	44	39	1	4		32			1	3		6		2
YR 1-6	42	27	4	5	6	29		1			2	2	1	1
TOTAL	242	202	15	23	10	169	7	7	7	5	3	19	3	16
(%)		83.4	6.2	9.5	4.1	69.9	2.9	2.9	2.9	2.1	1.2	7.9	1.2	6.6

TABLE 10. DRAW AND WRITE FREQUENCY RESPONSES OF YEAR 2 AND YEAR 3 CHILDREN FOR INQUIRY FOUR

Year & School	Subject N	Negative Feelings	Positive Feelings	Own Health Concern	Specific Illness	Request or Command	Dislike	Like	Question	Draw Defiance	Action	Scold	Silence	No Data
YR 2-1	27	23	2		1	15	1		3			1	4	3
YR 2-2	23	13		1	1	19			1		1			6
YR 2-3	52	47		3		41	1		2	1	1	2		3
YR 2-4	67	49	2	8	1	53	3		2	4		2	1	8
YR 2-5	47	35	2	3	3	30	3	1	1	3	1	4		5
YR 2-6	44	31		7	4	36	1		1		1	1		4
TOTAL	260	198	6	22	10	194	9	1	10	8	4	10	5	29
(%)		76.1	2.3	8.5	3.8	74.6	3.5	0.4	3.8	3.1	1.5	3.8	1.9	11.2
YR 3-1	17	14	1	1	2	12			3				1	2
YR 3-2	13	9	1	1		9		1			1			3
YR 3-3	59	42	1	5	3	36	5	1	5	4	1	7		9
YR 3-4	70	62		9	4	55	1		4	7	4	5		3
YR 3-5	40	40		9	9	39				1	3	1		
YR 3-6	40	36		2	4	33	4		2	1	1	5		2
TOTAL	239	203	3	27	22	184	10	2	14	13	10	18	1	19
(%)		85	1.3	11.3	9.2	77.0	4.2	0.8	5.9	5.4	4.2	7.5	0.4	7.9

Appendix Six

Semi-structured Interview Guide

Show picture of children smoking

Tell me what you see- how do you know?

What do you know about cigarettes?
Why do we have them? What are they made of?

What do you think they taste like?
If they taste horrible, why do people still want to smoke?

Why do you think these children are smoking?

What can happen to children who smoke?

Do you think that they know that smoking is bad for them?

Who should teach children that smoking is bad for them?

How do you think these children feel when they smoke?

Where do you think they learned to smoke?

How hard or easy would it be for them to stop smoking?

Do you think these children have mums and dads who smoke?

Are they old enough to smoke? Why or why not?

Is there an age when it is ok to smoke?

Would you like these children to be your friends? Why or why not?

You said smoking is bad for people. Do you think it is worse for grown ups or for children? Why?

Interview Schedule

Show pictures of adults smoking

Why do you think they smoke?

What can happen to people who smoke?

Where did you learn about these bad things about smoking?

Can you tell me what the word cancer means?

These smokers look healthy. If they smoke, why are they not sick?

Lots of people smoke so there must be something good about it. Can you think of any good things about smoking?

How easy or hard is it to stop smoking? Why?

If people are smoking near you, how do you feel?

Can you tell what passive smoking means?

Where do you see people smoking?

Who do you think smokes more: men or women?

What do your mum and dad think about smoking?

Does anyone at home smoke?

If yes, why do you think they smoke?

Appendix Seven

Visual Aids Used in Interviews and Focus Groups

Appendix Eight

Revised Children's Questionnaire

SCHOOL: _____ CODE: _____

Liverpool John Moores University

Mark **ONE** box for each question.

1. I AM A ☐ GIRL ☐ BOY

2. I AM _____ YEARS OLD.

3. HAVE YOU EVER TRIED TO SMOKE A CIGARETTE, EVEN JUST ONE PUFF?

☐ YES (go to question 4) ☐ NO (go to question 5)

4. IF YOU HAVE YOU TRIED TO SMOKE A CIGARETTE, EVEN JUST ONE PUFF, HOW MANY TIMES DID YOU TRY?

_____ **TIMES**

5. DO YOU WANT TO TRY (OR TRY AGAIN) TO SMOKE A CIGARETTE, EVEN JUST ONE PUFF?

☐ YES ☐ NO ☐ DON'T KNOW

6. DO ANY OF YOUR FRIENDS AT THIS SCHOOL SMOKE?

☐ YES ☐ NO ☐ DON'T KNOW

7. DOES YOUR MOTHER SMOKE?

☐ YES ☐ NO ☐ USED TO SMOKE

8. DOES YOUR FATHER SMOKE?

☐ YES ☐ NO ☐ USED TO SMOKE

9. DO YOU HAVE ANY SISTERS? YES ☐ NO ☐

10. IF YES, DO ANY SISTERS SMOKE?

YES ☐ NO ☐

11. DO YOU HAVE ANY BROTHERS ? YES ☐ NO ☐

12. IF YES, DO ANY BROTHERS SMOKE?

YES ☐ NO ☐

13. DO YOU THINK SMOKING IS GOOD OR BAD FOR YOU?

☐ GOOD ☐ BAD ☐ DON'T KNOW

14. DO YOU THINK SMOKING IS GOOD OR BAD FOR GROWN UPS?

☐ GOOD ☐ BAD ☐ DON'T KNOW

15. DO YOU WANT TO SMOKE WHEN YOU GROW UP?

☐ YES ☐ NO ☐ DON'T KNOW

★ **THANK YOU FOR FILLING IN THIS QUESTIONNAIRE** ★

Appendix Nine

Focus Group Interview Guide

Moderator's Guide for Focus Groups with Year 2

Introduction:

Hello my name is _____ and I work at John Moores University in Liverpool. As you know, we are interested in learning what you think about smoking. Today I would like you to tell me your thoughts on why children smoke and how you think we can stop children from becoming smokers. There are no right or wrong answers. I just want to hear what you think or feel about the questions I ask. I am going to tape the discussion so that I can remember what we have said but nobody will hear the tape except me. This is not a test but what each of you have to say is very important so please remember not to copy each other's answers. It is also very important to be honest and give the answer you think is best, even if you do not agree with what the other children have said.

When I ask a question you don't have to raise your hand to answer. But it is very important that I hear all of your answers. So when you have something to say, please wait until the person talking stops talking or until I call your name. Are there any questions?

Warm up:

Now, you all know each other but I don't know you so we need to introduce ourselves. I would like each of you to say your first name and to tell me what your favourite tv show is. I'll start. My name is _____ and my favourite show on tv is _____. Now lets go around the table and say your first name and tell us your favourite tv show.

(Allow each child a moment to say their name)

Questions:

1. What can you tell me about smoking?
   If smoking is such a bad thing, should grown ups be allowed to do it?
   What about children, should they be allowed to smoke?

2. **Show pictures of young smokers and say:**
   I am going to show you this picture of this boy and this girl who are 11 years old and they are smoking

   Why do children try out smoking?
   How would you feel if your friends started to smoke?
   What can happen to children who smoke?
   Children who try out smoking, will they smoke when they are grown up?
   Tell me some ways that we can stop children from trying out smoking?

3. At what age do you think children should learn about smoking? Why?
What should children learn about smoking?
Who should teach children about smoking?

4. I want you to pretend that you are the teacher. What is the one message you would teach your class about smoking? *Ask someone what I mean by this.*
(Give blank sheet of paper and few minutes to write down their message)

5. What activities would you like to do in the classroom, to make sure that you do not start to smoke when you are bigger?

7. **Advertising: Show picture**
What can you tell me about this picture?
Where do you see this kind of picture?
Do you think that this picture makes people want to smoke?

Wrap up

Unfortunately we are almost out to time. If I could just go over the main points that you that have told me. (Identify the major themes of the participants' responses and summarise them)

Closing Statement

I want to thank you all very much for talking with me today. Your answers have really helped me to understand what you really think about smoking. Are there any last questions? OK, you can all return to your classes.

Appendix Ten

Frequency Tables For The Draw And Write Technique

TABLE 1. DRAW AND WRITE FREQUENCY RESPONSES OF RECEPTION CHILDREN FOR INQUIRY ONE

Year & School	Subject N	Negative Feelings	Positive Feelings	Both	Nicotine Addiction	Death	Cancer	Heart	Lung	Smoke in the body	Smoke other places	Pollution	No Data
Rec C1	22	14	6								22		2
Rec C2	14	8	5	1		1					14		
Rec C3	60	34	22							38	31		1
Rec C4	72	46	16					1	1	15	54		3
Rec C5	39	29	10			1			2	10	26		2
Rec C6	28	13	6							1	22		2
Total	235	144	65	1		2		1	3	64	169		10
(%)		61.27	27.65	0.42	0	0.85	0	0.42	1.27	27.2	71.9	0	4.25

TABLE 2. DRAW AND WRITE FREQUENCY RESPONSES OF RECEPTION CHILDREN TO INQUIRY TWO

School and Gender	Sample Size (N)	Visible Signs: Setting	Visible Signs: Ill Health	Well Being: Physical	Well Being: Emotional	Person Age Time	Internal General Body Parts	Lungs	Heart	Death	Cancer	Addiction Tar Nicotine	No Data
Rec C1	22	8	5	4	1	4				1			
Rec C2	14	3	2	2	2	1	1	1				1	2
Rec C3	60	20	7	21	1	14	5		2	1			1
Rec C4	72	13	4	22	4	15	4	4	1	1		1	13
Rec C5	39	10	4	14	6	5			2			1	2
Rec C6	28	7	0	0		5	1		1				17
Total	**235**	**61**	**22**	**63**	**14**	**44**	**11**	**5**	**6**	**3**		**3**	**35**
(%)		**26**	**9.4**	**26.8**	**6**	**18.7**	**4.7**	**2.1**	**2.6**	**1.3**	**0**	**1.3**	**14.9**

TABLE 3. DRAW AND WRITE FREQUENCY RESPONSES OF RECEPTION CHILDREN FOR INQUIRY THREE

Year & School	Subject N	Mum	Dad	Both Family	House Home	Sister Brother	Grand Parents	Aunt Uncle	Other People	Friends	School	Place Shop	TV
Rec C1	22	3	8		2	1	1		3		1	4	
Rec C2	14		2	1	1				2			6	
Rec C3	60	2	2		14		2	2	5			25	
Rec C4	72	7	4		9	4	6	1	7	2	5	16	1
Rec C5	39	3		1	10		2		6		3	11	
Rec C6	28	3		1	2	1			3			1	
Total	**235**	**18**	**16**	**3**	**38**	**6**	**11**	**3**	**26**	**2**	**9**	**63**	**1**
(%)		**7.7**	**6.8**	**1.3**	**16.2**	**2.6**	**4.7**	**1.3**	**11.1**	**0.85**	**3.8**	**26.8**	**1.3**

TABLE 4. DRAW AND WRITE FREQUENCY RESPONSES OF RECEPTION CHILDREN FOR INQUIRY THREE

Year & School	Subject N	Under 10	11-20 Years	Over 21	Personality	Self Image	Desire Pleasure Curiosity	Copy Parents	Copy Mates	Copy Others	No Data
Rec C1	22	10	3	5	6	2	8	3		1	4
Rec C2	14	5	5	4		4	5	1		1	5
Rec C3	60	23	19	15	3	8	27	3	3	7	23
Rec C4	72	41	20	7	3	9	38	3	2	8	12
Rec C5	39	25	5	6	6	9	19	1	1	2	8
Rec C6	28	3				1	3				36
Total	**235**	**107**	**52**	**37**	**18**	**33**	**100**	**11**	**6**	**19**	**88**
(%)		**45.5**	**22.1**	**15.7**	**7.7**	**14**	**42.5**	**4.7**	**2.6**	**8.1**	**37.4**

TABLE 5. DRAW AND WRITE FREQUENCY RESPONSES OF RECEPTION CHILDREN FOR INQUIRY FOUR

Year & School	Subject N	Negative Feelings	Positive Feelings	Specific Health Concern	Request or Command	Dislike	Like	Question	Act	Scold	Silence	No Data
Rec C1	22	19	3	2	17	2		2		2		1
Rec C2	14	13	1	3	11	2						
Rec C3	60	48	9	2	46	1	1	1	2			11
Rec C4	72	52	15	5	52	7	3		1	3	2	5
Rec C5	39	29	8	2	30	4	3	1		2		2
Rec C6	28	7	6	7	10				1			9
Total	**235**	**168**	**42**	**21**	**166**	**16**	**7**	**4**	**4**	**7**	**2**	**28**
(%)		**71.5**	**17.9**	**9.0**	**70.6**	**6.8**	**2.9**	**1.7**	**1.7**	**2.9**	**0.9**	**11.9**

TABLE 6. Draw and Write Frequency Responses Of Year One For Inquiry One

School and Gender	Sample Size (N)	Negative Feelings	Positive Feelings	Other	Smoke Other Places	Smoke in the Body	Asmtha	Lungs	Heart	Cancer	Death	No Data
C1 Boys	11	8	2		8	2		1				1
C2 Boys	9	6	1	1	5	4						1
C3 Boys	31	22	8	1	28	3						
C4 Boys	25	13	10	1	23	1		2				1
C5 Boys	21	16	4	1	15	4			1			1
C6 Boys	10	4	6		6	4						
Total Boys	107	69	31	4	85	18	0	3	1	0	0	4
%		*64.49*	*28.97*	*3.73*	*79.44*	*16.82*	*0*	*2.8*	*.93*	*0*	*0*	*3.74*
C1 Girls	9	6	2		4	3	1					1
C2 Girls	7	4	2		6	1						1
C3 Girls	27	18	8		18	8		1				1
C4 Girls	31	17	14		19	9		2				2
C5 Girls	23	19	3		18	1			1			2
C6 Girls	18	10	5	2	13	5						1
Total Girls	109	74	34	2	78	27	1	3	1	0	0	8
%		*67.89*	*31.19*	*1.83*	*71.56*	*24.77*	*.92*	*2.75*	*.92*	*0*	*0*	*7.33*
Total Both	222	143	65	6	163	45	1	6	2	0	0	12
%		*64.41*	*29.27*	*2.7*	*73.42*	*20.27*	*.45*	*2.7*	*.9*	*0*	*0*	*5.4*

TABLE 7. Draw and Write Frequency Responses Of Year One For Inquiry Two

School and Gender	Sample Size (N)	Visible Signs: Setting	Visible Signs: Ill Health	Well Being: Physical	Well Being: Emotional	Person Age Time	Internal Body Parts	Asmtha	Lungs	Heart	Cancer	Death	No Data
C1 Boys	11	4	2	3		1			1		1	1	1
C2 Boys	9	2	2	5									
C3 Boys	31	8	3	9	1	7	4			1			2
C4 Boys	25	11	5	5	4	4	1		2				
C5 Boys	21	5	5	4			3		1	4		1	
C6 Boys	10	4	1	2	1		4	1					
Total Boys	107	34	18	28	6	12	12	1	4	5	1	2	3
%		*31.78*	*16.82*	*26.17*	*5.61*	*11.21*	*11.21*	*.93*	*3.74*	*4.67*	*.93*	*1.87*	*2.8*
C1 Girls	9	1	2	1		1	1	1					3
C2 Girls	7	1		7									
C3 Girls	27	4	3	10	1	5	3			3		1	1
C4 Girls	31	6	5	8	4	5	1		2	1		2	1
C5 Girls	23	3	5	6	3	1			1	2		1	1
C6 Girls	18	1	3	5	1	1	1			4			
Total Girls	109	16	18	37	9	13	6	1	3	10	0	4	6
%		*14.68*	*16.51*	*33.94*	*8.25*	*11.93*	*5.5*	*.92*	*2.75*	*9.17*	*0*	*.036*	*5.5*
Total Both	222	50	36	65	15	25	18	2	7	15	1	6	9
%		*22.52*	*16.21*	*29.27*	*6.8*	*11.26*	*8.1*	*.9*	*3.1*	*6.8*	*.45*	*2.7*	*4*

TABLE 8. Draw and Write Frequency Responses Of Year One For Inquiry Three

School and Gender	Sample Size (N)	Mum	Dad	Parents Family	House Home	Siblings	Grand Parents	Aunts Uncles Cousins	Other People	Friends	School	Place Shop	TV	No Data
C1 Boys	11	2	4	1					3			1		1
C2 Boys	9	2	1		1		1		3	1		1		
C3 Boys	31	3	3	2	2		1	2	4	4		10		
C4 Boys	25	3	2	2	3		2	2	5			7		1
C5 Boys	21	3	2	2					10			2		
C6 Boys	10	1	2	2					1	1	1	1		2
Total Boys	**107**	**14**	**14**	**9**	**6**	**0**	**4**	**3**	**26**	**6**	**1**	**22**	**0**	**4**
%		***13.1***	***13.1***	***8.41***	***5.61***	***0***	***3.74***	***2.8***	***24.29***	***5.61***	***.93***	***20.6***	***0***	***3.74***
C1 Girls	9			2	1			1	2			2	1	
C2 Girls	7		2	1					2			1		
C3 Girls	27	4		5		1	3	2	3	4		5		2
C4 Girls	31	3	1	3	1	1	3	1	6	3		7	1	
C5 Girls	23	3	4	2	1		1		5	1	1	3		2
C6 Girls	18	1	1	5	5		1	1		3		3		
Total Girls	**109**	**11**	**8**	**18**	**8**	**2**	**8**	**5**	**18**	**11**	**1**	**21**	**2**	**4**
%		***10.1***	***7.3***	***16.5***	***7.34***	***1.83***	***7.34***	***4.58***	***16.5***	***10.1***	***.92***	***19.26***	***1.8***	***3.66***
Total Both	**222**	**25**	**22**	**27**	**14**	**2**	**12**	**8**	**44**	**17**	**2**	**43**	**2**	**8**
%		***11.3***	***9.90***	***12.2***	***6.3***	***.9***	***5.4***	***3.6***	***19.81***	***7.65***	***.9***	***19.36***	***.9***	***3.6***

TABLE 9. Draw and Write Frequency Responses Of Year One For Inquiry Three

School and Gender	Sample Size (N)	Age Under 10	Age 11-20 Years	Age Over 21	Desire Pleasure Curiosity	Image	Personality	Copy Parents	Copy Mates	Copy Others	Pressure From Others	Want To Die	No Data
C1 Boys	11	3	4	2	5	1		3		1		1	2
C2 Boys	9	3	4	1	4		2		1		1		1
C3 Boys	31	6	21	3	5	1	2	4	3	8	3	4	1
C4 Boys	25	8	13	4	9	2	1	6	2	3	1		1
C5 Boys	21	11	10	1	9	8		1	2	1			
C6 Boys	10		7	3	4	1		2		1			2
Total Boys	**107**	**31**	**59**	**14**	**36**	**13**	**5**	**16**	**8**	**14**	**5**	**5**	**7**
%		***28.9***	***55.1***	***13.1***	***33.64***	***12.14***	***4.67***	***14.95***	***7.47***	***13.1***	***4.67***	***4.67***	***6.54***
C1 Girls	9		5	2	3	1	2	1		1	1		1
C2 Girls	7	5	3		2	3		1					2
C3 Girls	27	4	21	2	6	1		9	3	4	2		3
C4 Girls	31	5	23	3	8	5	2	5	1	5	4		2
C5 Girls	23	10	8	3	10	3		6		2	1		2
C6 Girls	18	8	6	4	6	4	1	3	1	2			1
Total Girls	**109**	**32**	**66**	**14**	**35**	**17**	**5**	**25**	**5**	**14**	**8**	**0**	**11**
%		***29.3***	***60.5***	***12.8***	***32.11***	***15.59***	***4.58***	***22.93***					
Total Both	**222**	**63**	**125**	**28**	**71**	**30**	**10**	**41**	**13**	**28**	**13**	**5**	**18**
%		***28.37***	***56.3***	***12.6***	***31.98***	***13.5***	***4.5***	***18.46***	***5.9***	***12.6***	***5.6***	***2.3***	***8.1***

TABLE 10. Draw and Write Frequency Responses Of Year One For Inquiry Four

School and Gender	Sample Size (N)	Negative Feelings	Positive Feeling	Specific Health Concern	Request Command	Dislike	Like	Question	Act	Silence	No Data
C1 Boys	11	6		4	11		1	1			1
C2 Boys	9	5		3	5	3		1			
C3 Boys	31	22		10	29						
C4 Boys	25	20		5	25	1					
C5 Boys	21	15	1	6	13	1		3	1		2
C6 Boys	10	7		1	9	1		1			1
Total Boys	**107**	**75**	**1**	**29**	**92**	**6**	**1**	**6**	**1**	**0**	**4**
%		***70.09***	***.93***	***27.1***	***85.98***	***5.61***	***.93***	***5.61***	***.93***	***0***	***3.74***
C1 Girls	9	6		2	8						2
C2 Girls	7	6		1	3			1			4
C3 Girls	27	23		6	22	4					
C4 Girls	31	23	1	7	26	1		1		1	1
C5 Girls	23	21			18	1		2			3
C6 Girls	18	12	2	3	16	1	1				2
Total Girls	**109**	**91**	**3**	**19**	**93**	**7**	**1**	**4**	**0**	**1**	**12**
%		***83.48***	***2.75***	***17.4***	***85.32***	***6.42***	***.92***	***3.66.***	***0***	***.92***	***11***
Total Both	**222**	**166**	**4**	**48**	**185**	**13**	**2**	**10**	**1**	**1**	**16**
%		***74.77***	***1.8***	***21.6***	***83.33***	***5.85***	***.9***	***4.5***	***.45***	***.45***	***7.2***

TABLE 11. Draw and Write Frequency Responses Of Year Two For Inquiry One

School and Gender	Sample Size (N)	Negative Feelings	Positive Feelings	Other	Smoke Other Places	Smoke in the Body	Chest	Lungs	Heart	Cancer	Death	Asmtha
C1 Boys	14	8	1		1	3	5	3	1			
C2 Boys	7	4	2		4	2		1				
C3 Boys	26	17	4		17	3	2	3	1			
C4 Boys	22	9	9	1	15	1		5				
C5 Boys	21	8	8	2	18			2	1		1	
C6 Boys	11	6	4		6	2	1	1	1			
Total Boys	**101**	**52**	**28**	**3**	**61**	**11**	**8**	**15**	**4**	**0**	**1**	**0**
%		***52%***	***28%***	***3%***	***61%***	***11%***	***8%***	***15%***	***4%***	***0***	***1%***	***0***
C1 Girls	8	5		1		1	4	2				
C2 Girls	10	2	7		5	4			1			
C3 Girls	27	15	7	1	17	4		6				
C4 Girls	32	22	8	1	24	2		6				
C5 Girls	21	11	10		16	1		2	1			
C6 Girls	20	9	8		12	4		3	1			
Total Girls	**118**	**64**	**40**	**3**	**74**	**16**	**4**	**19**	**3**	**0**	**0**	**0**
%		***54%***	***34%***	***3%***	***63%***	***14%***	***3%***	***16%***	***3%***	***0***	***0***	***0***
Total Both	**219**	**116**	**68**	**6**	**135**	**27**	**12**	**34**	**7**	**0**	**1**	**0**
%		***53%***	***31%***	***3%***	***62%***	***12%***	***6%***	***16%***	***3%***	***0***	***.5%***	***0***

TABLE 12. Draw and Write Frequency Responses Of Year Two For Inquiry Two

School and Gender	Sample Size (N)	Visible Signs: Setting	Visible Signs: Ill Health	Well Being: Physical	Well Being: Emotional	Person Age Time	Internal General Body Parts	Lungs	Heart	Cancer	Death Disease	Tar
C1 Boys	14	3	3	1			2	4	1			
C2 Boys	7	2	4	1				1		1		
C3 Boys	26		4	6	3		7	4	2			
C4 Boys	22	2	5	5		1	2	6	1			
C5 Boys	21	6	7	1	3	1	3	2	1	1	1	
C6 Boys	11		3	5	3	1	1	2			1	
Total Boys	101	13	26	19	9	3	15	19	5	2	2	0
%		*13%*	*26%*	*19%*	*9%*	*3%*	*15%*	*19%*	*5%*	*2%*	*2%*	*0*
C1 Girls	8		3			1	4	1				
C2 Girls	10	2	2	2	1		1	1				
C3 Girls	27	5	5	8	2	1	6	3	4			
C4 Girls	32	3	4	10	2	3	3	7				1
C5 Girls	21			6	1	3	5	7	1		3	
C6 Girls	20	3	2	6	1	3	4		2		1	
Total Girls	118	13	16	32	7	11	23	19	7	0	4	1
%		*11%*	*14%*	*27%*	*6%*	*9%*	*19.5*	*16%*	*6%*	*0*	*3%*	*1%*
Total Both	219	26	42	51	16	14	38	38	12	2	6	1
%		*12%*	*19%*	*23%*	*7%*	*6%*	*17.4%*	*17%*	*5.5%*	*1%*	*3%*	*.5%*

TABLE 13. Draw and Write Frequency Responses Of Year Two For Inquiry Three

School and Gender	Sample Size (N)	Mum	Dad	Parents Family	House Home	Siblings	Grand Parents	Aunts Uncles Cousins	People	Friends	School College	Place Shop	TV	No Data
C1 Boys	14		2	2					3	2	1	3		1
C2 Boys	7								1	1		2	1	2
C3 Boys	26	2	5	2					2	2	3	5		2
C4 Boys	22	1	5	2	2	1		1	7	1	1	1	1	2
C5 Boys	21		3	1			1		8	4	1	2		2
C6 Boys	11	2	2	1					3	2			1	
Total Boys	**101**	**5**	**17**	**8**	**2**	**1**	**1**	**1**	**24**	**12**	**6**	**13**	**3**	**9**
%		***5%***	***17%***	***8%***	***2%***	***1%***	***1%***	***1%***	***24%***	***12%***	***6%***	***13%***	***3%***	***9%***
C1 Girls	8			4					1	1				2
C2 Girls	10		2	3					1	1		2		1
C3 Girls	27	3	2	6	2		1		6	4		3		1
C4 Girls	32	4	1	5		2	3	1	8	6	1	2		2
C5 Girls	21	3	1	4	1		1		6	3		2	1	
C6 Girls	20	2	1	4	2				4	6				2
Total Girls	**118**	**12**	**7**	**26**	**5**	**2**	**5**	**1**	**26**	**21**	**1**	**9**	**1**	**8**
%		***10%***	***6%***	***22%***	***4%***	***2%***	***4%***	***1%***	***22%***	***18%***	***1%***	***8%***	***1%***	***7%***
Total Both	**219**	**17**	**24**	**34**	**7**	**3**	**6**	**2**	**50**	**33**	**7**	**22**	**4**	**17**
%		***8%***	***11%***	***16%***	***3%***	***1.4%***	***3%***	***1%***	***23%***	***15%***	***3%***	***10%***	***2%***	***8%***

TABLE 14. Draw and Write Frequency Responses Of Year Two For Inquiry Three

School and Gender	Sample Size (N)	Age Under 10	Age 11-20 Years	Age Over 21	Desire Pleasure Curiosity	Image	Personality	Copy Parents	Copy Mates	Copy Others	Pressure from Others	To Die	No Data
C1 Boys	14	4	8	2	4	1		2	1	4			1
C2 Boys	7	2	5		1	1	1		1	1			
C3 Boys	26	7	16	3	10	3	1	5	2	2	5	1	
C4 Boys	22	7	10	4	8	6		1	2	2	3		
C5 Boys	21	9	10	1	5	8		1	2	3		2	
C6 Boys	11	2	8	1	1	4		1	2	2			
Total Boys	**101**	**31**	**58**	**11**	**29**	**23**	**2**	**10**	**10**	**14**	**8**	**3**	**1**
%		***31%***	***58%***	***11%***	***29%***	***23%***	***2%***	***10%***	***10%***	***14%***	***8%***	***3%***	***1%***
C1 Girls	8	1	7			2		5		1		1	
C2 Girls	10	4	5		3	2	1	1		1			
C3 Girls	27	7	19	2	8	1	2	8	3	4			1
C4 Girls	32	9	20	2	5	5	4	5	2	6	1		
C5 Girls	21	5	12	4	4	6	3	4	3	1			
C6 Girls	20	2	17		6	2		6	5	1	1		
Total Girls	**118**	**28**	**80**	**8**	**26**	**18**	**10**	**29**	**13**	**14**	**2**	**1**	**1**
%		***24%***	***68%***	***7%***	***22%***	***15%***	***8.5%***	***25%***	***11%***	***12%***	***1.7%***	***1%***	***1%***
Total Both	**219**	**59**	**138**	**19**	**55**	**41**	**12**	**39**	**23**	**28**	**10**	**4**	**2**
%		***27%***	***63%***	***9%***	***25%***	***19%***	***5.5%***	***18%***	***10.5%***	***13%***	***5%***	***2%***	***1%***

TABLE 15. Draw and Write Frequency Responses Of Year Two For Inquiry Four

School and Gender	Sample Size (N)	Negative Feelings	Positive Feelings	Specific Health Concern	Request Command	Give Health Advice	Dislike	Like	Question	Act	Silence
C1 Boys	14	12		1	11	2	2				
C2 Boys	7	5			3						
C3 Boys	26	18		4	18	3	1			2	
C4 Boys	22	17	1	1	12	3	1		2		
C5 Boys	21	15	5		13	1			4	2	
C6 Boys	11	8			4	3	2		2	1	
Total Boys	**101**	**75**	**6**	**6**	**61**	**12**	**6**		**8**	**5**	**0**
%		***75%***	***6%***	***6%***	***61%***	***12%***	***6%***		***8%***	***5%***	***0***
C1 Girls	8	5	1	1	7						
C2 Girls	10	8		2	8	1	2		2		
C3 Girls	27	25	1	1	24	2			1		
C4 Girls	32	25	1	5	23		3		1		
C5 Girls	21	16	1	2	13	5	1		2		
C6 Girls	20	12		2	13	4			1		
Total Girls	**118**	**91**	**4**	**13**	**88**	**12**	**6**		**7**	**0**	**0**
%		***77%***	***3%***	***11%***	***75%***	***10%***	***5%***		***6%***	***0***	***0***
Total Both	**219**	**166**	**10**	**19**	**149**	**24**	**12**		**15**	**5**	**0**
%		***76%***	***5%***	***9%***	***68%***	***11%***	***6%***		***7%***	***2%***	***0***