A GROUNDED THEORY OF FEMALE ADOLESCENT BEHAVIOUR IN THE SUN: COMFORT MATTERS

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Abstract

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A grounded theory of female adolescent behaviour in the sun: comfort matters.

The aim of the research was to generate a grounded theory to explain the behaviour of young women in the sun. The study sought to explore the sun-related experiences of young women in order to gain new insights into the influences upon them. The study was qualitative by design and utilised grounded theory method as developed by Glaser. Twenty female participants, aged 14 to 17 years old were included in the study. They formed six groups. Thirteen interviews were carried out with the groups and six one-to-one interviews took place with individuals. All interviews were semi-structured and were based upon the participants' experiences of being in the sun. Data was analysed using the constant comparative method of data analysis, concordant with Glaserian grounded theory method. Five explanatory categories emerged from the data; *Fitting In*, *Being Myself*, *Being Physically Comfortable*, *Slipping Up* and a core category of *Being Comfortable.* One of the issues that emerged was that some young women believed their social acceptance depended on their appearance and they conformed to this end. The theory, derived from the categories, proposes that when in the sun, young women direct their activities toward meeting physical and psychosocial comfort needs. Comfort matters to them because it has implications for their wellbeing.

This thesis contributes to the literature about the behaviours of young women in the sun. By increasing understanding of the factors that influence them, it also adds to the body of knowledge related to the primary prevention of skin cancer with teenage girls in the United Kingdom. The outcome of the research and its contribution to knowledge is a grounded theory, which explains the basis of the behaviours of young women in the sun. It appears that no other study has explored the experiences of UK adolescent females specifically, in a qualitative way and with the intention of producing a theory to explain them.

CONTENTS

Figures

Figure One

The conceptualisation process. From raw data to grounded theory (based on Glaser 1998; Glaser 2001; Glaser 2003).

Figure Two

The methods involved in conceptualising the raw data and developing the categories (based on Glaser 1998; Glaser 2001; Glaser 2003).

Figure Three

The conceptual categories.

Figure Four

The methods involved in conceptualising. From categories to theory (based on Glaser 1998; Glaser 2001; Glaser 2003).

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Author's Declaration

No material contained in this thesis has been presented before.

CHAPTER ONE

Introduction, Background and Rationale

Introduction

Researchers influence their studies and they can acknowledge this within their written accounts (Charmaz 2006). In the following introductory paragraphs I outline the events and issues that led to me to undertake this study. Following this, I explain the background to the work and its rationale.

In hindsight, this study derives from my fascination with all things environmental. Through undergraduate study of ecology and subsequent education and development into the professional roles of nurse and teacher, I have become aware of the environmental influences believed to affect humans. In the late 1990's I was involved with the delivery of undergraduate curriculum that considered the influence of the environment upon human health. At the time, it was being suggested that stratospheric ozone depletion could be implicated in the rise of skin cancer incidence globally. Eiser *et al.* (1995) for example, had proposed that environmental change such as stratospheric ozone depletion could be responsible for the rising incidence of skin cancer given the higher levels of ultraviolet radiation (UVR) humans were believed to be exposed to. Further, Eiser *et al.* had indicated that the rising incidence of skin cancer globally and locally in the United Kingdom (UK), posed a significant threat to public health. Anecdotally, clinical contacts had also indicated a clinical need for skin cancer prevention and so I became interested in the primary prevention[1] of skin cancer. I began to look into the strategies in place to prevent skin cancer at the time. Although it had been hypothesised that stratospheric ozone depletion was responsible for the rise in skin cancer, this had not been established and in any event, steps were being taken internationally to reduce the damage to the atmosphere by human means. I decided that if I were to study an element of the primary prevention of skin cancer a tangible focus (that would be relevant irrespective of the mechanisms of UVR hitting the earth), would be the primary prevention of skin cancer at the level of the individual. I deemed that primary prevention at the level of the individual

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[1] Primary prevention of disease refers to prevention of a health problem before it occurs. Secondary prevention, refers to activities to detect disease early, in order that treatment can be instigated. Tertiary prevention refers to the prevention of complications of disease (Kiger 2004).

would provide an appropriate focus given that a person's risk of developing skin cancer may be influenced by their sun exposure behaviours (Marks 1999).

This thesis represents the journey I followed in my attempt to explore why young women behave as they do in the sun. As I will explain within this first chapter, adolescents have been identified as a difficult group to influence in terms of sun safety. I made an assumption that if insight could be acquired into why this might be, primary prevention of skin cancer strategy could be made more relevant to this particular group. Further, it could potentially reduce their risk of developing skin cancer in later life. The narrative that follows explains and presents how I achieved my final study aim. The aim was to generate a grounded theory to explain the behaviour of young women in the sun. I sought to explore the sun-related experiences of young women in order to gain new insights into the influences upon them.

Before the body of the text begins, it is important to explain my use of terminology within the study. The definition of the term 'adolescence'varies in the disciplines that use it. In biology and psychology for example, the terms can cover young people between the ages of 12 and 18 years old. In sociology, the term 'youth' tends to refers to an age range between mid teens and mid twenties, whilst the transition from childhood to adulthood can be perceived to cover years between the ages of 10 and 30 (European Commission 2000). Although children as young as 10 years old may be included within this transitionary period, people aged between birth and 18 years are classified as 'children' (Alderson 1995). For the purposes of this study, I have assumed the term 'adolescent' to encompass those between the ages of 11 and 19 and I have involved people aged between 14 and 17 years old as participants. The title of this study refers to the volunteers as 'female adolescents' and although this language could be construed as rather technical, it is appropriate because it is accurate and indicates generally, what the study is about. However, I have had concerns about how to refer to the participants within the text. Referring to them as 'young women' (as used in youth work) would not reflect their status as children, whilst using the term 'girls' (as used in school) infers that they are more child-like than adult. I accept that neither expression is ideal but for pragmatic reasons I refer to the participants as 'young women' and 'girls' in the rest of the study and use the terms interchangeably.

I have presented this thesis in five chapters. In this, the first, I introduce skin cancer as a public health issue and provide the rationale for the study. In chapter two of the study, I present the methodology and the method adopted to achieve its aim. I have taken the term 'methodology' to refer to the broad approach taken to research and identify the methodology of this study as being naturalist, qualitative, and specifically grounded theory by design. I have taken the term 'method' to be the pragmatic activities and techniques I applied in order to access and analyse the data. Although the chapter is dedicated to methodology and method, other chapters are peppered with these elements when appropriate for example in chapter three, where critique has been necessary. Chapter three considers issues of reflexivity, trustworthiness and study limitations. The findings of the study are presented and discussed in chapter four, which culminates in presentation of the grounded theory based upon the core category of *Being Comfortable.* The work ends with chapter five and the study conclusions.

The remainder of this particular chapter is dedicated to the background to the work undertaken and the rationale for the study. I begin with the notion that exposure to the sun is a cause of skin cancer and explain how skin cancer poses a significant public health issue, globally and locally. I explain the rationale for the broad geographical context of this study. I then argue that the primary prevention of skin cancer, globally and locally in the United Kingdom (UK) is largely based upon the assumption that people knowing about the risks of sun exposure and the development of skin cancer, will lead to behaviour change in order to avoid it. I challenge this assumption based on evidence specifically related to young people (who are considered in the literature to be a group who need to protect themselves in the sun), and argue the case for qualitative exploration with teenagers to gain insight into what influences their behaviours in the sun. Finally, at the end of this chapter I present my initial aim[2] for the study which was to explore adolescents'[3] sun-related behaviours in order to generate a grounded theory to explain them.

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[2] This initial aim was amended, as explained in due course.

[3] At the outset, I had intended to involve young people of both genders as participants, but for reasons given later, I ultimately focused on teenaged girls and produced a grounded theory to explain their behaviours in the sun.

Background and Rationale for the Study

As long ago as 1894, Paul Gerson Unna proposed that sunlight contributes to the development of skin cancer and epidemiological and in vitro investigation since has shown that ultraviolet radiation and sunlight are implicated in the development of most skin cancers (Marks 1999; de Gruijl 1999). This causal link has now been accepted to the extent that authors refer to it as established (Saraiya *et al.* 2004, The Royal College of Physicians 2007). There are two main types of skin cancer - malignant melanoma (MM) and non-melanoma (NMSC) and both have implications for public health associated with their incidence, the nature of the health problems they cause for individuals experiencing them and the danger they pose to a person's longevity. These implications have been noted locally in the UK and globally. In particular it has been recognised that the incidence of skin cancer has been rising in countries around the world including the UK, (Department of Health (DH) 1992; DH 1993; Holme *et al.* 2000), Australia (Lowe *et al.*1999; Livingston *et al.* 2003), and in the United States of America (US). In the US, skin cancer has been identified as the most common form of cancer (Kamin *et al.*1993; Robinson 1997a; Graffunder *et al.* 1999). For some time, NMSC (which includes basal and squamous cell types of lesion (BCC and SQC respectively)) has been identified as the most common form of cancer experienced by people with white skins (Strom and Yamamura 1997; Wong *et al.* 2003). In 1999, Marks claimed that in Australia, approximately two thirds of Australian-born inhabitants were likely to have treatment for at least one such skin cancer in their lifetimes. In the US, The American Task Force on Community Preventive Services estimated that more than one million Americans would be diagnosed with basal cell and squamous cell forms of the disease in 2004 (Task Force on Community Preventive Services 2004). Closer to home, in the UK, NMSC is one of the most common cancers people experience (Melia *et al.* 2000) and in 2004, in England alone, registrations of NMSC lesions numbered almost 60,000 (recorded as 32,299 and 27,333 in males and females respectively). In reality, it is likely that the statistics are even higher because the Office for National Statistics (ONS) have noted that NMSC lesions are significantly under registered (ONS 2006). In the South West Region of England (the area that the ONS identifies as encompassing the geographical location of this study), figures for newly diagnosed NMSC were higher than those for any other Government region in the country (ONS 2006). Although NMSC does not usually result in death (Katz 1997; Strom and Yamamura 1997), the lesions have the potential to invade and destroy surrounding

tissues presenting a significant problem in terms of morbidity (Ramstack *et al.* 1986; DH 1993; Quinn 1997). Basal cell types of the disease rarely metastasise but squamous cell carcinoma can have the potential to metastasise and to cause local destruction of the tissues. Overall, NMSC can lead to disfigurement and loss of function as well as significant emotional and treatment costs (Mermelstein and Reisenberg 1992; DH 1993; Rippey and Rippey 1997; Graffunder *et al.* 1999).

Malignant melanoma skin cancer poses a different problem in terms of the personal impact it may have upon individuals (Livingston *et al.* 2003) and hence public health. This is because cutaneous malignant melanoma is more serious than NMSC. It can be a fatal form of skin cancer (Mermelstein and Rosenberg 1992; Quinn 1997; Heffernan and O'Sullivan, 1998). In 2007, the highest rates of increase of MM were reported to be the amongst white Europeans and in comparison with other European countries, the UK has been identified as an area with the highest incidence of MM in those under the age of 55. Relative to 26 European and accession countries (Cyprus, Czech republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia, Slovenia) the UK has the ninth highest age standardised rate of melanoma incidence in people in that age band (World Health Organisation (WHO) 2007a). This has been reflected in UK literature that has identified a doubling of rates of MM since the 1980's (Miles *et al.* 2005). The Royal College of Physicians (2007) have identified that one in 150 men and one in 120 women in the UK are likely to develop MM in their lifetimes. Although these risks are deemed to be relatively low they are still significant in terms of lives lost because a fifth of the cases occur in young adults (The Royal College of Physicians 2007). In March 2003, the work of Cancer Research UK highlighted that more people in Britain died of skin cancer than in Australia (Cancer Research UK 2007a). This is ironic because it is Australia that has been dubbed the 'skin cancer capital of the world' (Lowe *et al.* 1999) suggesting that the number of deaths would be expected to be greater there.

Historically, mortality rates[4] of cutaneous malignant melanoma have been reported to be greatest in Southern most parts of the United Kingdom. My study was based in Southern England, and specifically in the county of Dorset. This was an appropriate context for the study since MM has been recognised as posing a particular problem in the South West

[4] Mortality or death rates are calculated by dividing the number of people dying of a particular cause (in this case, malignant melanoma), by the total number in the group per unit of time (Moon *et al.* 2000).

region of the UK. Here, the Southwest Cancer Intelligence Service has indicated that in the year 2000, malignant melanoma was the 6th most common cancer and the 18th most common cause of cancer death in the region (Southwest Cancer Intelligence Service 2007). In 2004, the number of cases of newly diagnosed malignant melanoma in the area exceeded those of all other government office regions, save one (ONS 2006). Reasons for this have been cited as the rural and coastal nature of the environs, which offers opportunity for outside activities. Dorset for example has extensive countryside and offers easy access to beaches. In 1999, the Department of Health identified the age standardised mortality rate[5] of MM skin cancer in Dorset to be 4.6 per 100,000. In comparison, the rate in Manchester was 1.4 per 100,000 (DH 1999). At the time, Dorset Health Authority (DHA) also acknowledged that deaths from skin cancer in the county were significantly higher than the national average for England and Wales (DHA 1999a) and this has been reflected in their public health reports since (Dorset County Council and the NHS 2004).

Given these scenarios, skin cancer prevention work is justified in public health and research portfolios and although there has been extensive prevention work and investigation in other parts of the world (particularly the United States of America and Australia) I argue here that UK-specific studies are warranted because of climatic issues associated with its geographical location. It has been suggested that the nature of solar exposure in the UK is different when compared to that in Australia and the United States of America (Melia *et al.* 2000). Here in the UK, sunshine is a rarer commodity (Jones *et al.* 2000) and this has been found to affect the population's sun-related perceptions and behaviours. In 1997, for example the Health Education Authority instigated a qualitative market research paper in order to understand the attitudes of UK residents to sunbathing. The paper, produced by Howard (1997) was based on data from discussions held with 134 British people in 1993. The discussions were held with individuals and in groups. Howard found that people were not concerned about over-exposure to the sun and that although individuals in the UK recognised that sun-induced skin cancer might be an issue in Australia, they did not believe that the situation here compared. Although the methodology section of Howard's paper was brief and the findings largely reported as quotations, the work gave an insight into individuals' perceptions of the British climate; it lacked sunshine. The study also indicated that people here, believed that the weather

[5] The age adjustment seeks to standardise the data in relation to age in order to enable comparison of populations with different age structures (Moon *et al.* 2000).

influenced the opportunities they had for outside activities. Based on this, findings from others' studies that involve people in other parts of the world (with different climates) may not compare with the UK experience and so studies specific to this specific location are justified.

In summary, I based my study on the assumptions (discussed above), that skin cancer has significance as a public health issue and that it has implications at population and individual levels in the UK. My rationale for focusing on an area in the South Western Region and specifically the county of Dorset was that skin cancer had a particular relevance here. A further focus of the study has been that it specifically relates to the primary prevention of skin cancer with teenagers and the rationale for this is given next.

Sun exposure during childhood and adolescence is believed to have particular significance in the potential development of skin cancer. This is because it is possible for a delay of tens of years (possibly up to forty), between experiences of sunburn and the onset of melanoma cancer (WHO 2007a). There is evidence to suggest that sun exposure in childhood is linked to individuals developing skin cancer in later life (Cockburn *et al.* 1989; Banks *et al.* 1992; Grob *et al.* 1993; Gallagher *et al.* 1995; Quinn 1997; Graffunder 1999; WHO 2007a). Based upon a systematic review of the epidemiology associated with childhood sun exposure and melanoma of the skin, Whiteman and his colleagues concluded that it is reasonable to assume that sun exposure in childhood and increased risk of malignant melanoma of the skin are linked (Whiteman *et al.* 2001). The scenario of young people being vulnerable is exacerbated further, by evidence that people receive most of their lifetime UV exposure before adulthood (Koh *et al.* 1996, Savona *et al.* 2005). It has been proposed that sun exposure in the first 15 years of life may be significant in the development of cutaneous malignant melanoma (Grob *et al.* 1993) and that eighty percent of a person's sun exposure can occur before they reach 21 years of age (Banks *et al.* 1992, Lowe *et al.* 1999). Not only are young people believed to risk developing skin cancer in later life if they are over exposed to the sun, there is also evidence that malignant skin lesions can affect them in the shorter term. For example, Cancer Research UK (2005) has noted how in May 2005, malignant melanoma was the third most common cancer in those aged 15-24 years old; and in 2001, 190 people in that age group had been diagnosed with the problem. Cancer Research UK (2005) claim that this scenario is almost always preventable through people protecting themselves in the sun.

Because of the epidemiological evidence and the incidence of melanoma skin cancer in young people, reduction of sun exposure in youth has been advocated as specifically important (Marks 1999). The purpose of the primary prevention of skin cancer is that it should target those who have not yet developed the disease and who are at risk. Hence, over the years, it has generally been agreed that the primary prevention of skin cancer should begin in childhood (Koh *et al.* 1996; Boldeman *et al.* 1997; Hoang and Eichenfield 2000; Filiz *et al.* 2006). Adolescents have been identified as a group specifically needing to modify their sun related behaviours in order to reduce their risk of skin cancer development in the future (Arthey and Clarke 1995; Cresswell 1998; DHA 1999b). As I will discuss next, the assumption has been that if young people receive information about sun safety, this will lead them to reduce their levels of sun exposure. In turn, this is anticipated to reduce the likelihood that they experience skin cancer in later life (Cancer Research UK 2005).

Because of the significance and importance of the primary prevention of skin cancer relative to young people, I decided to investigate specific strategy for teenagers at the outset of this study. I was keen to know what provision existed for them at the time. I found that in 2001, the primary prevention of skin cancer for those in this age group consisted of the Department of Health raising awareness through its 'Sun Know How' website (DH 2000a). I accessed the site which explained how the 'Sun Know How Programme' (previously led by the Health Education Authority) was now the responsibility of the Department of Health in the context of its work on cancer. The programme gave practical advice on reducing the risk of skin cancer. I contacted the Department of Health to enquire how skin cancer prevention for young people specifically, would be managed within the cancer framework (personal verbal communication, 26th January 2001). I was informed that there would be website improvements. This would be to make the site more child-friendly and interactive. There would be more information for the public about the UV index (UVI) generally and television adverts night and early morning to raise awareness. I was told that future strategy would involve schools (as indeed subsequently it has (Wired for Health 2007)). Overall, the foundation of the strategy was education. Because the cause of skin cancer had been largely attributed to exposure to the sun's rays, prevention strategies were based upon the premise that avoiding sunlight would be instrumental in reducing skin cancer. It resulted in strategy based on

education to reduce sun exposure (Arthey and Clarke 1995). How the strategy was derived, is presented next.

In the early 1990s, a global, national and local plan called Agenda 21 was conceptualised by the United Nations in order to address issues associated with humans and their environment (United Nations 2004). As a consequence of the United Nations Agenda 21, the World Health Organisation instigated a Global Ultraviolet (UV) project called the INTERSUN programme (WHO 2007b). This global project was designed to take remedial action to mitigate against the effects of ultraviolet radiation upon people. Because the link between ultraviolet exposure and skin cancer was known, the view was that skin cancer contracted through excessive exposure to solar UVR was largely preventable by advising people to limit exposure, awareness raising and information campaigns. INTERSUN guidelines were produced in order to encourage countries around the world to increase knowledge and awareness about the negative effects of ultraviolet radiation and to give guidance about effective sun awareness programmes (WHO 2007b).

As I discovered, the same philosophy and emphasis upon awareness-raising in order to reduce exposure to sunlight was reflected in English primary prevention of skin cancer strategy in the 1990's, with education about the risks being at its heart (DH 1992; DH 1993; DH 1999). For example, a UK Skin Cancer working party had been formed in response to the Health of the Nation target 'to halt the year-on-year increase in skin cancer by the year 2005' (Marks 1994). The remit of this professional organisation was to coordinate UK work about skin cancer including public education messages about skin cancer prevention (British Association of Dermatologists 2004). The result was that they produced guidance to minimise damage from the sun (Marks 1994) and this comprised advice for the public to avoid the midday sun, seek natural shade, wear clothing and hats, and to use a broad spectrum sunscreen of sun protection factor (SPF) of 15 or more. At the time, the Health Education Authority was charged with the responsibility of raising public awareness about avoiding sunlight exposure and communicating what had become known as 'The Sun Know How' programme. Raising public awareness was achieved through the media and local coordinators. When the Health Education Authority was dissolved in 2000 its awareness raising activity was replaced with an electronic resource in the form of the 'Sun Know How' website administered by The Department of Health. Once again, the focus of the site and its aim was to give practical advice on reducing the risk of skin cancer

(Health Development Agency 2002) via a 'Sun Safety Code'. The essence of the code was to avoid sunburn, use clothing to cover up and wear sunglasses, use shade during the hottest part of the day, use high factor sunscreen and protect children in the sun and avoid the use of sun beds (Department of Health 2000a). Also in the year 2000, the Government published its national strategy for the improvement of cancer services and outcomes in the UK. This was in the form of The NHS Cancer Plan which indicated that resources were to be provided to improve education about the risks of sun exposure. These included funding for the Meteorological Office to provide the public with information about solar intensity in weather forecasts (DH 2000b).

In 2002, the Department of Health handed the responsibility for strategy to reduce skin cancer to Cancer Research UK. This organisation was commissioned by the government to run the national skin cancer prevention campaign. The expectation was that awareness raising would be a major feature (DH 2004; Institute of Social Marketing (ISM) 2007). It aimed to increase knowledge about the causes and prevention of skin cancer, have a positive influence on sun protection attitudes and behaviours, and to support behaviour change with the development of sun protective environments (Cancer Research UK 2007b). The 'SunSmart' public health campaign was launched in 2003 with the 'SunSmart code' being integral to it. The code comprised information messages which advised people to stay in the shade between 11 o'clock in the morning and three o'clock in the afternoon. It suggested that individuals should ensure that they did not burn and that they covered up with a tee shirt, brimmed hat and wrap around sunglasses. They were also advised to take extra care of children, and to use sunscreen with a sun protection factor (SPF) of 15 or more. The information was promoted through public health professionals and free leaflets and posters (Miles *et al.* 2005).

When beginning this study the approach to skin cancer prevention in Dorset mirrored the national agenda. In February 2000, for example, the Dorset Health Community published an 'Integrated Strategy for the Prevention, Early Detection and Treatment of Cancer in Dorset', which included the target: 'To halt the year on year increase in the incidence of skin cancer from a baseline 1996 to a target date of 2005' (DHA 2000, p87). This reflected the governmental commitment to reduce the incidence of skin cancer incidence[6]

[6] 'Incidence: the number of new cases that come into being in a specified population during a specified period of time' (Moon *et al.* 2000).

identified in its key strategy document The Health of The Nation in 1992, and subsequently (DH 1992; DH 1993; DH 1999; DH 2000b). In response to the epidemiological issues raised at regional and county levels, strategy in Dorset included raising awareness of skin cancer (DHA 1999a). Dorset Health Authority's Health Improvement Programme 1999-2002, identified that action on cancer would include 'sun awareness campaigns and training in schools, play groups, youth groups, on beaches and for outdoor workers' (DHA 1999b, p5). Hence awareness raising was the main approach to the primary prevention of skin cancer at this time and critique of this follows.

Health education involves the communication of information to improve health knowledge and to motivate health promoting activity (Mackinnon 2007). It has been suggested that health education based upon information-giving reflects a medical model of education which aims to persuade people to change their behaviours. Historically this approach has been based upon assumptions that 'experts' are in a position to inform others about what to do and when to seek professional help (Kiger 2004) and this notion has been reflected in the philosophy underpinning both primary and secondary skin cancer prevention strategies. In the former, information is given about how to avoid the disease (primary prevention) and in the latter advice is given about how to identify problematic skin lesions should they occur (secondary prevention).

An underlying theme of primary prevention of skin cancer strategy to-date globally and locally (as discussed above), has been the recommendation that people should reduce their sun exposure. This is because sunlight is believed to be a causative factor in the case of most skin cancers. Prevention of the public health issues identified is believed to be achievable by people avoiding the sun. The apparently logical assumption underpinning this belief is that if people know about risks and know how to protect themselves from them, they will act in ways to avoid disease (Naidoo and Wills 2001) (in this case, skin cancer).

The expectation is that education will bring about behavioural change (Melia *et al.* 2000) and this assumption has been explicit in sun safety strategy. For example, the Sun Safety Code was specifically designed to encourage people to change their sun exposure [7] and sun

[7] Sun exposure behaviours are defined in this study as behaviours where an individual intentionally exposes themselves to the sun.

protection behaviours[8] in order to reduce their risk of developing skin cancer (DH 2000a). The Health Development Agency too, has identified how education has formed 'the backbone of most interventions to change sun exposure knowledge, attitudes and behaviour' (Health Development Agency 2002, p.128). In other reports the expectation that knowledge will bring about behavioural change is less explicit but implied nonetheless, for example in 'The NHS Cancer Plan and the New NHS' published in 2004. Here, the Department of Health highlighted avoiding sunlight as the means for people to prevent skin cancer. This infers that they expected individuals to take action to minimise their risk from the disease. Further, the document presents the SunSmart campaign as the means of generating awareness about the dangers of excessive exposure to sunlight and risk reduction, inferring that if individuals are armed with knowledge, it will follow that they will naturally alter their behaviours. The recent Cancer Reform Strategy, also published by the Department of Health (DH 2007), provides another example of an implicit expectation that knowledge will translate into behaviour change. The document attributes the rapid rise in skin cancer incidence to people being exposed to the sun. It also cites a Cancer Research UK goal: that by 2020 people will know how to reduce their risk of cancer and that 75% of the UK public will be aware of the lifestyle choices that can reduce their risk (DH 2007). This implies that people do not currently know how to reduce their risk and that educating them about it will naturally lead them to avoid sun exposure. In reality however, health behaviour does not always seem to be determined by such rational use of knowledge (Koblenzer 1998).

Doubts have been raised about the level of evidence supporting the notion that awareness leads to behaviour change. For example, in the mid 1990's, Eiser *et al.* (1995) questioned whether people act on sun-related health warnings. Others have also identified limitations to the apparently straightforward influence knowledge is believed to have on behaviour (Cockburn *et al.* 1989; Harvey 1995; Fielder *et al.* 1996). Melia and colleagues (2000) and the University of York (2000) have noted a lack of evidence of behaviour change in UK studies that specifically evaluated UK skin cancer, primary prevention initiatives. These were initiatives involving health education[9] and aiming to alter sun-related knowledge,

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[8] Sun protection behaviours are defined in this study as behaviours where individuals intentionally protect themselves from sun exposure.

[9] Health education assumes that a person's behaviour influences health and that it is possible to change their behaviours with planned interventions (Kiger 2004).

attitudes and behaviours. It is also noteworthy that the advocates of strategies underpinned by the notion that education will lead to behaviour change, have conceded themselves, that awareness of the risks of exposure, does not automatically lead to protective action. The Department of Health's NHS Cancer Plan (2000b) is testimony to this paradox because on one hand, the Department of Health acknowledges the limited effect education can have on behaviour change and on the other, it still promotes a course of action for behaviour change based upon education about the risks of sun exposure (DH 2000b). Cancer Research UK too, has identified that knowledge changing behaviour is not a given (Cancer Research UK 2007c). Despite this, they maintain that education of the public is key and that more education is needed. They propose that this is especially the case for high risk groups, including young people.

At the time of planning this study, I was aware that experiences in Australia (a country considered an international forerunner in the quest to prevent skin cancer) suggested that young people were particularly resistant to health education (Melia *et al.* 2000). In a review of the literature covering 20 years of the Australian public health and skin cancer agenda, Marks (1999) described how adolescents had been a difficult group to 'reach'. Subsequently in 2001, Montague and her colleagues presented the learning from the Anti-Cancer Council of Victoria campaigns that had run between 1980 and 2000 and in their evaluation, they discussed young people as some of the 'The Harder Nuts to Crack'. Montague and her colleagues noted that whilst campaigns had led to changes in teenagers' beliefs and attitudes to sun exposure, young people belonged to a group that were least likely to act to protect themselves in the sun.

It had been observed before that educating adolescents about skin cancer and its prevention did not lead them to change their sun protection behaviours significantly (Arthey and Clarke1995; Martin *et al.* 1999). It had also been recognised that although it could contribute, knowledge acquisition could not be relied upon as the main method of instigating change (Arthey and Clarke 1995). The issue this (and the other points discussed above) raised for me was whether the UK primary prevention of skin cancer based on education would be effective with young people here. How would they be likely to fare in the context of skin cancer prevention strategy based on the assumption that giving them information would lead them to avoid the sun's rays? I was also concerned that it had been mooted in the literature that prevention could be better targeted at more

receptive groups such as younger children and their families (Melia *et al.* 2000). This was because of the perception that adolescents resist health promotion messages. Investigation of service provision for this group in practice suggested that they could be disregarded and whilst (arguably) this could be justified on the basis of prudent public health resource use, it potentially excluded a group of the population known to be an important one to target.

I decided to look in the literature to explore what was known about the links between education and/or knowledge, and changes in adolescent sun-related attitude and behaviour (see appendix one for the search details). I wanted to establish current thought on the influence of education and/or knowledge upon adolescents' behaviours in the sun. The studies sourced were appraised in terms of the relationships they identified between knowledge about sun protection and protection behaviours or behavioural intentions.

For the purposes of the review, and in order to establish whether the literature was relevant, I decided to include studies that had involved young people falling within a broad age range, of 11-19 years. My choice of age range was based upon the epidemiological evidence (discussed previously) that eighty percent of sun exposure can occur before the age of 24 years old (Banks *et al.* 1992; Lowe *et al.* 1999). The lower limit was set at the age of eleven because there is evidence to suggest that sun-protecting attitudes and behaviours begin to wane at that age (Dixon *et al.* 1999). The decline is believed to be the result of children becoming more independent of their parents' and carers' influence which is believed to impact on their sun protection (Shapiro *et al.* 1998). I set the upper age limit as 19, because initially at least, I anticipated that I would access young people via the schools system[10]. To begin with, I decided to consider studies that had been based in the UK specifically, given that behaviours are believed to be contextual (Naidoo and Wills, 2001) and because geographical, cultural and environmental aspects could affect the transferability of others' findings (Bergenmar and Brandberg 2001). However, the literature review identified a lack of British studies on the subject. There was just one written by Hughes and her colleagues in 1993. This had been a quantitative study with male and female secondary school students, who had an average age of 14 years. The researchers had designed a multi-media education package which was designed as an intervention to increase students' knowledge about the sun and skin cancer. The

[10] The final age range of participants who were involved in the study was 14-17 years.

investigators anticipated that this would increase participants' knowledge about the sun and skin cancer, change attitudes to sun exposure and potentially change behaviour in the sun. The researchers recruited participants from seven English secondary schools and in each school, five classes from the same year were selected. In May 1990, four of the classes received a version of the education package and one class did not experience an intervention at all. This class was the control group. Just before the summer holidays of 1990 a questionnaire was administered to the young people in order to assess their knowledge and attitudes regarding the sun. Then, after the summer break, a second questionnaire was administered to assess sun exposure behaviours in addition to knowledge and attitudes. Just over half of the 543 pupils who were originally involved provided pre and post-summer questionnaires. Data analysis was based upon their responses. The researchers concluded that the data had revealed that although knowledge and attitudes had increased in all groups (except the control), there had been no significant difference in terms of behaviour across the groups. A difference was noted (but not identified as a significant one) that although there did not appear to have been behaviour change associated with the education intervention, those who had been abroad had been more likely to wear a hat and sunscreen. Overall, the researchers concluded that the correlation between the knowledge and behaviour of the young people in their study had been poor.

In the absence of other relevant UK research related to knowledge and sun-protection behaviour in adolescence, I considered the comparable literature from the search that involved participants in other parts of the world. This literature was based upon work in Australia (Cockburn *et al.* 1989; Lower *et al.* 1998; Lowe *et al.* 1999; Livingston *et al.* 2001), America (Mermelstein and Riesenberg 1992; Reynolds *et al.* 1996; Robinson *et al.* 1997b), and New Zealand (Richards *et al.* 2001).

The earliest of the Australian studies (Lower *et al.* 1998; Cockburn *et al.* 1989) had aimed to determine the prevalence of the use of sun protection measures among adolescents. The authors also set out to determine the variables that might predict the use of sun protection. They investigated knowledge as one of these. Whilst Cockburn and her colleagues identified this as knowledge about skin cancer and sun protection, Lower and his colleagues (1998) did not specify. Although the two studies appear to have had the same aim, Lower *et al.* (1998) believed theirs to be the first to use random sampling technique

across a whole Australian state. In any event, neither study was able to conclude that knowledge level was a predictor of sun protection behaviour. Cockburn and her colleagues (1989) concluded that their findings called the practice of increasing knowledge in order to change behaviours into question. Another Australian study, this time published in 1999, took the form of a randomised controlled trial and was carried out by Lowe *et al.*. The researchers evaluated the impact of a school skin cancer programme upon the knowledge, attitudes and behaviour of 13-16 year olds. They delivered an education package as an intervention and this included at least four 50-minute classroom sessions. The sessions incorporated a range of activities covering individual, social and environmental issues. Findings reflected that there had been minimal behaviour change as a result of the intervention and that any behaviour change had been transient. The researchers acknowledged that social and cultural influences could be impacting upon sun protection behaviour. More recently, in 2001, Livingston *et al.* evaluated changes in knowledge, attitudes and behaviours of Australian adolescents. Their participants were aged 12-17 and the researchers evaluated the changes that had occurred in their knowledge, attitudes and behaviours between 1993 and 1996. The work was based upon an assumption that years of mass media campaigns and health promotion strategy aimed at behavioural change, would have had an impact and improved sun protection behaviours. There was no specific intervention in this study. Instead, the researchers compared survey data sets derived from different groups of students. They identified trends that knowledge levels had been high and that attitude scores had indicated reduced desire for a suntan over time. The behavioural changes over the years were mixed. Results from the later survey showed that natural means of protection from the sun were favoured and that avoiding the sun by staying inside and wearing more protective clothing had become more common practice. However, wearing sunglasses and using sunscreen were methods of protection that had decreased over time. The researchers advised against over interpreting their results and, like Lowe *et al.*, they concluded that there could be social factors influencing sun protection behaviours. On balance, the Australian studies had illustrated that knowledge levels and education interventions did not necessarily influence behaviour.

The American research the literature search had revealed comprised quantitative studies by Mermelstein and Reisenburg (1992), Reynolds *et al.* (1996) and Robinson *et al.* (1997). The two studies by Reynolds and Robinson and their respective colleagues both used survey methods to examine predictors and levels of adolescents' sun exposure and

knowledge, attitudes and behaviours. Reynolds *et al.* concluded that high levels of knowledge about sun protection and risk factors did not prevent their participants from experiencing high levels of sun exposure. In a similar vein, Robinson and her colleagues found that knowing about the risks of skin cancer did not prevent theirs from becoming sunburned. This was further evidence to suggest that knowledge does not necessarily influence behaviour. In their study, Mermelstein and Reisenburg (1992) gathered data about adolescents' sun exposure, their use of sunscreen and tanning booths. They also appraised the knowledge the young people had about skin cancer and their attitudes to sun protection. The researchers used this as baseline data to evaluate a school-based education intervention designed to increase knowledge and preventive attitudes relative to skin cancer. Although the researchers identified that the intervention increased the way the people in their study perceived their susceptibility and increased knowledge, it did not change their behavioural intentions to take precautions in the sun.

Richards and her colleagues had written the New Zealand-based study identified by the literature search. Their paper (Richards *et al.* 2001) examined change in the self-reports of young people related to their sun protection behaviours, knowledge and attitudes to tans. The study compared the results of surveys carried out in 1991 and 1997. The purpose of the work was to see if there had been long-term change in the self-reported behaviours and attitudes of teenagers. This was following a campaign held between 1990-1991 specifically designed to raise awareness of malignant melanoma amongst adolescents and to enhance their use of sun protection. There had also been subsequent campaigns although not directly aimed at adolescents. Issue may be taken with some elements of the design of the study since in the surveys, the 1997 comparison group did not comprise the same individuals of the 1991 cohort. However, the authors acknowledge this and indicate that the characteristics of the people in the groups were comparable, for example in terms of their ethnicity. Their results demonstrated that over time there had been little change in behaviour toward protection. However, attitudes toward protection had increased. Numbers of those getting a suntan had decreased but in 1997, more young people were experiencing sunburn and sunbathing in order to achieve a tan. Fewer knew about malignant melanoma and covered up in the sun in 1997. It appeared that the previous interventions had not been effective long-term. The researchers accepted that although the results were not necessarily generalisable they were disappointing. The researchers

believed that there was a case for examining the sociocultural contexts that affect adolescents.

Overall, I concluded from the literature available at the time of my search that there was little evidence to suggest that knowledge and education about the dangers of sun would lead adolescents to reduce their sun exposure. Since the initial search, literature that is more contemporary has come to similar conclusions (Geller *et al.* 2005, Livingston *et al.* 2007) and in 2007 Livingston and her colleagues recommended that the time was right for research to be directed toward understanding the trend for excessive sun behaviour in young people. This suggests that my thesis remains timely despite the years that have elapsed since it began.

Research generally has acknowledged the complexity of psychosocial issues associated with sun exposure (Farmer *et al.* 1997; Burgess 1998; Koblenzer 1998; Graffunder *et al.* 1999). Given their findings that knowledge is not necessarily a factor that determines adolescents' sun-related behaviour, authors of the literature reviewed above have speculated about what the influential factors might be. Richards and her associates (2001) for example, suggested that the impact of adolescents' sociocultural contexts should be acknowledged before trying to change their attitudes and behaviours to sun exposure. Lowe (1999) and Livingston (2001) and their respective colleagues identified the potential significance of social and cultural influence for protection behaviour and how, because of this, community-wide schemes could be more appropriate in helping to change adolescent behaviours. Livingston and her colleagues also surmised that sun protection activity would need to be the 'norm' and acceptable to peers if it were to be carried out (Livingston *et al.* 2001). Lower *et al.* (1998) inferred that sun protection was not convenient and needed to be made more so, whilst Cockburn *et al.* suggested that peer and image issues imply that covering up in the sun should be made more glamorous.

A common issue that underlay the discussions and speculations was that they were based directly and indirectly upon adults' notions about what should, would or could affect adolescents whilst they were in the sun. These assumptions were implicit and explicit within the studies. For example, they manifested in quantitative survey methods based upon questionnaires underpinned by adults' assumptions about adolescents, and health models. Robinson *et al.* (1997b) had given the opportunity for the young people in their

study to express some of their own opinions in response to open questions in telephone interviews. However, there was little scope elsewhere in the studies I had considered for in-depth exploration of issues from the participants' perspectives. Further, the evidence so far had indicated that adult logic and the assumption that knowledge would influence sun protection behaviour could be in doubt. Other factors appeared to be influencing the behaviours of young people in the sun. This supported the notion that it is important to glean adolescents' perspectives about the issues that affect them. Whilst market researchers have recognised the importance and role of children's input in such matters, those in the academic world have been slower to engage with young people (Roberts 2000). It is believed that if health promotion with teenagers is based on adults' assumptions about adolescent-specific issues, its effectiveness may be compromised (Bell and Bromnick 2003; Grunfeld 2004; Coleman *et al.* 2007). Participation of young people in relation to the issues that affect them may avoid adult-led agendas (Hill 1999) and in research, a useful approach to gaining knowledge about the experiences of young people is one that values the perspectives of children and enables others to learn from them (Royal College of Paediatrics and Child Health (RCPCH 2000). Not involving children in the issues that affect them may undermine the rights they now command (Masson 2000). Consequently, my study has been based upon the supposition that if adolescents warrant concern because of their sun-related behaviours, their perspectives on the issue must be sought.

In research, different methods are employed according to what needs to be known. They are underpinned by different philosophical stances that influence the nature of the work and its outcome. Qualitative research tends to give primacy to participants' accounts of the issues that affect them. As Arthey and Clarke (1995, p266) have commented in the past (in relation to sun-related research), the advantage of qualitative work is that it aids understanding of beliefs, attitudes and behaviours. It helps to ensure that researchers are 'looking in the right place'. It enables exploration of why people do what they do and it facilitates access to the meanings, motives, beliefs, understandings and perceptions of young people (Rich and Ginsburg 1999). When I was planning this work, one study had considered young peoples' views in a qualitative way. This was an Australian piece published by Lupton and Gaffney in 1996. A subsequent literature search (see appendix two for the details of the search) has indicated that a dearth of qualitative work (with the age group I considered) continued to exist until 2003. Then, Shoveller and her colleagues

published another qualitative study about Canadian adolescents and the sun. However, to my knowledge, theirs has been the only comparable work to mine, certainly to the end of 2007. The findings of Shoveller *et al.* will be considered in due course however, Lupton and Gaffney's work is scrutinised here because it was in existence and relevant at the beginning of this study; it formed part of the background.

Lupton and Gaffney involved 98, 11-16 year-old pupils in their research, which took place in six Australian secondary schools. The study had been based upon a similar premise to mine since the researchers had identified that prior to 1996, little work had been done to examine young peoples' attitudes about sun exposure and everyday life (Lupton and Gaffney 1996). The purpose of their investigation was to identify the discourses and practices around solar protection, skin cancer and tanning with young people. The researchers also aimed to gauge the response of young people to a government sponsored sun protection programme called the 'Me No Fry' media and marketing based campaign that had run between 1990 and 1994. Although the study design was qualitative and it employed a focus group approach to data collection, the researchers used a semi-structured questionnaire schedule, based upon issues they had identified as emerging as potentially relevant issues from former quantitative studies. The questionnaire assumed a strong link between young peoples' attitudes and beliefs about sun tanning, solar protection, physical attractiveness, fashion, youth, fitness, summertime and body image. Hence discussion was structured around the participants' feelings about being tanned or not, the value they placed on having a tan, the nature of people with or without tans, perceived gender differences re: attitudes to tanning. The young people were also asked about those who were sunburned, their own solar protection activities, what sources of information they used regarding sun exposure and protection and why they used them[11]. Because of the structured approach to the data collection, I concluded that the study was based upon adults' perceptions of what affects adolescents in the sun. I also concluded that there was a gap in the knowledge base specifically related to adolescents' perspectives about what influenced their behaviours.
In summary, the issues that underpinned this study were as follows. The development of sun-related skin cancer pose a problem for individuals and for public health, locally and internationally. At a local level, skin cancer had been identified as a particular problem in

[11] The findings from the study of Lupton and Gaffney are discussed further in due course. Although my premises were different and I explored factors, similar data emerged.

the South West of England and the county of Dorset. Sun exposure during childhood was believed to be implicated in the development of skin cancer in contemporary as well as later life and adolescents had been identified as a group that needed to modify their sun exposure to prevent this. Historically, the primary prevention of skin cancer had been based upon an assumption that knowing about the risks of being in the sun would deter sun exposure. However, there was little evidence to suggest that adolescents were likely to reduce their sun exposure on this basis. Factors other than knowledge appeared to be affecting them. Adults' notions about what affected adolescents in the sun had tended to dominate research with this group and it was appropriate to engage young people in a study to gain their perspectives about what influenced them in the sun. Hence, I identified my initial aim for this study to be to explore adolescents' sun-related behaviours (this later became experiences) and to generate a grounded theory to explain their behaviours. In meeting this aim, I hoped to illuminate the issues involved and to make skin cancer, primary prevention strategy more relevant to this group. Ultimately, I anticipated that this would reduce their risk of skin cancer development in later life. I decided that a qualitative methodology would enable me to gain the perspectives of young people and would be appropriate to that end. In the next chapter, I will explain the rationale for the methodology and methods I adopted to achieve the aim of this study. The chapter explains the rationale for using a qualitative approach in study, using grounded theory method and specifically a Glaserian approach.

CHAPTER TWO

Methodology and Method

Methodology

There are different views about what constitutes reality (ontology) and the nature of knowledge (epistemology) (Holloway 2005). It is believed that different types of knowledge can be gleaned in different ways. According to the purposes of their studies, researchers opt into different sets of assumptions that determine which, and how, research methods are used. I had to decide on the best way to find out about what influenced adolescents in the sun and I chose to use an inductive form of enquiry, specifically Glaserian grounded theory method. Justification for my use of this method follows.

Broadly speaking, perspectives of ontology and epistemology have been dominated by two paradigms or sets of views. The first, logical positivism, has also been termed positivism, or considered to be reductionist or rationalist in nature. The second is naturalistic enquiry. Researchers may choose to subscribe to positivist or naturalist sets of assumptions according to what it is they want to know. From the point of view of positivism, reality is viewed as objective and it can be known through measurement and observation. Quantitative research derives from this paradigm. In the positivist domain, it is believed that subjectivity can be controlled through method and to this extent, the research can be considered to be unbiased. The process of thinking involved in the positivist paradigm is deductive (DePoy and Gitlin 2005) meaning that the researcher reads the extant body of theory that relates to their topic before they begin and they deduct a theoretical framework with which to verify or study it. The framework, underpinned by existing theory, guides the data collection. Because of their deductive nature, positivist approaches to enquiry do not have a great capacity to be open to participants' perspectives. In contrast, the naturalistic philosophy and method that I adopted, assumes that the people who have had experiences of particular issues know the most about them. Further, it incorporates an inductive form of thinking, meaning that theory is not developed from pre-existing knowledge but observation. Hence inductive methods begin with data collection (DePoy and Gitlin 2005). In choosing an approach for this study, this was particularly salient because I had found that in sun-related literature before, the link that existing theory assumed between knowledge and behaviours had been in doubt; its relevance was

questionable. Inductive methods are believed to help relevant issues to emerge as the research progresses (Glaser 1978) and so this informed my choice. Further value of using a naturalistic approach to enquiry can be that it gives the opportunity to consider individuals holistically as complete human beings and in context, rather than as an amalgam of different elements or variables that can be examined individually (DePoy and Gitlin 2005). Previous sun-related studies suggested that the issues affecting adolescents' behaviours were likely to be complex and so opting for a methodology that could embrace this complexity was an advantage. Gaining the participants' perspectives was also paramount in this study and so it was also important that the research approach was exploratory in nature and that it facilitated the search for explanation. The interpretive paradigm tends to underpin qualitative research and so, for this study, I chose a qualitative, inductive method. As explained above, this was in order to embrace and explore participants' perspectives. In particular, I chose to use grounded theory method because it enables theory to be derived from the data and not from prior assumptions. It also focuses on the interests of the participants (Glaser and Strauss 1967; Glaser 1998). It aims to discover why people do what they do (Glaser, 1998) and is thereby explanatory. I chose to use a particular version of grounded theory method developed by Glaser and the rationale for this choice comes next.

Rationale for Using Glaserian Grounded Theory Method

The grounded theory method of theory generation was devised in the 1960's by two sociologists Barney Glaser and Anselm Strauss. Strauss had been influenced by his work with Herbert Blumer and Everett Hughes in symbolic interactionism[12] and qualitative research. Glaser's background had been quantitative but he was introduced to the perspectives of Strauss when they worked together in Chicago (Glaser 1998). Glaser and Strauss had become disenchanted with sociological research in those days because in their opinion, sociologists were preoccupied with verifying existing theory, rather than

[12] Symbolic interactionism can be defined as: 'An approach in sociology that focuses on symbols and meanings in interaction' (Holloway 2005, p.295). Key to the symbolic interactionist view of human life is that people do not act in social isolation. Rather, they take what others are doing into account; social interaction influences what people do as they respond to each other. The symbolic interactionist perspective suggests that individuals act according to the meanings that objects have for them and that the meanings derive from social interaction (Blumer 1969). During my study I found that these notions applied. It transpired that participants could be influenced by others' responses to them.

discovering the relevant concepts and hypotheses that underpinned the phenomena under investigation. They were concerned that in testing theory, researchers could overlook the evidence that the theory had been based upon, resulting in a potential mismatch between theory and the empirical world if hypotheses did not come from data in the first instance (Glaser and Strauss 1967). Although Glaser and Strauss initially conceived the grounded theory method together in 1967, their views about what it comprised subsequently diverged, with the effect that two traditions of grounded theory emerged; Straussian and Glaserian (Melia 1996; Stern and Covan 2001). Because the two differed, I needed to make decisions about the specific method I would use in this study. I chose the Glaserian form for reasons related to the aim of the study and also on practical grounds. First, from a methodological point of view, I was committed to exploring adolescents' sun-related behaviours and wanted to maximise the potential for this. Consideration of the two versions of grounded theory (aided by the original texts of Strauss and Corbin (1990), Glaser (1992) and Melia's analysis of their differences in 1996), led me to conclude that the Glaserian method seemed to be the best for exploration purposes. I came to this conclusion because Glaser emphasised how the research focus should emerge, in comparison to Strauss and Corbin who were more definitive about what should be studied and what needs to be known (Strauss and Corbin 1990; Glaser 1992). Further, although the process of data analysis Glaser proposes has structure, it is not as directive as that of Strauss and Corbin. According to Glaser, the problem with being directive is that data may be forced to fit a predetermined theoretical framework, compromising the outcome of the work. Another of Glaser's concerns is that the result will be a conceptual description and not grounded theory as it was originally conceived (Glaser 1992). Because I wanted the participants' perspectives to have primacy in the theory, I chose the Glaserian approach.

From a practical point of view, I also decided to choose one version of grounded theory to guide the study because I was aware that the research process can become confusing if researchers apply a mix of the approaches (Backman and Kyngäs 1999; Charmaz 2006). I was also cautious of applying others' interpretations of the method that Glaser (1998) suggests may be wrong[13]. Hence, I used the primary source material of Glaser and Strauss,

[13] It is noteworthy that Glaser (2003) apparently expresses frustration that grounded theory method has been perceived by some as solely aligned with qualitative research when, in fact, it can be used with quantitative data. He explains how the method transcends the division between the quantitative and qualitative genres of research. The crux is that it is inductive, irrespective of the data collected.

and the later work of Glaser, to guide me. This enabled me to interpret the method for myself and to establish my own critique of the method as I have in the chapters that follow. Another issue that swayed me in the direction of the Glaserian method was that I had used it before and I had been struck by its value in determining the perspectives of others and facilitating exploratory study. It seemed wise to build on my experience, and what Glaser has described as the 'delayed understandings' of the processes involved (Glaser 1992).

Key to the grounded theory method Glaser and Strauss initially devised in the 1960's is the process of induction. This means that the researcher begins their study by collecting the data (Glaser 1978). The inductive process requires that the researcher leaves themselves open to the issues that emerge from the data so that their hypotheses derive from this, rather than existing literature and assumptions (Glaser and Strauss 1967; Glaser 1992). Although the grounded theory method begins with induction, deductive processes are also incorporated but later as the theory develops (Glaser 1998). The notion that relevant issues will emerge means that the matter the researcher ultimately discovers to be the main concern of the participants may not be what they had anticipated (Glaser 2001). Indeed, at the start of this study, I did not anticipate that I would be writing a theory about young women being comfortable. I chose to use grounded theory method because I believed it gave scope for exploration and the production of explanatory theory (Glaser and Strauss 1967). My experience has been that it does, as I will show in the findings chapter.

In this chapter so far, I have justified my choice of methodology and method as being naturalistic and qualitative in nature, and based upon Glaserian grounded theory method. In the rest of the chapter, I will explain how I applied elements of the grounded theory method in practice. I begin with specific explanation of how it influenced the use of literature in the study and sampling methods. Following this, I present the methods I employed to collect data for the study and those I used to analyse it.

Grounded Theory Method and the Use of the Literature

Because the grounded theory method of theory generation relies on an inductive process and theoretical concepts emerging from data collected (Glaser and Strauss 1967; Glaser 1978), the researcher is not expected to begin with a priori assumptions about the variables involved, predetermined hypotheses and samples (Glaser and Strauss 1967). Rather than

be influenced in advance by the findings of literature believed to applicable to the research area, *not* reading in advance of the emergent is advocated (Glaser 1998). This is to reduce the tendency for researchers to assume what is likely to be relevant. It is also to prevent them from wasting time by researching predefined areas that may not relevant to the emergent theory (Glaser 1998). For this reason, my thesis does not begin with an in-depth analysis of the theory and literature related to why adolescents are believed to behave as they might do in the sun. It has however, presented an argument based upon literature relevant to the justification of the work, and later refers to literature relevant to emergent concepts and analyses. This is not an omission but rather a 'tactic' (Glaser 1998). It does not mean that existing theory and literature can be ignored however. On the contrary, reading is staged and determined by the emergent theory. Relevant literature is discovered through exploration, just like the theory (Glaser and Strauss 1967; Glaser 1978; Glaser 1998) (see appendix three for details of the timing of activity relative to the research process overall).

Sampling Methods - Purposive and Theoretical Sampling

Purposive Sampling

The implication of grounded theory method for sampling practice is that sampling decisions are not based upon a preconceived theoretical framework but the general problem area identified (Glaser and Strauss 1967; Glaser 1978). The work begins with a purposive sample, whereby people who have insight into the phenomenon in question are involved at the outset of the exploration of the issues that affect them. Accordingly, adolescents were to be the main source of the data for this study and I initially involved girls in year 10 of a secondary school setting. This meant that the initial volunteers were aged 14-15 years old. I chose to work with girls in this age group because I believed they would be at the right developmental stage. Developmental issues likely to influence sun-related behaviours impinge at different ages. Work by the Health Education Authority for example, had indicated that when teenagers begin to make links between appearance and attractiveness this can influence their desire for suntans (Howard 1997); appearance becomes a preoccupation and a priority (Marcoux 2000; Jones *et al.* 2000). I needed to capture these issues if they were of significance. I also needed to access volunteers at an age when they were likely to be experiencing independence from adults. This was because

it is then, that their sun protection attitudes and behaviours are believed to decline (Dixon 1999). Other than age, there were no other inclusion criteria based on the assumption that all teenage girls would have had experience of being in the sun at some time. No exclusion criteria were applied to volunteers because it was important to be inclusive in the work because it was with children (as explained in the forthcoming ethics section of this study). Further the inductive nature of grounded theory meant that issues or variables were not pre-determined and would only be included if the participants raised that they were significant (Glaser 1978).

Although I had intended to include boys in this study, I realised early on that even with girls alone, the issues emerging were complex. Participants were not part of a homogeneous group as they tend to be portrayed. I was also aware that the literature indicated that there were differences in terms of male and female adolescents' behaviour in the sun (Wichstrøm 1994; Lupton and Gaffney 1996). Based on this, I altered the focus of this study to concentrate on young women specifically, rather than adolescents of both genders. As a consequence the study sample comprised female participants.

Theoretical Sampling

A key characteristic of the inductive process in grounded theory is that data collection, analysis and theory generation occur simultaneously (Glaser and Strauss 1967). As the grounded theory emerges the researcher considers what groups or subgroups should be approached next (Glaser 1978). This is so that the theory can develop. Groups to study are chosen on the basis of theoretical purpose and relevance for developing the categories that are emerging. This approach is called 'theoretical sampling' (Glaser and Strauss 1967). In this study, theoretical sampling guided me to older girls and led me to access young women in new settings such as youth work. The rationale for including the older participants was that in order to develop categories or elements of the theory, I needed to explore the perspectives of those who had become more independent of family and parents. Whilst my initial sample in secondary school year 10 appeared to be appropriate (in that it emerged that they were interested in appearance issues), the young women in that age group were not as independent of family and parents as I had anticipated they would be. Because of this, I extended the inclusion criterion for age, to 18 years old and sought

participants of 16 years and older in the latter recruitment cycles (see appendix four for detail of the recruitment process over time).

The Final Sample

By the end of the study the final sample comprised 20 female participants aged 14-17 years. During the course of the study, I had targeted three secondary school, one sports, three youth work and one higher education setting for recruits and was successful in gaining the 20 volunteers from two of the school and two of the youth work settings (see appendix five for a summary of interview settings, groups and participants).

Data Collection Methods – Interview Data

Semi-structured Interviews

Young women were the main source of data in this study and I specifically sought qualitative data from them. The method I used to gather the data was semi-structured interviewing. Whilst semi-structured interviews are based upon themes that the interviewer explores, the agenda is flexible and open in order for participants' issues to emerge (Kvale 1996). In keeping I used some initial, open questions to instigate discussion. I used Cancer Research UK advice about sun safety to trigger conversation around what the young women did and did not do in the sun (see appendix six). This also allowed me to explore the 'why' of their perspectives. Initially, my research aim had been to explore adolescent female sun-related *behaviours* in order to create a grounded theory to explain their behaviours in the sun. However, once I began discussing issues with the girls, I was gleaning much more than accounts of their behaviours. I was gaining information about their perspectives and experiences. Kortesluoma *et al.* (2003, p.434) had identified that experiences comprise 'sensations, feelings, thoughts and activities'. This resonated with the type of data I was collecting and so the final aim of this study became one to explore female adolescents' sun-related *experiences* in order to generate a grounded theory to explain their behaviours.

During the study I used the semi-structured approach to interviewing with groups of participants as well as with individuals. Detail of the group and one-to-one interview

scenarios follows but it is timely to mention that ethical issues influenced the collection of interview data. In the account that comes next, I refer to the ethical issues but consider them in more detail later, in the ethics section of this chapter.

Interviews in Groups

As the study progressed and participants were recruited, the 20 volunteers involved in the study formed six interview groups. I was able to meet with five of the interview groups on at least two occasions and had one meeting with the sixth group. The advantage of meeting groups on more than one occasion was that it gave me the opportunity to check my perceptions and the findings from previous interviews. In total, I carried out 13 group interviews. The size of the groups ranged between two and five volunteers (see appendix five for a summary of interview settings, groups and participants).

The decision to engage participants in group interviews was made for several reasons. Interviewing participants in groups helped to balance potential power relationships between the volunteers and me (as described in the ethics section of this chapter). Further, drawing on the principles of focus group interview technique in group settings facilitated exploration of the issues from participants' perspectives and helped me to gain the qualitative data required; I explain how, next.

Focus groups are small group interviews about a specific topic, guided by a moderator (Morgan 1998). They are exploratory in nature (Kitzinger and Barbour 1999) and data is comprised of what the participants in the group say during their discussions (Morgan 1998, Kitzinger 1994). A premise of the group method of interview is that the researcher rescinds control to the participants (Wilkinson 1999). In terms of their capacity for exploration, topics can be explored from the participants' perspectives and participants' responses clarified (Holloway and Wheeler 2002). Discussions enable the researcher to listen and learn (Morgan 1998). Group discussions are also well suited for the acquisition of qualitative data because they provide a forum for opinions and experiences to be compared. Ranges of perspectives can be identified (Morgan 1998) and the researcher can gain new insights and ideas as participants answer their questions and contribute to discussion (Holloway and Wheeler 2002). Whilst collecting data with groups it was useful to use sun safety advice as a focus for discussion. I also found it helpful to use pictures to

elicit participants' perspectives. A specific instance arose when it emerged that skin colour was an issue for the girls. In order to explore the significance of skin colour I took two pictures of women with different complexions as foci for discussion at interviews. The women featured in advertisements and I had selected their images from a magazine. One picture depicted a tanned woman and the other a woman who was fair-skinned and pale in appearance. Using these images as foci for discussion was beneficial because I believe it enabled me to glean more detail about the significance of skin colour than I would otherwise have gained.

Focus group method is not only a means to establish opinions. Focus groups can also give insight into how opinions are formed and how people within groups interact (Kitzinger and Barbour 1999). In grounded theory, everything has the potential to be data including what is happening in the research setting (Glaser 1998). Because of this, my initial intention was to take the process-and-outcome approach that focus group work affords. I intended to gain the participants' perspectives and observe their interactions with each other. However, I modified this intention. This was because in order to incorporate analysis of group interactions, it is advisable to have an observer in the midst of it. The role of the observer is to note the interactions that occur during discussions so that they can be included as data. I deduced that including an observer (another adult) in the small group discussions I conducted would defeat the object of using the group method to balance the power relationships (discussed in the ethics section that follows). As a compromise, I limited the inclusion of interactions as data, to those I, alone, was able to note and accepted this as a necessary 'trade off' (Morgan 1988).

Interviews with Individuals

Despite the benefits of interviewing in groups, a criticism sometimes levied at this approach is that quieter participants may not have the same opportunity to contribute as their more forthright counterparts (Michel 1999). This was a likely scenario in this study. and so once participants had got to know me in their groups, I asked if them they would be willing to meet me individually. In total, I interviewed six volunteers on a one-to-one basis. The interviews with individuals gave the girls opportunities to add their perspectives if they had not done so before and they gave me the chance to check my understanding of the issues that had emerged in the data analysis. Due to time constraints, I was not able to

offer the opportunity of one-to-one interviews to all participants, only those from the first two groups. In retrospect, it was not so important in subsequent groups because these were friendship units comprising long-term friends. Being with friends is believed to make young people at ease and more inclined to voice their points of view (Michel 1999).

Irrespective of interviews being held on group or on one-to-one bases they took place in participants' school and youth club settings (for reasons explained in the ethics section of this chapter). They lasted between 20 minutes and an hour and the participants' verbal accounts comprised the interview data. Some volunteers gave permission for their contributions to be tape-recorded and in these cases, I transcribed the interview tapes personally, verbatim. When volunteers had not given permission for me to tape record interviews they had agreed to my taking notes during discussions. Whether in the form of transcripts or notes, all of the interview data were analysed on an ongoing basis. This was in keeping with grounded theory because the processes of data collection, analysis and theory generation interact and should occur simultaneously.

In grounded theory, the analytic process includes categorising data according to the categories or concepts the data indicate. Because it is possible for different types and sources of data to indicate the same concept, Glaser (1992) holds that 'all' can be considered data. When different types and sources of data indicate the same concept, they are termed 'interchangeable indices' (Glaser 1992). As analysis of interview data began to reveal the issues involved in this study, it transpired that data from sources other than interviews were relevant to the developing categories (see appendix seven for the range of sources of data used). The use of data sources related to the context and process of the research is recognised in grounded theory method (Glaser 2001) and I consider these next.

Sources of Data Related to the Research Context and Process

Sources of data or interchangeable indices that related to the research process and context included reflective memos I had written about the processes of interviewing and analysis, experiences, environmental observations and influences (rain for example) and observations in the interview setting. The significance of these sources of data emerged during the ongoing process of data analysis. However, I also sought sources that would help to develop my insight into the participants' worlds. The girls' accounts had indicated

a harsh social context in which people were judged by their appearances and I wanted to understand this perspective. Charmaz (2006) has noted how participants sometimes lead the researcher to suitable data sources and unbeknown to them, the participants in my study led me to magazines as a data source; they had previously indicated that magazines influenced them. In order to access appropriate publications I enquired about the ones they read. I bought one copy of each of five titles (Glamour 2006; Reveal 2006; Heat 2006; Hello! 2006; OK! 2006[14]). I went through the magazines and noted the nature of their contents. I used my observations about the contents as a form of data. Although this data derived from a source other than interviews, it contributed to the study because it provided interchangeable indices for issues that had emerged from my discussions with the girls; it too, indicated an emphasis upon appearance and the necessity for people to conform to a social agenda that values appearance (see appendix eight). I have acknowledged the contribution of the magazine data within the findings section of this study. There, I have made reference to a memo written about it specifically in relation to the category *Fitting In* and its property *The Worry*.

The Literature as Data

I approached the use of the literature in the way advocated by Glaser and Strauss; as a source of data to compare with the emergent theory (Glaser and Strauss 1967; Glaser 1978; Glaser 1998). In practice, this meant that when categories had emerged and were 'settled' I could read in relation to them (Glaser 1998) (see appendices nine and ten for detail of the approach I took to finding literature relevant to the emergent categories). I compared the other literature with my findings and considered how it might contribute or relate. As advocated by Glaser (1998) when other studies related to mine, I contemplated how their findings might support or challenge what I had discovered. The literature I used as a data source not only comprised others' studies but also existing theory that could be compared with the issues that had arisen in my study. For example, I applied the seminal work of Mead to my findings and this contributed to the explanation of issues that had emerged in the study (as presented in the findings and discussion chapter of this study). Because a grounded theory should be modifiable in the light of new data, literature that has not been

[14] OK! magazine included a free supplement entitled 'Hot Stars' (2006).

considered but subsequently emerges as relevant becomes additional data to compare during the potentially never-ending process of grounded theory generation (Glaser 1998).

In summary, various sources of data were used in this study including literature, reflective memos, experiences, environmental observations and influences and observations in the interview setting. However, the initial and main source of the data for the study was interviewing and the ethical and legal issues associated with interviewing the young women involved in the study are presented next.

Ethical and Legal Issues

Before interview data could be gained, there were ethical and legal considerations to be made. Although Glaser (2001) asserts that there is no need to gain consent from participants, I disagreed. Glaser's view is based on the notion that the outcome of grounded theory research is theory and not description involving participants' accounts verbatim. He maintains that the theorising process will maintain individuals' confidentiality because writing in a theoretical way means that no reference is made to them. Despite this rationale, I deemed it necessary to consider legal as well as ethical issues associated with this study on three counts. First, the participants were under 18 years of age[15]. Secondly, I had adapted the method and presented elements of the findings from this study descriptively. Lastly, irrespective of the nature of the presentation of the findings and the age of the participants, I believe that ethical and legal issues should be considered in any study with human beings. This was not just a personal judgment. I also needed to meet ethical and legal requirements of peer review before the study could begin. Although the proposed research did not fall into a category compulsorily appraised by a National Health Service (NHS) Research Ethics Committee (DH 2001a), approval by the relevant NHS Local Research Ethics Committee (LREC) was sought given University protocol at the time (see appendix four for detail of the ethical approval processes followed in the study).

Issues associated with research work with people under the age of 18 have been recognised as complex (Roberts 2000). Specific matters that needed to be addressed before any

[15] The UK Children Act (1989) defines a child as any person under the age of 18 years (Allmark 2002).

participants could be asked to engage with this study, included how to gain legal, voluntary consent from participants viewed as children using the terms of reference of the NHS Local Research Ethics Committee. I opted to gain the written consent of both participants and those who had parental responsibility for them for the legal and ethical reasons explained below.

Consent to Participate in Research - Legal and Ethical Issues

Consent should be obtained from people who have the legal capacity to give it (Doyal 2001) and from a legal point of view, the same principles apply to consent in research practice as to clinical practice (DH 2001b). However, it has been noted that the law concerning research with children is not clearly established (RCPCH 2000; Montgomery 2001) and it is complex (Kennedy and Grubb 2000).

There are those who suggest a cautious approach to the acquisition of consent and who advocate the involvement of parents and children (when they are old enough) (Alderson 1995). However current law can limit the power of parental responsibility[16] over older children (Masson 2000) potentially calling the relevance of parental consent into question. The exact nature and extent of parental responsibility has only been determined by case law and so it falls to researchers to decide whether, and in what situations children are able to agree to participate in research independently of their parents (Masson, 2000). Another consideration is that consent to participate in research is governed by common law meaning that if a volunteer were to suffer because of lack of care of the researcher, they could claim negligence or breach of contract (Abrams and Browning 2001).

Given the complexity of the legal issues involved, and in the light of other guidance, I decided to involve those with parental responsibility in the consenting process. This was in keeping with other guidance that had been cautionary and that had noted how it was good practice to involve parents (British Sociological Association (BSA) 2002). The Market Research Society had also advocated gaining the consent of relevant responsible adults particularly when participants are under 16 and when the work involves interviews

[16] Those with parental responsibility will normally be the child's parent but may be others identified by The Children Act, 1989. When required legally, the consent of one person with parental responsibility is sufficient (Department of Health 2001c).

(Market Research Society 2000). Further, it has been argued that requesting parental consent indicates the researchers' respect for their role (Allmark 2002). Unbeknown to me at the time, school and youth club policies dictated a similar requirement for parental consent for the participation of young people in activities. This was fortunate because I was required to adhere to these policies in any event.

The Declaration of Helsinki[17] and its amendments suggest that if consent has been gained from a legally valid representative it is only necessary to acquire assent to participate in research from a minor (WMA 2002). However, this does not address the ethical issues that consent with children raises. My decision to acquire volunteers' consent in addition to that of a parent stemmed from concern that gaining consent by 'proxy' may not have afforded the young people adequate 'say' (Allmark 2002). The United Nations Convention on The Rights of The Child identifies that children should not be seen as the property of parents. Neither should they be seen as people without voice (Ruxton 1996). If, theoretically, the consenting process respects the autonomy of the person giving it, proxy consent cannot serve the same purpose (Allmark 2002). It could also be argued that permission granted on behalf of a group cannot be considered to be 'informed consent'. The National Children's Bureau (NCB) (2002) suggests that the researcher should consider carefully how they will gain voluntary agreement of children for their studies. Children are not usually in a position to decide alone. Parents have legal rights to ensure the welfare of their children and adults in other roles have professional rights and responsibilities to act as protective 'gatekeepers' (Masson 2000).

In order to access potential participants in different settings I was required to negotiate with gatekeepers, some of whom had higher levels of authority than others (see appendix four for detail of contact and negotiation with gatekeepers during the research). It may have been difficult for the children to say 'no' to participation in the study if the hierarchy of gatekeepers had approved my access to them. A consideration for me was that the young women should be able to make their own decisions about whether to participate or not, 'unfettered' by the influence of adults. It was important to ensure that any participants were volunteers and that they had consented to join the study. I devised a way of gaining

[17] The Declaration of Helsinki (derived from the Nuremberg Code for Research with Humans), serves as an ethical guide for those involved with medical research (Brody 2001; World Medical Association (WMA) 2002).

access to young women and then requesting volunteers. I began by negotiating access to the setting they were in and where possible I went to meet potential participants. This meant I could briefly explain the nature of the study to individuals and request their help. To ensure they did not feel coerced by me or awkward in front of peers, they were asked to let their teacher or youth worker know if they were interested in participating. I collected volunteers' names from the respective adults later and subsequently contacted both the volunteers and their parents in writing (see appendix eleven for a summary of the steps of the recruitment and consenting process in principle. See appendix twelve, for an example of the documentation sent).

It is necessary for those who consent to being involved in research to have full information about the work beforehand (Doyal 2001). In order for the participants to provide their informed consent to participate in the study and for their parents to agree, they needed to be aware of the purpose of the study, as well as any risks and benefits of inclusion. It was necessary to design study information outlining the details of the study differently for the girls and their parents. It was important to produce the information in the right style and to use the right pitch and language for both participants and those with parental responsibility. I took advice from teachers and youth workers regarding language, literacy or understanding difficulties of any party in order that I could address these individually. In the event, no issues arose.

It was not only important that the participants had understood the materials I had provided (NCB 2002), they also needed to understand how the study would affect them (Masson 2000) and that they were free to withdraw from the study at any time (before, during or after interviews). Hence, on every occasion I met with volunteers, I went through the main issues associated with their participation before I began collecting data and checked they understood the implications of being involved (see appendix thirteen for the general format of interviews).

Overall, I used the principles of autonomy, justice, nonmaleficence and beneficence to guide my research practice as advocated by Grieg and Taylor (1999). Autonomy refers to the individual being able to act according to their own free will and without the control of others, whilst justice reflects equity and fairness. I applied the principles of autonomy and justice in the consenting processes discussed above. Nonmaleficence indicates that a

person should not cause harm to others and beneficence determines their obligation to act in a way that benefits them (Beauchamp and Childress 2001) and I applied the principles of nonmaleficence and beneficence in the ways presented next.

Ethical Issues - Nonmaleficence and Beneficence

Although it is considered to be good practice to involve children in research, they are classed as a vulnerable group. Ensuring participants' dignity, rights, safety and wellbeing had to be my primary concern (DH 2001c) and I needed to make sure that they would come to no physical or psychological harm as a result of joining the study. I worked on the principle suggested by Roberts, that participation in the research should be fun for volunteers and at worst, it should cause them no harm (Roberts 2000).

The main tool for acquiring data for this study was interviewing. This method is believed to cause minimal risk to participants unless the issues explored are deemed sensitive (Allmark 2000). Even though discussions were to revolve around being in the sun, I could not anticipate the issues that could be raised. This was because interviews would be exploratory and qualitative. Accordingly I went to interviews armed with support materials, information and contact details of people who may be able to help participants should issues arise for them and I also checked at the end of interviews that all was well with them. It was important to be prepared, in case I gleaned 'unsought' or 'difficult' information such as instances of child abuse (Allmark 2000). Whilst I had indicated to volunteers that information they provided me with would be confidential[18], I needed to explain the limits of confidentiality that would apply (NCB 2002). For example, as a registered nurse bound by the Nursing and Midwifery Council (NMC) Code of Conduct (NMC 2002), I have professional as well as personal responsibilities in the event of suspecting child abuse. I explained in the initial literature to volunteers and their parents that if I believed that information should be passed on to a third party, I would discuss the situation with the participant first. I also re-iterated the limits to confidentiality at the outset of interviews. The participants appeared to be comfortable with this because they were aware of these issues already. It was also important to address how participants in

[18] ' Confidentiality is present when one person discloses information to another ... and the person to whom the information is disclosed pledges not to divulge that information to a third party without the confider's permission' (Beauchamp and Childress 2001, p.305-6).

groups would respect each other's contributions and so we set ground rules at the beginning of sessions about the confidentiality of proceedings. I reminded the groups of our agreement during each interview. I also protected participants' confidentiality by anonymising the data and by ascribing pseudonyms to volunteers. The researcher should be the only person who can match names and identities (Holloway and Wheeler 2002; BSA 2002) and so the taped interview data was transcribed by me. The details of participants and their identities were stored securely and all data kept according to data protection legislation and university protocols. Hard copies of transcripts and notes will be archived and stored in a secure environment (locked, fireproofed filing cabinet) for five years (Bournemouth University 2003) and tapes destroyed.

Child safeguarding procedures and policies applied to me just as any other in the organisations I was working with. I was required to undergo enhanced criminal records bureau checks and to comply with their policies and procedures associated with safeguarding children. I was aware of each organisation's child protection officer and had made contact with them to introduce myself prior to commencing data collection with relevant groups. There were other ways I sought to protect the participants' interests, for example in terms of their inclusion. It has been noted that children do not like to be left out (Green and Hart 1999) and as it transpired, this emerged as a significant issue in the findings of this study. In any event, ethical approval from the NHS REC review had been granted on the basis that any person who volunteered would be included in the study. Hence, no exclusion criteria were applied to volunteers.

I met and interviewed participants in their own, familiar settings such as school. This is established as a place of safety for children (Huber and Clandinin 2002; Market Research Society 2000) and the same applies to the youth club environment. In this sense these were suitable environments for interviews to take place. Familiar infrastructure and faces surrounded the girls and I anticipated this would mean they would be more at ease. A disadvantage was that my access to participants was restricted to term times and the school and youth work agendas. The limitation this brought was that the timing of interviews was not ideal and on some occasions I talked with participants in the months of February and March. It may have been an advantage to have interviewed them in the summer when it was sunnier, however as I found, the weather in spring and summer months was often inclement. This observation became data in itself. In any event, in school, my research

could not compromise the participants' education. This was particularly salient because some of the young women I targeted were undertaking GCSE examination work and it was important that my meetings with them did not impinge. I had permission to meet them during lunchtimes, which meant that they also needed to eat and drink. Hence, I invited them to bring their lunches. In club settings, I could not compromise the activities participants had gone primarily to enjoy and I was required to work around their other choices of activity.

In the past, research that would not potentially benefit the individual child participant was not advocated and although this was presumably to prevent harm to children, it potentially denied them of the potential benefits of participation (Montgomery 2001). Sometimes it is difficult to identify the benefit to individual children participating in the research, except that they are having a 'say' (Masson 2000) and in terms of benefit to individual participants, this was the level anticipated here. It was unlikely that the outcome of this study would benefit the individual participants directly, although it was feasible that it might affect their counterparts in the future. I understood from staff in the organisations I approached, that if people did offer to help, there was something for them to be gained indirectly by being involved in discussion forums. On completion of data collection, I was in a position to provide volunteers in school with contributions to record of achievement portfolios. In agreement with school and youth work staff I gave small tokens of appreciation such as notebooks and pens, and sent thank you cards.

Power Issues

An ethical issue that needed to be addressed as a matter specifically related to children was the balance of power between the participants and me as an adult researcher. Research is the domain of adults (Roberts 2000) and all researchers are in a position of power that carries with it the potential for abuse. This is potentially more significant in adult: child interaction (Grieg and Taylor 1999; Christensen and James 2000). Even in studies involving adults, there is potentially an uneven balance of power in the researcher's favour (Roberts 2000). However, it is believed that to an extent, power issues can be overcome by selecting research methods appropriate to what needs to be known, the people involved in the study and its social and cultural context (Christensen and James 2000). The issue of power inequity was partially addressed by my approach to the participants. I adapted my

language and style in an attempt to make the research information materials and interactions accessible and acceptable to the young women. The main way in which potential inequity was addressed however, was through data collection. I chose to collect interview data in groups as well as with individuals. Group work may be reassuring especially for those who do not want to be the 'sole focus of the researcher's attention' (Kitzinger and Barbour 1999, p.10); it work shifts the balance of power in the researcher/researched relationship. As far as I could in the interview settings, I tried to create a relaxed atmosphere. It was important not to come across as a figure of authority and I emphasised to the participants that I was there to learn from them. They had usually met me before group interviews and had always met me before one-to-ones so I was familiar to them and vice versa.

Once the ethical and legal issues relating to the involvement of young women in the study had been addressed, interviews could begin. The interviews began in June 2004 and ended in June 2006. I stopped collecting interview data when I experienced that extra data did not reveal new issues, or in other words, the categories that had emerged had reached 'theoretical saturation' (Glaser 1992).

Data Analysis and Building the Theory

Data analysis had been ongoing during the collection of interview data because the processes of data collection, analysis and theory generation occur simultaneously in grounded theory. The analysis of the data involved the application of a method specific to grounded theory: the Constant Comparative Method of Data Analysis. Using this method, the data was organised into categories[19] (clusters of data) and properties of categories[20]. The categories included a core category, which subsumed and integrated the others and it formed the basis of the theory (Glaser and Strauss 1967; Glaser 1978). In this study, *Being Comfortable* emerged as the core because it denoted the main concern of the participants. It emerged as important for them to be comfortable in the sun from physical and psychosocial perspectives. The theory based on the core category explains how the perceptions and behaviours of young women were directed towards the achievement of

[19] A category forms a conceptual element of the theory (Glaser and Strauss 1967).

[20] A property is an element of a category that indicates the scope of the category and its nature such as the conditions it might occur under and its relations to other categories and properties. The category stands by itself with the properties being contributory aspects of the category (Glaser and Strauss 1967).

physical and psychosocial comfort. The processes involved in the data analysis and how they were applied in reaching these conclusions is explained next.

Moving the data to a theory involves the process of conceptualising or seeing 'the bigger picture' (Glaser 1998, p.133). Once data collection had begun, the raw data was analysed in a way that moved it to a different conceptual level. The method used to do this, was the Constant Comparative method of data analysis. The process of conceptualisation is key to this method and to building a theory from raw data. Conceptualising and the Constant Comparative method of analysis are the processes explained next. Figure one shows the conceptualisation process in principle. The figure is based upon Glaser's views over time, of what it comprises (Glaser 1998; Glaser 2001, Glaser 2003). It depicts the conceptual levels that lead to the development of a grounded theory. The first reflects the data at conceptual level one, where it is 'raw' data. Via the process of analysis, the data moves to conceptual level two. At this stage, categories and their properties have been gleaned from the data. At conceptual level three, the theory has been derived from the categories. In the following section, I will explain how I applied the processes that are involved in these conceptual shifts in practice. In keeping with the analytic rule that the researcher should do their own analysis or coding (Glaser 1978), I did this myself.

Figure two gives an overview of the first conceptual shift of the raw data to the categories. Data from a range of sources was used in this study and, arguably, even selecting data from the overall data 'bank' formed part of the conceptualising process. This was because the data was not 'just there'; I had selected it. Moving the raw data to the next conceptual stage meant that I needed to develop codes or categories, referred to as substantive codes (Glaser 1978). This involved the process of 'open coding', which entailed considering segments of the data or 'incidents' in it, systematically. Similar incidents were grouped together to establish what Glaser (1992) terms 'substantive codes'. Irrespective of how they had been derived, data from the range of sources identified in this chapter underwent the comparative process. This was appropriate because it was possible for the data to indicate the same issue whatever their source; they were potentially interchangeable indices for the emerging categories (see appendix eight for an example).

Open coding was aided by the use of certain questions and rules. Glaser (1978) suggests

Figure One

The conceptualisation process. From raw data to grounded theory (based on Glaser 1998; Glaser 2001; Glaser 2003).

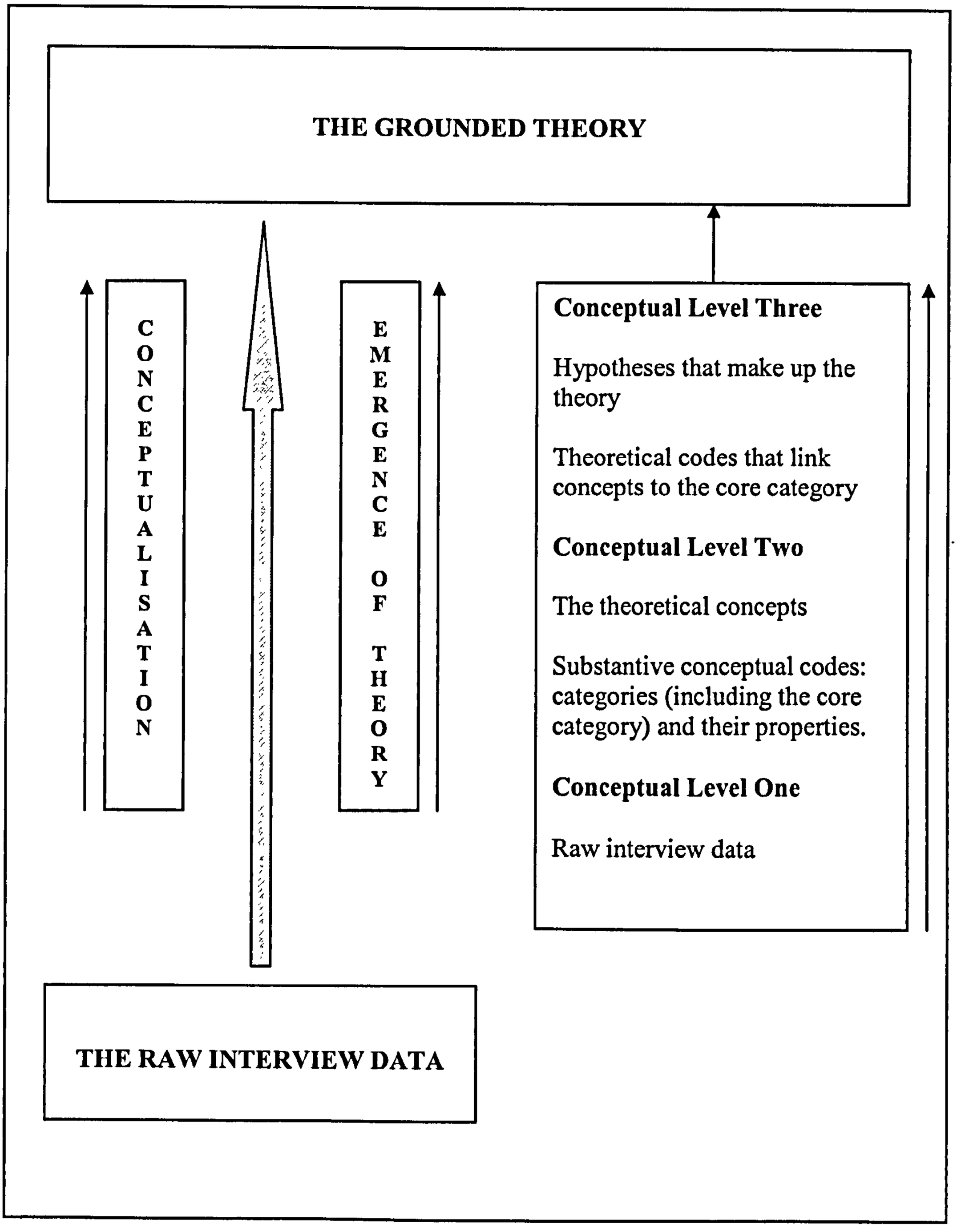
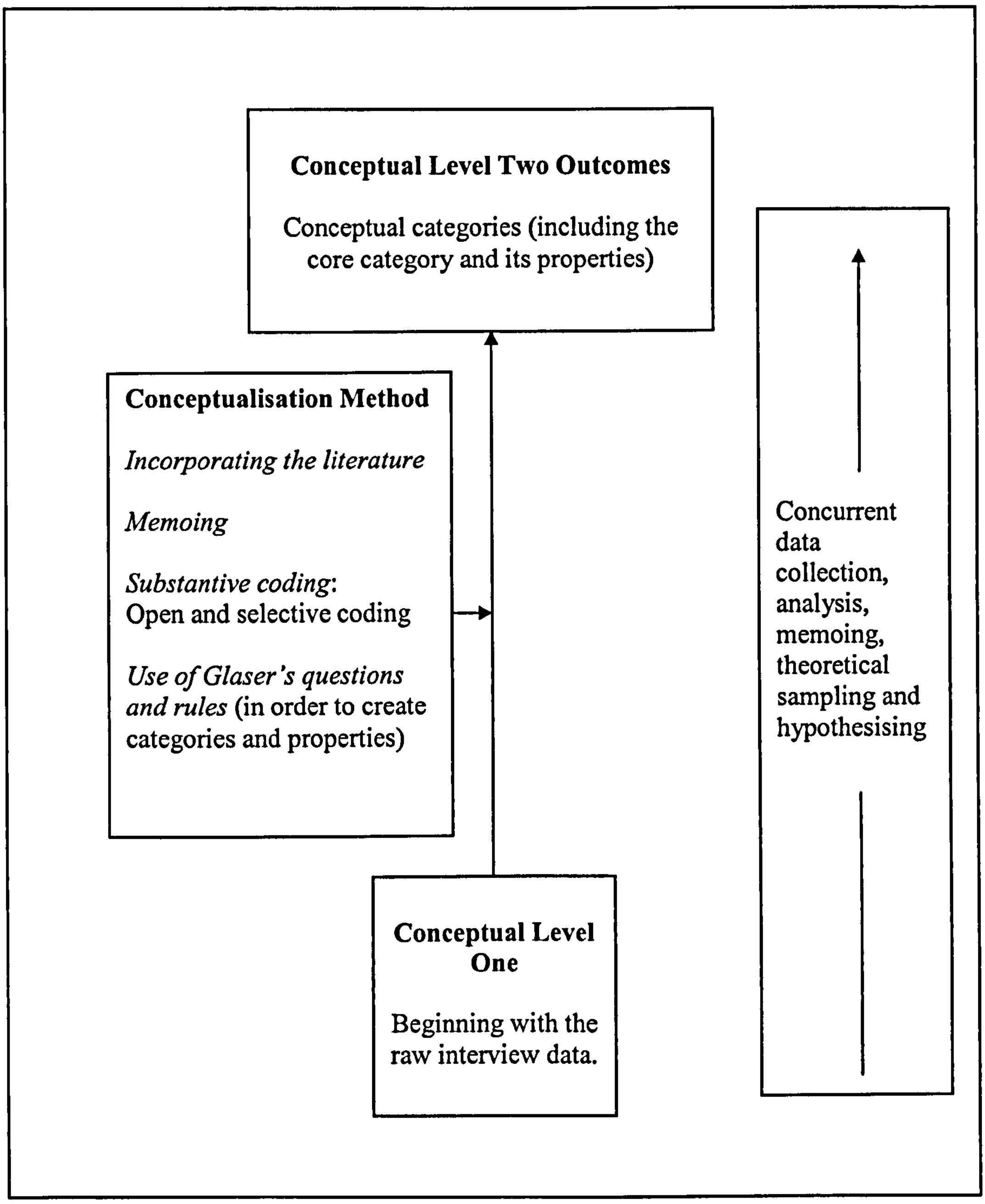


Figure Two

The methods involved in conceptualising the raw data and developing categories (based on Glaser 1998; Glaser 2001; Glaser 2003).



that in considering each snippet of data, the researcher should ask themselves certain questions about it. The questions are: What is this data a study of? What category or property of a category, of what part of the emerging theory, does this incident indicate? What is actually happening in the data?' The last question is intended to lead to the identification of a core category. The core category represents the main issue in the study from the participants' perspectives. Using Glaser's questions helped me to establish what each segment of data (or incident) suggested. Segments of data could then be compared and similar ones grouped together. These groups of data formed the basis of the conceptual categories that I then gave names: *Fitting In*, *Being Myself*, *Being Physically Comfortable*, *Slipping Up* and *Being Comfortable*. Figure three shows the categories and properties that emerged on this basis. As new data was collected, it was compared with the concepts I had begun to generate. At the time, I viewed the categories as 'concepts-in-the-making' as they were dynamic; new data constantly demanded revision of the categories and properties and also required 'old' data to be revisited and re-categorised. The categorising process was not linear or neat but it led to the creation of the categories. In generating the categories in the way described, the data had been taken from conceptual level one, to level two. Not only this, there were different conceptual levels within and between the categories that had been created. For example, the category properties and sub-properties were at lower levels than the categories that encompassed them. The core category, *Being Comfortable* was at the highest conceptual level of all, because it integrated the others (see appendix fourteen, for the elements of each of the categories (their properties, and sub properties and the relationships between them[21]). To illustrate the nature and scope of the categories I wrote descriptors for each category, its properties and sub properties (see appendix fifteen) and these descriptions underpinned the write up of the category findings. Theoretically, once the core category has been discovered through open coding, a process called 'selective coding' can be used to narrow the focus of the work or 'delimit' it (Figure two). This means that the core category guides future data collection (Glaser 1978). In practice, the conceptualisation process was neither neat nor linear as this description of coding methods might suggest. The reality I experienced was that the categories became settled around the same time, meaning that their development had been concurrent in many ways.

[21] The findings chapter is based upon the categories and these elements.

Figure Three

The conceptual categories.

CORE CATEGORY: BEING COMFORTABLE

Emergent Category or Concept **FITTING IN**	*Emergent Category or Concept* **BEING MYSELF**	*Emergent Category or Concept* **BEING PHYSICALLY COMFORTABLE**	*Emergent Category or Concept* **SLIPPING UP**
Property • Conforming *Sub properties* o Appearances Matter o The Leaders and The Sheep *Property* • The Worry *Property* • Standing Out *Sub properties* o Positive and Negative Standing Out o Avoiding Negative Standing Out o Enhancing Appearance *Property* • Being Different	*Property* • My Agenda *Sub property* o Consequences of My Agenda *Property* • Acting the Part *Sub properties* o Being The Child o Being The Adolescent o Being The Adult	*Property* • Planned Protection Strategies *Property* • Avoiding Discomfort	*Property* • Misjudging By Not Knowing *Property* • Forgetting

A process that had helped during the conceptualisation process was memoing. Memos are notes made about observations and decisions made during the research process. They form a record of how theoretical ideas develop during analysis (Glaser 1978). The memos are written spontaneously because their purpose is to note ideas as they flow. They are written without concern for accurate grammar and presentation as illustrated later in the findings section. Glaser (1978) has prescribed a format for the memos and I produced a proforma based on this to help me. Memoing is advised during all stages of the constant comparative method of theory generation but begins during open coding. The memos eventually form the basis of a memo 'fund' or a source of reference for the researcher about the development and integration of categories. In hindsight, writing informally about how the categorising was progressing and why, was important given the complexity of the issues that were emerging and because it was not feasible for me to commit everything to memory.

It is timely to mention the role of the literature in the conceptualising process. It would have defeated the object of letting significant issues emerge from the data, if I had imposed preconceived theoretical ideas and concepts from the literature at the outset. It was possible to identify and incorporate relevant literature once the substantive categories and properties had emerged (Glaser 1992). This meant that the data included existing theory related to the issues that had arisen from participants' accounts and the categories that had emerged as important. Although my grounded theory stood in its own right, other literature could be considered in comparison with it and 'woven in' to it (Glaser 1998). Accordingly, I integrated relevant literature into the findings and discussion based upon the theory that had developed (see appendices nine and ten for detail of how relevant literature was accessed). I also used the literature to illustrate my own contribution and used previous sun studies to illustrate the explanatory nature of the theory and the categories. Because the issues that emerged in this study were multidisciplinary in nature, so was the literature I included.

In the conceptual journey so far and in taking the data from conceptual level one to level two, I had conceived the main categories of the study as: *Fitting In*, *Being Myself*, *Being Physically Comfortable*, *Slipping Up* and *Being Comfortable*. However, according to Glaser (2003), describing the categories is not synonymous with creating

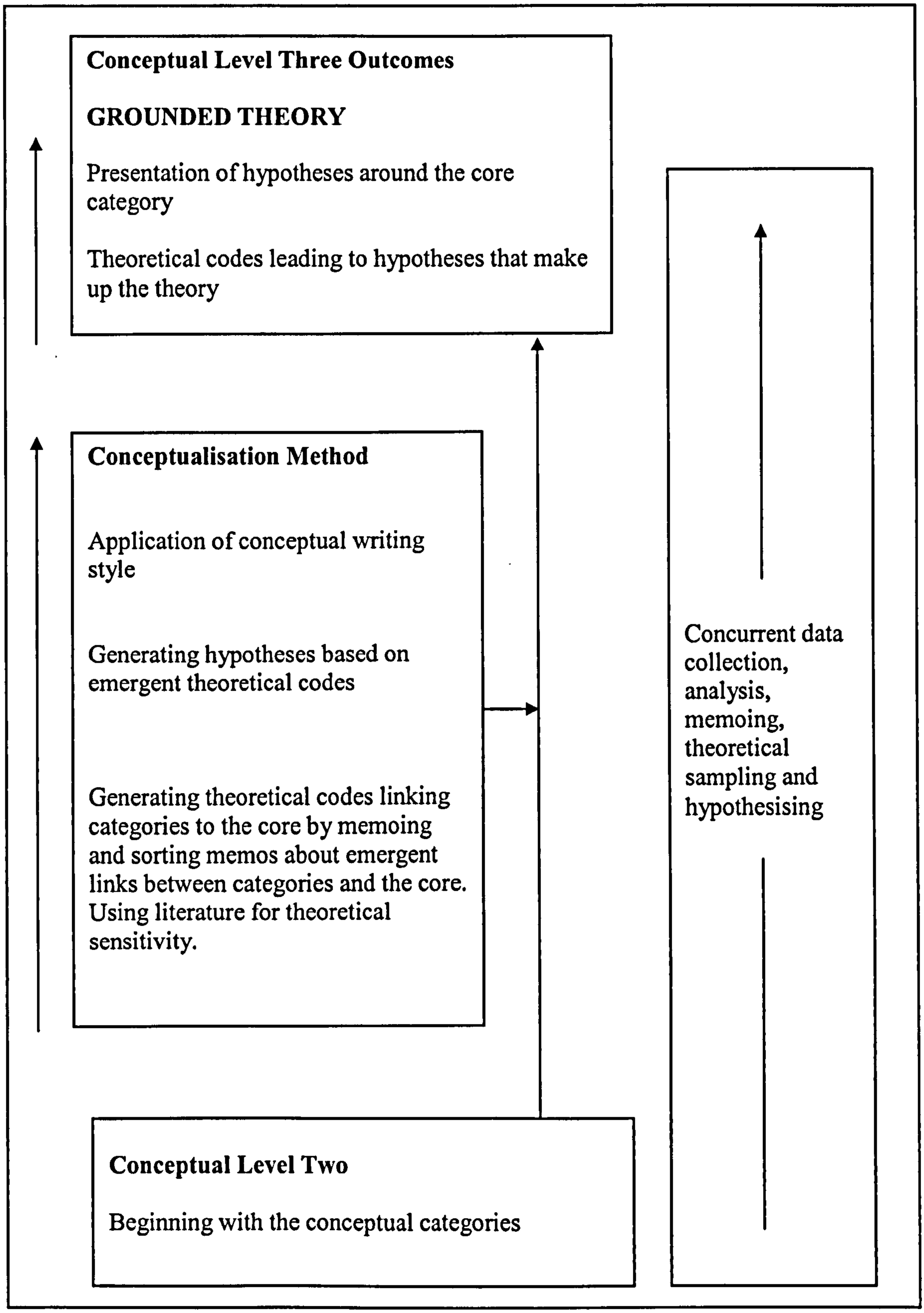
a theory. Whilst categories (or substantive codes) have meaning in relation to the area of concern, there is another vital step in developing the theory called 'theoretical coding' (see figure four for an overview of the second phase of the conceptualising process in generating a grounded theory). Theoretical coding involves the researcher in proposing theoretical links specifically between the core category and the others that have developed. The theoretical relationships are termed 'theoretical codes' and these integrate the categories around the core (Glaser 1978). Once the core category has been discovered and identifies what is going on, the theoretical codes shows *how* it is happening (Glaser 2003). In the case of this study, the core category indicated that young women needed to be comfortable in the sun. The theoretical codes I identified included that *Being Comfortable* was a need.

Theoretical codes emerge, just like substantive codes and according to Glaser (1978), the researcher should not go to theoretical places 'by armchair' and 'logical drift'. In this part of the conceptualising process the data derives from the memos that have been written all along. At this stage in the proceedings, it is the content of memos not the initial data that is analysed (Glaser 2003, p.53). For example, the content of a memo may indicate a connection between the core and another category. This link can be compared with others that have been conceived. The types of relationship that link the categories are sorted and grouped together. It is through the sorting the ideas in the memos that the theoretical codes emerge (Glaser 1998). I identified *Being Comfortable* as a need and other theoretical codes as conditions, strategies, a consequence and a context, all in relation to *Being Comfortable* (see appendix sixteen).

An advantage of allowing theoretical codes to emerge as described is that it stops the researcher from forcing particular theoretical frameworks on their work (perhaps derived from their professions). Instead, they have the freedom to discover an appropriate overarching framework for themselves, meaning that the potential outcome is a theory that is comprehensive, with the scope to cross professional and discipline boundaries (Glaser 2003). Being aware of the potential to force a theoretical framework (for example related to health promotion) helped me to be open minded about what might be significant. Further, at one point I suggested in one memo that a theoretical code could be a typology. Then I realised that I had deduced this 'by armchair' and enthusiasm rather than emergence

Figure Four.

The methods involved in conceptualising. From categories to theory (based on Glaser 1998; Glaser 2001; Glaser 2003).



through the memo sorting process that Glaser advocated. I needed to keep reining my thoughts in by sorting memos as described above. In any event, the scope of theoretical frameworks the researcher can draw upon in developing theoretical codes hinges on their awareness of potentially suitable ones. To this end, Glaser recommends that the researcher should read in order to develop their ability to identify relevant theoretical codes (Glaser 2003) and I did this based on his texts. The theoretical links that I identified as having emerged between the core category and its properties of *Fitting In*, *Being Myself*, *Being Physically Comfortable* and *Slipping Up* are represented in appendix sixteen. In grounded theory, the theoretical links are expressed in the form of hypotheses that 'weave the fractured story back together' and form a coherent grounded theory derived from the data. According to Glaser, part of the conceptualisation process involves writing about it in a theoretical, rather than a descriptive style. This entails writing in a way that is abstract of people, place and time because the conceptualisation process will have transformed the data; the findings in grounded theory are the theoretical hypotheses that have been generated from it (Glaser 1998; Glaser 2001). Although I have been mindful of the role writing style plays in the conceptualising process, I have also had concerns about it. This is because writing in a purely conceptual way, with no reference to the data that has given rise to the categories, could result in the loss of elements of the conceptual journey I followed in taking the raw data to different theoretical levels. Consequently in the findings and discussion chapter I have presented the findings using both conceptual and descriptive ways of writing. First, as I build up to the theory about the core category (*Being Comfortable*), I provide the findings of the other categories of *Fitting In*, *Being Myself*, *Slipping Up* and *Being Physically Comfortable*. I present these as elements of the theory and the properties of the core category. The findings related to these categories are written using a mix of conceptual style and description, in order to illustrate how the category, its properties and sub properties were conceived. Then, when presenting the theory based upon the core category of *Being Comfortable* I have used the conceptual, theoretical style that Glaser advocates when writing such accounts. In so doing, I have incorporated the hypotheses that emerged into the text.

In this chapter I have explained and rationalised the methodology that underpins this study as well as the methods used to gather and analyse the data. I have also provided detail of how the data was conceptualised during the development of the grounded theory. In the

next chapter I give detail of how I and other factors influenced the research process. In addition I consider the trustworthiness of the study and its limitations.

CHAPTER THREE

Reflexivity, Trustworthiness and Study Limitations.

According to Charmaz (2006, p.188) reflexivity can be defined as:

> *The researcher's scrutiny of his or her research experience, decisions, and interpretations in ways that bring the researcher to the process and allow the reader to assess how and to what extent the researcher's interests, positions, and assumptions influenced inquiry.*

Whilst Glaser does not specifically recognise reflexivity, I agree with Ahern (1999) that it is important to acknowledge the potential sources of bias in a study. This thesis is my creation and I am bound to have influenced it in some way, not least, because the research process is a pragmatic one that requires ongoing trade-offs between what is ideal and what is possible. Because I could not avoid all sources of bias during the research process, I regularly considered the decisions I was making, the progress of the research and the influences others and I were having on upon it. This ongoing assessment gave me the opportunity to deal with areas of bias as they arose and did not restrict me to merely acknowledging them in post-hoc evaluation (Morse *et al.* 2002). During this reflexive process, I discovered that my potential to affect the research was being determined by different facets of 'Me'. I made this discovery when I was reflecting on data from a particular interview. In my role as interviewer, my plan had been to be a neutral receiver of information and to be non-judgemental of participants' perceptions and reported behaviours. This was because I wanted to avoid influencing them with my opinions. Despite these intentions, the data in the transcript indicated that on this occasion I had inadvertently made a judgement. Linda had been telling me that she applied sun cream before she went out and I had remarked *that's good. A*s I was considering this in retrospect, I realised that my comment had been an instinctive one and possibly attributable to nurse and teacher elements of 'Me' spilling over into the research situation. Giving positive feedback to a person about their behaviour would be an appropriate thing to do in the roles of nurse and teacher. As I pondered my possible influence as nurse, teacher and researcher, I realised that other aspects of 'Me' could also have impinged, such as my personal qualities and characteristics. What follows is a narrative of how I believe I may have influenced this study, structured around different facets of 'Me'. The memo material

written during my research journey informs the account and I begin by considering the influence I have had on this study in the role of researcher. Within the following text, I discuss my role as research interviewer, issues of access to volunteers and power relations in the research setting.

Interviewing young people in groups was new to me and although I have had experiences with teenagers in health settings and schools, the people I generally deal with are older than the young women who were involved in this study. Some of my field notes reflect my apprehension about working in the new environments of school and youth work. On reflection, this was because I was aware that anecdotally, teenagers are portrayed as difficult to engage and to communicate with. I was concerned about how I would facilitate a group interview if no one was willing to talk. In practice, this concern was unfounded although I did find that open questioning did not generally result in long explanations or descriptions. I needed to address this because there were implications for the depth of data I could collect. Participants' succinct responses did not appear to be because the situation or I intimidated them. I came to this conclusion because participants were willing to talk to me on more than one occasion and feedback from a youth worker indicated that they enjoyed the time we spent together. My impression was that the girls were not used to being asked for their opinions, for example I was told by one participant that they are 'usually told to be quiet' rather than invited to comment. To remedy this I needed to help the young women to verbalise their views and to encourage them to provide detail about their perspectives and experiences. I went about this in several ways. One way was to clarify and confirm my perceptions of what the participants were telling me on an ongoing basis. This involved asking them to correct me if I had misinterpreted their views, which they did. On one occasion for example, Ann corrected me whilst we were talking about the value of SunSmart leaflets. During discussion with Ann, Carly and Bella, I had begun to draw a conclusion that the information the leaflets comprised might not be relevant to people in their age group. However, Ann commented that:

> *... It's like, it just depends. Different people feel differently about the sun.*
> *Me: Yeah.*
> *Ann: So you can't say 'our age group' 'cos not all of our age group are the same.*

Me: No, no you're right. Mm.

Another way to draw out and explore individuals' perspectives was to use one-to-one interviews. The one-to-one contexts gave me the chance to probe and to check the girls' views. The one-to-one scenarios also gave quieter participants the opportunity to contribute, as they would wish and the following memo shows the effect the interview arrangements could have on participant contributions:

> *Gill is a self reportedly quiet person and has needed to be drawn out in discussion. Today though* (referring to an interview just involving Gill and I) *she appeared to be very comfortable discussing things one: one and said she had enjoyed the sessions.*

Because I wanted individuals to be at ease with me in one-to-one conversations and I did not want to force discussion, I began by asking individuals if they agreed or disagreed with statements I had previously prepared. The statements derived from opinions previously expressed by their group. Once the individual had articulated her agreement or disagreement, I had the opportunity to explore her perspective. An approach I used to stimulate and develop discussion in groups was to use pictures as visual foci for conversation. When skin colour emerged as an issue from the girls' perspectives, for instance I was able to use pictures of pale and tanned models to find out what participants deemed important.

Although it required intensive and sustained effort on my part, I needed to develop rapport with the young women before, during and after the interviews in contexts where time was a limiting factor. During interviews I also I needed to build trusting relationships in order to gain in-depth data. To aid this, I began interview sessions by chatting to the girls, perhaps about what had been going on at school or club. On each interview occasion, I also reiterated the conditions of their contribution, for example that they were free to withdraw at any time. Although I did not attempt it, I do not believe that launching straight into my agenda would have facilitated discussion, rather it would have impeded it because the girls needed to get to know me and vice versa. Charmaz (2006) has suggested that building rapport and making the effort to understand others in the research situation demonstrates an investigator's respect for their participants. The young women who contributed to this

study may have responded to my efforts on this basis but in any event, the rapport I developed meant that I could delve deeply. However, the need for rapport demonstrates that the participants and I co-constructed the interview situation meaning that the interview process could not have been objective (Charmaz 2006). Further, the young women were aware of the nature and purpose of this study from the outset to the extent that in one setting I became known as 'The Sun Lady'. In spite of this, participants' accounts did not reflect that they were tailoring them to what they perceived I might have wanted to hear as the following example shows. I had been describing sun safety advice about staying in the shade and asked Helen, Isabel, Jo, Katie and Linda if they followed this. Helen replied:

> *No. I never do that.*

Despite my success in developing rapport and in gaining relevant interview data for this study from some settings, I did not secure volunteers for the study from all of the areas I contacted. For example, I approached young women in a higher education environment but this did not result in volunteers. In retrospect, I was reliant upon the cooperation and permission of gatekeepers such as heads of departments and course leaders and although I had some success in securing their help (and appreciated it), I was not able to choose the way to contact potential participants. Rather than the more personal, face-to-face approach I would have preferred, I was allowed to request participants via their course website. The website medium limited me to a very brief piece posted by the course leader. The result was, that one person contacted me by e mail for more details but she did not get in touch with me again (as was her choice). The reality was, that I had exhausted the potential for this particular context. Although I partially attributed this to my lack of personal contact with potential volunteers, I was aware that even when I had been able to meet potential participants, this did not necessarily engage them. I needed to consider the reasons for this and in one context, a sports environment, I surmised that my formal appearance might have deterred young women from volunteering. The first time I met the group in question, I had not had the chance to change into appropriate, informal clothing. When I arrived at the sports centre where the girls trained, they were playing football and, as I interacted with them later, I felt very out of place in my formal-looking work clothes. Whether or not my appearance contributed to the girls deciding not to participate remains to be seen, but I noted in my research diary that I felt it had been instrumental. The significance that impressions and appearance held with this group had already emerged in the study and I

knew the girls would have been appraising me (Charmaz 2006). The experience made me think about the influence my self-presentation might have and I was able to address this in some of the future interviews by dressing more casually. I was aware of how much more comfortable it felt when I could wear appropriate clothing and noted the irony that I was subject to the same influences as the participants; I too, needed to fit in based on appearance and self-presentation.

Another issue that transpired was that even when I had secured volunteers for the study, circumstances could prevent me from interviewing them. For example in one youth club, I had invested a large amount of time in meeting and securing volunteers. I had negotiated a date and time with three young women to interview them, and they arrived at the club accordingly. The problem was that they arrived without the forms giving their parents' consent to join the study. The first time this happened, I explained to the girls why I could not involve them without their parents' consent. We rearranged our discussion for the following week, on the basis that they would be able to bring appropriate permissions. Unfortunately, the scenario was the same subsequently and they arrived without the necessary signatures. My immediate concern then was that once again, the girls had made the effort to come to talk to me but I could not interview them. I felt they should benefit in some way for making the effort and I adapted the session to one where I answered queries they had about sun safety. Subsequently, reluctantly, I did not make any further arrangements in that setting. I gathered from youth workers that they too, had trouble in gaining parental consents via the young people. This was despite the teenagers wanting to participate in the activities that required permission from their parents. This reassured me that the volunteers were not avoiding gaining the consents required because they did not want to participate in the study. My experience was that the girls did not seem to deem their parents' permissions as necessary; it did not make sense to them that I could not interview them when they had given me their consent and were there, willing to talk. Later, when I reflected on the issue, I decided that even though the consenting process I had devised could be unwieldy, I could not compromise its rigour and needed to involve the young women and those giving parental consent. This was for legal and ethical reasons and so I had to accept there could be limitations.

At the outset of the study, I was aware of how it is possible to wield power in the research situation. In particular, I was cognisant of my potential to influence young people with my

'adult authority' and I took steps to equalise power relationships as described in the methods chapter of this study. It transpired that in reality the power was not necessarily all mine. For instance, youth clubs are the domain of young people and places where their autonomy is actively encouraged. Within reason, the role of adults is supervisory rather than controlling. On one evening, I was looking for a particular person who had volunteered to take part in the study. I was hoping to arrange a future interview session with her and I found myself in pursuit of the young woman as she went in and out of the building smoking cigarettes[22] and socialising with her friends. She was exerting her autonomy and whilst I respected that, I noted the irony of the tendency in research to assume that adults have more power than their young counterparts. In school settings, the power relationships were more likely to be in my favour because there, adults are assumed to have more power than the young people they work with. This is due to the nature and function of school. Despite this, power dynamics between the volunteers and myself, appear to have been balanced since the young women felt able to exert their autonomy. Evidence of this was that some chose not to consent to discussions being tape recorded, some felt free to miss occasional sessions and negotiate other times to come and talk to me. Further evidence to suggest that I was not perceived as overly powerful was that outside of the interview situation, gossip was shared with me as if I were a peer. This may have been because I was perceived as a visitor.

In my role as visitor, I was expected to abide by the policies and procedures required in the research settings. I required permission from gatekeepers for every aspect of my activities. I also relied on them to organise interview venues and to help me to contact volunteers. I appreciated their commitment and time especially as my agenda was not theirs. Because of this, I went to great lengths to be organised, to make as few demands of gatekeepers as possible and to help them in ways that I could. In retrospect, this was key to my success in accessing participants and indirectly, crucial to gaining the data for this study. I have realised since, that my rapport with the gatekeepers helped me to increase my autonomy in the research settings, although I was not conscious of this at the time. I believe I was allowed to become more independent because I had gained the gatekeepers' trust. On one occasion for instance, through prior agreement and communication with all parties, it was

[22] This was at a time when it was legal for people under the age of 18 to smoke cigarettes.

possible for me to meet and interview participants and leave the setting with minimal assistance from teaching staff.

As a visitor some situations and arrangements were out of my control. It was important to be adaptable to the facilities available for interviewing and it meant that my meetings with volunteers were not necessarily carried out in ideal environments. I considered that I could adapt as long as participants' confidentiality and protection issues were not compromised. In the event, inconveniences that arose were minor and included issues such as general noise, loud music, sounds of people having fun and playing sport, participants arriving at different times and mobile phones going off. I did not believe that these compromised the data collection process.

On some occasions, the rooms allocated for interviewing did not lend themselves to recording conversations. For example, one interview was held in a school music storeroom because the usual interview venue had been changed at short notice. I noted in a memo that:

> *The room was not conducive to recording and I needed to keep a lookout for the girls so decided to take notes (and the girls agreed).*

I was used to adapting when it was not possible to tape-record discussions, for example on occasions when the participants had not consented to being recorded. Then, they agreed to me taking notes during discussions and I did this as discreetly as possible, often writing one word to act as an aide memoir. Immediately after the interviews (usually in the car), I wrote extensive notes using the prompt words as reminders. The advantage of note taking was that it was convenient and easily accomplished. However, its disadvantage was that it could temporarily distract volunteers. Further, the extent of the data in the form of retrospective interview notes relied upon my powers of recall. The main disadvantage of not taping interviews from my point of view was that the scope for providing verbatim quotations in this written piece became limited. The effect has been that some participants are quoted verbatim to a greater extent than others. For equity I have referred to all individuals who contributed to this study on at least one occasion.

My potential influence in this study was not just as the interviewer, but also as the data analyst. Next, I explain how being reflexive helped me to present the participants' perspectives through the process of analysis. In Glaser's words, my aim had always been, to let the data 'speak'. I was aware that I would be doing the participants a disservice if I gleaned their views only to develop theory around my presumptions and theoretical perspectives (Shuckmith and Spratt 2002). During reflection on the analytic process of open coding, I realised that despite my efforts to allow issues to emerge from the girls' points of view, I had been categorising data according to my agenda rooted in skin cancer risk and sun safety. This realisation was triggered during my reflection on data gathered from a group interview. Within the interview, a participant told us about the way she used SPF 2 sun cream. She used it to make her skin glisten. At the time, she, the rest of the group and I, had laughed about this unconventional use of sun cream. However, when I reflected on it, this incident had revealed an agenda to enhance appearance. It also brought home to me how I needed to change my mindset if I was going to reflect the participants' perspectives rather than my own in data analysis. So far, the categories I had developed indicated sun 'protecting' and 'non-protecting' behaviours. What the participant had described had been nothing to do with sun protection. A memo I wrote illustrates how I accounted for this discrepancy:

> *Although I thought I had gone into the setting with an open mind about the girls' agenda I was unconsciously imposing my professional agenda and not leaving the work open to the emergent, girls' agendas in the sun.*

The way I responded to this experience was to reiterate to myself Glaser's advice and when open coding, I made sure I asked (myself) what was happening in the data from the participants' standpoints. I revisited the data and began the open coding process again. I also reminded myself that the agenda to explore the girls' behaviours in the sun that I had imposed might bear no resemblance to theirs. These measures meant that the theory was more likely to reflect the participants' perspectives, thereby making it relevant.

Relevance is one of four criteria that Glaser and Strauss suggest should be considered when assessing a grounded theory as trustworthy (Glaser and Strauss 1967, Glaser 1978). Another criterion that Glaser and Strauss affirm should be met is that of 'fit'. Fit refers to

the data naturally relating to the theory rather than being forced to correspond (Glaser 1978). In this study, I used the Constant Comparative Method of data analysis and as I gathered new data, I reviewed existing categories in the light of it. This helped to ensure that the data fitted categories that I had already developed. When data did not fit, the categories had to be changed to accommodate it. On some occasions, I was disinclined to make alterations and on reflection this was because of the effort I had previously expended in developing the categories. Further, alterations had implications for the data collected on previous occasions and sometimes it was necessary to re-categorise this in keeping with amendments made. In spite of any reluctance on my part, I was compelled to make the changes rather than compromise the data, categories and potentially the theory. Because of this, I believe that my work is in a good position to meet the principle of fit as well as a further criterion for trustworthiness. This third criterion reflects that the theory should be modifiable in the light of new issues that emerge. In other words, the theory needs to be responsive to all new data and data that might not support the theory cannot be ignored (Glaser 1978; Glaser 1998). As demonstrated above, I was responsive at the level of analysis and modified the theory as necessary. In addition, the theory has retained the capacity for future modification because grounded theory has the potential to continue to evolve and develop in the light of more data or another theory. As Glaser and Strauss wrote in 1967 (p 40):

> *... The published word is not the final one, but only a pause in the never -ending process of generating theory.*

Although there was the potential to continue developing the theory in this study, I had to end the work at some point. This involved making choices about when to stop and these decisions influenced the scope of the work. For example, because of the limitations of time and other resources, I decided to confine myself to producing a substantive rather than a formal theory[23]. I stopped collecting and analysing data when I believed I had an explanatory substantive theory; a set of hypotheses based on the data that I could present as a theory. This theory is based on hypotheses that revolve around the core category of

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[23] In grounded theory, the theoretical outcome can be 'substantive theory' or 'formal theory' (Glaser and Strauss 1967). The former is based upon a specific area of enquiry for example in this study; sun-related experiences of young women. Formal theory is based upon a broader context of investigation and involves a wider range of settings and sample groups.

Being Comfortable and which explains the behaviour of young women in the sun. It is explanatory (in ways discussed in previous chapters) and I believe that my theory meets the final criterion for trustworthiness that Glaser and Strauss propose. This is that the theory should work. In brief, this means that the core category should explain and account for behaviour (Glaser 1998).

The theory that develops in grounded theory guides theoretical sampling and the identification of future sources of data collection. In principle, the processes of theoretical sampling and data collection could continue ad infinitum. Although I am satisfied that I have achieved my research aim (to explore adolescents' sun-related experiences) and have created a substantive, grounded theory of female adolescent behaviour in the sun, I acknowledge the limitations of these achievements. My theory has been confined to exploring the issues that affect young women and there is scope to develop the theory in relation to other groups. People I would have liked to have included in this study would have been adolescent boys, adult men and adult women. Although resources precluded their inclusion, the potential remains to access these groups in the future. There is also the potential for future work in developing formal theory. A focus for this could be the exploration of whether other health issues identified by adults as problematic (such as cigarette smoking, sexual behaviour and recreational drug taking) are explained by young people meeting their comfort needs. There is also scope for the theory to be verified or tested by using different research approaches, such as quantitative methods. My aim in this study has been to generate theory and the theoretical codes and hypotheses that have emerged amount to suggested links between categories and their properties.

The discussion so far demonstrates some of the influences I have had upon this study relative to specific activities as a researcher. However, an all-pervading influence will have been my philosophical stance toward it and this requires further consideration. I have developed this study as a constructivist grounded theory as I do not believe that it is possible to exclude my influence and presuppositions from it (Charmaz 2006). By writing in the first person, I have indicated my ownership of, and involvement with, the study in keeping with qualitative methodology. Despite my intention to produce a constructivist piece of qualitative research, I have been aware of a potential tension between my role in the study as a qualitative researcher and my positivist, quantitative background. My initial academic ventures as a science undergraduate and years of using quantitative, positivistic,

health-related literature have undoubtedly been significant in their influence upon me in professional life, just as my experiences of qualitative methodology have. Despite appreciating the differences between the research paradigms, their philosophies, methodologies and methods, I am still aware that I can have positivist tendencies when dealing with the qualitative domain. The use of the literature was a case in point and in one memo I wrote:

> *Think about similarities/discrepancies between my theory and what I am reading ... Glaser says that the use of other literature increases its scope (Not sure how exactly but we'll see).*

This memo shows that at first, I was disconcerted by the notion that existing literature could be construed as data. Then later, as I grasped that this was congruent with the qualitative, inductive nature of the research I noted:

> *You access the literature in relation to the categories. A big penny has just dropped.*

By being reflexive throughout this study, I believe that, as far as it has been possible, I have kept my positivist background influence in check. I have constantly reminded myself of what I am aiming for as a qualitative researcher, reaffirming what this means for the aspect of research in hand.

As already explained in the introduction to this chapter, I became aware that different aspects of 'Me' potentially influenced this research in a variety of ways. What follows is discussion of how my background as a nurse and some of my more personal characteristics may have had an effect. Through reflection on some interview situations, I became aware that I tended to explain matters that the young women either misunderstood or were unaware of. I found that I could not be a disinterested 'bystander' as the following excerpt shows; Carly had experienced sunburn on a cloudy day and I felt it necessary to explain the reason for this:

> *Me: Did you know that you can actually get the UV rays from the sun **through** the clouds and that you can st ....*

Ann, Bella and Carly (interrupting together): No.

Me: Just as you experienced, you can still get the rays onto your skin even though it's a cloudy day. Mm,mm.

Bella: Oh wow!

Carly: (giggles).

Bella: I didn't know that.

I became aware of how, in interviews, I did not always probe as deeply as I could with individuals into potentially sensitive areas like appearance. I believe that subconsciously I set boundaries based on how sensitive I perceived issues to be to individuals or members of a particular group. In retrospect, when considering the possible effect of these issues on the research, I identified that my background as a nurse was implicated and that the issues derived from professional ethics. I felt it necessary to explain and clarify sun-related health issues for ethical reasons and the same applied to my concern about going too far when addressing potentially sensitive issues. The young women were not there to be made to feel uncomfortable and I judged that ethical considerations should have primacy over data collection. Although this may have affected the extent of the data collected, I believe it was a necessary compromise.

In terms of personal characteristics being influential in this study, there are two that serve as examples. The first is that I have experience of having had a non-melanoma skin cancer. I also know that this increases the likelihood of developing the more serious form of skin cancer, malignant melanoma in the future. Since my lesion was removed twelve years ago, I have attempted to make the necessary lifestyle changes to reduce my exposure to ultraviolet radiation. My experience of this has been that it is a difficult transition to make and I am aware that my concern over recurrence or malignant melanoma is not at the forefront of my considerations. The relevance I believe this experience may have had in relation to this study is that it has helped me to develop a perspective on health promotion as a client, as well as being a person involved in it on a professional basis. I have found that I do not judge people negatively if they do not follow health promotion advice because I am fully aware of my own failings in this respect. Although participants were not aware of my experience of skin cancer and it did not directly influence them, it may have influenced the ways in which I was open to their perspectives. The second personal characteristic that I consider may have influenced aspects of this study is my age. I am a

middle-aged woman who sought to explain the perspectives and behaviours of young women. Whilst I could not modify my chronological age, I found that the age difference between the participants and me could be an advantage. This was because it enabled me to ask for participants' help in order to understand things from their points view. I explained to them that I needed their assistance because as they could see it had been a long time since I had been a teenager! I believe this helped to balance power relations between us because the young women became my teachers and I was learning from them. It also meant that they understood why I needed to clarify my understanding with them as the experts, on an ongoing basis.

In being reflexive, it has not only been important to consider my influences on this study. It has also been necessary to consider how *it* affected *me*. Some of the memos written on my research journey give insight into how the study's progress could affect my motivation. For example, I documented the elation of the breakthrough moment when I established the core category of *Being Comfortable*. Other memos reflect despair when I felt muddled during the analysis of the data and insecurity during concerns about how to write up the conceptualisation process. I experienced frustration when I realised that the categories needed to be reviewed and disappointment when I found that the emergence of the core category did not signify the end of the study. These experiences and emotions affected my motivation positively and negatively and I dealt with them by expressing my feelings in memos. This cathartic approach helped me to move forward. It helped me to see the problems and led me to their solutions. Overall, this approach enabled me to maintain my motivation and to see this work through to its conclusion.

In the chapter that follows I present and discuss the study findings. Because I discovered that all of the categories are explanatory and illustrate complex issues in their own rights, I have devoted a section of the findings and discussion chapter to each category. The sections comprise the findings of each category and discussion of the findings in the light of relevant literature. The discussions include the implications the findings may have for the prevention of skin cancer with young women. The findings presented in the first section of the chapter are those related to the category of *Fitting In*. This is followed by sections about the other categories identified as *Being Myself*, *Being Physically Comfortable*, and *Slipping Up*. The findings and discussion chapter of the thesis

culminates in a section that presents the core category and the theory about young women *Being Comfortable.*

CHAPTER FOUR

The Categories, Findings and Discussions

Fitting In

The findings in this category reflect how it was important for some participants to be socially acceptable, based on expectations derived from their wider social context and their peer groups. Participants believed that they were living in a social context where physical appearance was important and this message was apparently relayed to them indirectly via the media and celebrities. They perceived that peer evaluations of their appearance were of particular importance, hence, for some, *Fitting In* relied upon the young women conforming to what I have called an 'appearances agenda'. This agenda entailed the girls looking good, having a tan in the summer and being mindful of the potential to attract positive or negative attention. Because the young women were conforming to expectations about their appearances, they adopted behaviours and 'looks', expected of them by peers and it emerged that their need to conform and fit into the appearances agenda was driven by concern or 'worry' about what might happen if they did not comply. The expectation was that not conforming to the appearances agenda could affect whether or not peers would accept them, hence they employed strategies to increase their chances of being accepted. These strategies involved the young women in improving their appearance and avoiding potentially damaging, negative attention derived from 'looking bad'. It emerged that conformity was not the case for all however and there were limits to the necessity for *Fitting In*. Some of the young women in the study apparently behaved independently of the agenda for being tanned and caring what others thought of them. It emerged that the ability to be different in this way could derive from having been accepted by others, having self-confidence and having learned from experience - all of which it seems, may have developed with age. The detail of the findings that led to the preceding analysis are considered next, beginning with an excerpt of data from one of the later interviews with some of the older participants in the study - Helen, Isabel, Katie, Linda and Jo. During the interview, I had been exploring how they perceived they had changed as they had grown older. Helen's comments summarised what had emerged from others of her age group before. This was that when younger, they perceived a need to fit in with the appearances agenda in order to be accepted by their peer group. However, as they grew older, they

could accept themselves for who they were, and were accepted by others; it had become easier to be more independent and to behave as they chose:

> *Helen: I definitely made more of an effort to try to fit in when I was younger like smokin' and stuff like that.*
> *Me: Right.*
> *Helen: Like wearing the gold I didn't really like some of the stuff but I just like wore it 'cos I thought it was cool.*
> *Me: Yeah, so it wasn't really your choice* (statement to clarify).
> *Helen: Yes.*
> *Me: But you've kind of, what's changed then d'you think?*
> *Helen: I dunno, it's just like I'd be like wearing like stuff .... I dunno, maybe it's like I'm becomin' more like my mum. Dunno if that's good or a bad thing but (laughs), I dunno but, it's just you don't really care about not fittin' in because you know that you've got your mates now and you know that they're gonna stick around for you, y'know, like us lot.*
> *Me: Mm.*
> *Helen: Y'know we might have tried like to make, to impress each other but now, we know each other's* (pauses) *we don't need to impress each other.*
> *Me: So you're alright in the group* (clarifying).
> Helen, Isabel and Jo agreed.

Helen had previously described her experiences of being a younger teenager. She told me about how she had worn gold to make her look 'hard', even though gold had not been to her taste. She had worn the gold and had smoked cigarettes in order to fit in with her peer group; *Fitting In* was conditional on her conforming. Now however, she wore what she liked and did not smoke because she knew that she was accepted by her friendship group. Although the illustration above does not specifically relate to behaviour in the sun, the same issue of needing to fit in, emerged as influential in the sun-related behaviours of the girls in this study. This was particularly the case for the younger participants, who it seemed, were at the beginning of the transition from childhood to adolescence. It meant they had a tendency to conform to the appearances agenda and peer behaviours. It had

become clear that the girls' social context was one where appearances mattered and some of the participants perceived a need to be socially acceptable based on appearance expectations. These expectations were apparently derived indirectly from their wider social context, communicated via the media and celebrity role models and directly derived from their peer groups. As I explored why the participants needed to conform and fit in with the appearance-led agenda, I was told about 'The Leaders'. These people influenced the appearance of others; those who conformed and followed them. It emerged that celebrities were perceived as the ultimate leaders and role models as the participants Ruth and Queenie commented:

> *Ruth: If people look up to the people in the magazines, they think 'I want to look like that.*
> *Queenie: And they try to copy.*

I was told how copying revolved around individuals needing to resemble celebrities whom they admired and in the past this notion has been linked to the process of adolescents developing self-esteem. By copying a celebrity, it has been suggested that the young person will gain approval from peers, resulting in a boost to their self-esteem. The process is believed to be particularly relevant to adolescents as they begin to seek approval from people other than their parents (Koblenzer 1998). In any event, the girls in this study were aware of the effect celebrities had in transmitting the appearance agenda. They felt that this influence had the potential to make a pale complexion more acceptable. They perceived that if celebrities were pale, this would make it easier for them to be fair-skinned. Further, the participants believed that if celebrities demonstrated compliance with sun safety advice, then that too, would become more acceptable. However, they were aware that in reality celebrities presented themselves as tanned and attractive and so this was the 'look' to be aspired to. As Molly had commented:

> *You don't see Victoria Beckham all pale blotchy and in trackie bottoms!*

Sun safety messages that were delivered by those with celebrity status, but perceived to be disingenuous were deemed by the girls to be unhelpful, as were impressions that celebrities used sun beds. In relation to sun bed use, the girls perceived that if celebrities used them, the young women who followed them would be likely to do the same. However, there was

a more positive aspect to the potential for famous people to lead others. For example, I was also advised that if they produced sun protection products, these goods would be used by the girls who followed them. It is noteworthy that the Cancer Research UK involves those with celebrity status in their SunSmart campaign, apparently to influence young people and to encourage them to use the SunSmart code (Cancer Research UK 2004). However, it emerged in discussions that the influence of celebrity could be complex. For example, whether a famous person will be influential is determined by whether they are perceived by the girls as 'good' or 'bad' celebrities. Whether a celebrity is deemed good or bad depends on 'what you are into', suggesting that even if celebrity influence *is* effective in promoting sun protection its influence should not be assumed to be universal.

It emerged that there were leaders within peer groups and that these individuals emulated celebrities. One group I interviewed referred to these leaders as 'The Plastics'. I was told how 'The Plastics' copied the celebrities and that they were fashionable and popular. Apparently 'The Plastics' 'thought they were pop stars' and they were characterised as wearing 'the latest, latest fashion' and setting the fashion for others. Helen acknowledged their influence in setting trends for example, if she liked what they were wearing, it was possible that she would buy similar clothing for herself. Another name the participants called the leaders of the appearances agenda was 'The Barbies'. These individuals were apparently followed by 'The Sheep' (the participants' words). According to the girls, characteristics of 'The Sheep' included that 'they just tag along', 'they want to be the leaders' and they are ''yes' people'. As Jo told me, a Sheep would think that if they dressed in a certain way they would be liked:

> ... *They think 'I'll get in their gang'*.

Apparently, it was easy to become a sheep (albeit a reluctant one) because being accepted could depend on conforming and Gill explained that not following others could lead a person to 'feel bad'. Following could also happen subconsciously, perhaps suggesting that the agenda is so deep-rooted that it is implicit in everyday life. On one occasion, I was discussing the attraction of a tan with Molly, Nancy, Olivia and Polly. They told me about the influence of the media, and who, they thought made tanning fashionable. They believed that young women wanted to be like the people they saw in magazines. At one point in the conversation, Molly (who had been very vocal until then), became quiet. She

appeared to be thinking about the discussion we were having and suddenly she blurted: 'we're being stereotypical teenagers aren't we?!'. The others agreed and it was as though they had just realised how celebrity and the media was influencing them. Molly seemed to be disappointed with herself. Another participant who had apparently subconsciously conformed with peer behaviour for a tan, was Carly. She, Ann and I, had been talking about being outside on sunny days and I had asked whether or not they thought about sunbathing on these occasions. Carly told me about an experience she had with a friend the preceding year. Although Carly did not need to conform to peer behaviour for a suntan (she had a skin type that was naturally brown because of her parentage and genotype), she had joined in with her friend's behaviour irrespectively. She apparently realised the irony of this as we spoke.

Carly : Well last year, my friend, she really like, last summer - she's the one that puts oil on her,

Me : Oh yeah, you told us about her.

Carly : We'd go out with like with tops that had no sleeves on. The shortest skirts that we could get (giggling) *and um we'd have our hair tied back really tight* (giggling) *so that when we were walkin' down the road the sun would be like all over us and our hair wouldn't be like shadowin' our faces.*

Me : Yes, so you had no marks?

Carly : Yeah.

Me : Mm, so, so that was on purpose then (clarifying).

Carly :Yeah.

Me: Yeah.

Carly (Laughing and demonstrating with arms out straight)*: walking down the road like.*

Me : (laughing and copying Carly's arm movement)*: I can't move my arms 'cos I might get a crease yeah? So what was all that about, for you?*

Carly : I don't know why I was doin' it! (giggling)

A further example of how opting into the appearances agenda could happen subconsciously arose in a discussion with participants Queenie and Ruth. Although the

duo originally told me that they were not concerned about their appearances, they contradicted this later, by telling me that they did not always wear sunglasses in the sun. This was because they wanted to avoid the white marks around their eyes that sunglasses could leave. It was also to avoid the attendant derision, they anticipated this scenario would bring. The implication was that they *did* care about their appearances to some extent after all, albeit subconsciously.

Being Different

Contexts when appearance did not matter included those where the girls knew they would be accepted for who they were. I was advised that 'you can be yourself', with people such as with family and close friends. Other times when appearance did not matter apparently, were circumstances when no-one knew the participants. It also emerged that response to the perceived pressure to look good was not universal. Some participants indicated that they did not subscribe to the agenda. How they looked was not an issue for them. These girls openly declared that they did not care what they looked like, whether they were tanned, or what others might think about them. This indicated difference and limits to conformity and this was illustrated in a conversation I had with Helen, Isabel and Jo:

> *Me: What is the business about fitting in? Why do you want to fit in would you say?*
> *Isabel: Depends on how you want to fit in.*
> *Me: Right.*
> *Helen: You get the sheep-bit. Everyone smokes 'cos so and so smokes. Everyone follows each other, don't they? It's stupid.*

Some individuals found that there was not a suitable group to belong to and this led them to act more independently of peer influences. Jo was a case in point and on one occasion she commented:

> *Yeah. I'm not a sheep. I don't follow no-one and everyone seems to like me.*

As I explored this more independent approach, I asked participants what the 'secret' was to not caring about what others thought. The younger participants perceived that a person

needed a lot of self-confidence to do their own thing and some older teenagers were able to reflect that for them, the prerequisite self-confidence had developed with age. When I explored sources of self-confidence participants told me how trusted, close friends contributed although as Helen pointed out, a person also has to gain confidence around other people who they may be less familiar with. As one of the older groups of participants (aged 16-17 years) told me, it was also to do with 'being comfortable with yourself'. As young women got older they also apparently learned about the need to care for themselves and this contributed to them behaving independently of peers. Older participants (aged 16-17 years) were able to reflect on how their behaviours had changed since their initial experiences of being independent of the adults in their lives. They had learned the necessity for sun protection through negative experiences. There were accounts of being badly sunburned as a result of being more concerned about what others thought, and forgetting to protect themselves from the sun. As Ruth described:

> *... When you're younger you think you want to be cool but you realise that it's more important to take care of yourself than look cool to other people, because it's not cool to not put it on it (sun cream), so you've sort of learnt that it's better to take care of yourself than risk your health-sort-of-thing .*

Further, Queenie told me that: 'you find out in the end' by testing things out and learning by making mistakes. She recalled getting very sun burned and then thinking 'never again!' Because of learning from such experiences, participants had apparently learned 'where their parents are coming from'.

The Worry

Despite the capacity of some girls to resist conforming it emerged that others could not. When I explored this further, their conforming behaviours with peers derived from 'worry' about being left out and not fitting in. The girls identified the potential consequences of this as feeling hurt, being mocked, feeling embarrassed and feeling insecure. To counter this, and to be accepted by peers, they believed that it was it was important for them to look good. This involved being fashionable and it was especially important to present oneself accordingly to friends, boys and people at school or college; there was peer pressure to be fashionable and if individuals were not in vogue this could result in them

being derided. I was assured during one discussion with Emily, Freya and Gill, that people laughed behind others' backs. Their fears about being ridiculed were based on reality as the following example shows. I had asked Emily, Freya and Gill if they had ever been in situations when they had thought that their appearance had not mattered. Emily described a situation when she had been with friends and had apparently assumed that it was safe to pay less attention to her appearance because of this. Her parent had bought her a coat that she had not liked and generally, she chose not to wear it. However, one cold day, she decided to put it on. She told those of us in the group how her friends had teased her about the coat and although she explained to us that she had 'given them as good as she got' she said she had felt hurt that they had teased her. It emerged that the worry not only stemmed from experience of real events like this but also from concern about what others *may* be thinking; what you think they are thinking. This came to light when Queenie and Ruth had been telling me about the disadvantage of wearing sunglasses and getting sunburned with them on:

Queenie: It's embarrassing. Seeing the shape of your sunglasses!

Goggles - even worse!

Me : Oh, right (all giggling).

Queenie: God! Well that's even worse!

Me: Because they are round (clarifying).

Ruth and Queenie together: Yeah.

Me: Well what's the big deal about that, from your point of view would you say?

Queenie: I dunno.

Me: Why is it you're not ....

Queenie (interrupts): *I's (its) being the laughing stock of the whole camp! It really is! It is though isn't it ?* (directing the question to Ruth).

Me: So it's to try not to, to make sure you're not the laughing stock (clarifying).

Ruth and Queenie together: Yeah.

Me: So that's stopping you getting them.

Ruth and Queenie together: Yeah.

*Ruth: Yes. Even if you're not (*the laughing stock of the whole camp*), you **think** you are, which is probably, sort of quite a big part of it - you think you look stupid.*

Me: Yeah.

Ruth: So you're not gonna be comfortable, so yeah.

Me : So even though they might not be thinking it....

Ruth and Queenie: Yeah, yeah,

*Me: You **think** they're thinking it.*

Queenie and Ruth agreed.

It emerged here, and in discussion with other participants that the fear of potentially gaining marks from sunglasses influenced whether or not they would be worn. As I explored the impact of *The Worry* there were other accounts of its apparent effect on sun-related behaviour and examples of how the intention to protect from sun exposure was modified in the presence of peers. The result was potentially a lack of sun protection and reduced potential for sun protection behaviour. One example came from Carly who described how she had seen girls wipe sun cream off because of comments made by their friends. This was apparently in spite of the perpetrators saying the comments had been made as a joke. However they were perceived to be meant by the 'victim' and lead them to remove the cream apparently in order to conform with peer expectation and prevent derision. Gill told me about how she had sensitive skin and how, although she knew it was important to reapply sun cream, this could be inconvenient. She told me how, if she was out with friends she was reluctant to stop to reapply it. This was because she would feel left out if the others were not doing the same thing. On another occasion she described how people might think 'you were a bit weird' if you put a tee shirt on when you came out of the sea and she told me about how she had burned on a trip with peers. Although she had been aware that she needed to cover up, concern about what the others would think stopped her from putting a tee shirt on. As I explored these issues, participants explained that it was acceptable to cover up in fashionable ways. It was also acceptable to cover up when incognito. Daisy for example, told me that if no-one knew her it would not matter how she looked and she would cover up but otherwise she would feel embarrassed. If not incognito Carly told me that the concern would be that 'you would look bad' and that 'word gets around'. Some did acknowledge that long term, they were potentially risking their physical health (with skin cancer), and they were aware of the argument that they

could become wrinkled later on. However, their need to attend to the appearances agenda in order to fit in in the short term emerged as a more pressing issue.

It transpired that when participants had been younger and of primary school age, they had not been concerned about what their peers had thought about them but now, they had become more self-conscious and the converse was true. The girls' perceptions of others' views came over as a powerful influence. As I tried to establish who the perpetrators of *The Worry* might be, it transpired that it was unlikely that they would be people whom the girls knew well. This was because when peers knew each other intimately, it was acceptable to be teased. It was generally understood that during banter, other parties would be joking and so it would not be hurtful. At the other end of the scale, people that the girls did not know did not pose a threat. It was the people who they were acquainted with but who they did not know well who caused concern. Apparently, this was because these peers were unknown quantities and participants could not predict how they would be received by them. As participants Ruth and Queenie explained:

> *Ruth : ...*(You are) *just gonna be yourself with friends but maybe if you're with people you don't really know you might be more aware of what you do.*
> *Queenie : You might think about what they think.*

That some peers could be disconcerting was borne out by a discussion I had with a youth worker in one of the study settings. She told me how the dynamic of a particular club session was determined by the presence or absence of certain individuals and how this affected who else was likely to participate.

It emerged that the young women could adapt in social circumstances they were unsure of as reflected in interview 18 where the participants in the group (comprising Helen, Isabel, Jo,) had been telling me about 'The Plastics'. They had given me the impression that these could be unpleasant people. Jo for example, talked about how they were 'nasty':

> *Jo: Yeah but you find that people like that are the actual* ***nasty*** *people.*
> *Me: Right.*
> *Jo: They can be 'orrible to you.*

Helen: Yeah, sometimes, they all do like look at us, like yeah, sometimes when you go past they like look round like that at you (Helen demonstrates by looking disdainful and moves her head as if she is watching someone walk past her). *'Cos they're really cool and pretty like.*

Me: So they're the ones you might be kinda guarding against.

Jo and Helen: Mm.

The participants (Helen, Jo, Isabel, Linda and Katie) had described themselves to me as a very cohesive and a close friendship group, with some members having known each other since early childhood. Their familiarity with each other was reflected in ongoing banter and teasing within one particular session. In the interview I was exploring the influence other people might have on them and I asked the members of the group how they would have behaved if 'The Plastics' had been present in our discussions. Helen replied that they would not have teased each other as they had been doing. I asked if they would have been very quiet and Jo replied:

> *You would be if you didn't know them. If you had friends like it you wouldn't really care. If you don't really know them you wouldn't know how they would react.*

This suggests that young women adapt and do what they perceive they need to, in order to fit into particular social circumstances. The implication is that they anticipate themselves as vulnerable. Sinats *et al.* (2005) came to a similar conclusion in work with young women aged 17-19 year old. They were exploring the use of diary data as a reflection of their participants' spiritual practice. Although American in origin and not directly related to sun behaviour or conformity, a common issue with this study emerged. Sinats and her colleagues found that because being sensitive was not generally seen as 'cool' by peer groups, the young women in their study modified its expression in order to be accepted. Apparently the risk of not doing so was ridicule and ostracism. The researchers quote the diary entry of a young woman in their study (identified as AR). She wrote:

> *It is dangerous to be sensitive in adolescent peer culture. If you are soft, you'll get squished.*

In her reflection on this later as an older adult, she explained:

> *In a peer group ... It was necessary to 'dumb down' my speech and ideas in order to fit in, but I didn't have to do that in my diary. It was one place where my articulate self could dwell.*

As Pipher (1994) has noted, a consequence of young women needing to fit into their social context can be that some of their behaviours will be based upon their reactions to peer pressure, rather than their own, conscious choices. Pipher's concern has been that this can lead to girls behaving in ways that do not necessarily address their real needs and may result in incongruence between their behaviours and feelings. In my study, there were implications related to this as I found that the participants could begin with good intentions to protect themselves from the sun but their social context determined their actual behaviour. This meant that that they did not always follow through their good intentions. They could not risk being left out and adapted accordingly. Linda for example, explained how she had wanted to put sun cream on but had been influenced by the presence of others:

> *Linda: You feel an idiot in front of your mates as well ....*
> *Isabel and Jo* (interrupting together)*: I don't!*
> *Linda: Like all of your mates are down there like layin' there and not puttin' it on, 'nd you're like 'Oh! Just a minute, I'll just go and get my sun cream'* (giggling and talking with a cynical tone).
> *Me: I was gonna ask you. Does it make any difference as to who you're with as to what you do?*
> *Helen: With boys I think it does.*
> *Isabel: I'm more conscious like, down the beach.*
> *Helen: Boys don't put it on 'cos they don't think it looks cool.*

This instance not only illustrates the possible influence of male peers, it also demonstrates that there was a lack of consensus about whether girls would feel awkward in front of their friends. Further, other sets of participants described how the people in their friendship groups all wore sun cream because they were aware of 'the dangers'. It is questionable

therefore, that individuals' behaviours compare. The implication is that girls cannot be classed as a homogeneous group because they each behave differently.

Overall, I had been taken by surprise by the girls' perceptions of the consequences of not *Fitting In*. Their accounts were indicating a potentially harsh social environment. In order to gain more insight into participants' worlds I asked them about the magazines they read and bought copies to read for myself. This was a revelation since many of the features and articles directly reflected what had been emerging from the girls' accounts about the nature of their social environments. Issues of appearance abounded and some of the articles sought to shame celebrities on the bases of their looks. They referred to celebrities' 'blunders' related to their physical appearance and clothing. Features included headings such as 'What were you thinking?' (Heat 2006, p. 67-76), 'Shocker!' and 'When bad clothes happen to good people' (Hot Stars, 2006 p. 24). There were comments about how certain appearances were 'not a great look' (Reveal, 2006 p. 19) and celebrities were 'named and shamed' based upon their looks. I noted that the tone was cynical and critical. It helped me to understand why the participants perceived that not conforming could have such undesirable consequences. A memo I wrote about the magazine data at the time, notes my reaction to the material that seemed to be influencing some of the girls.

> *I looked at 'Heat' and 'Reveal' and felt quite shocked by the tone of the magazines. Not just about the adverts and appearance-related articles (there were many) but that they could be actually quite evil and nasty re: celebs. Comments like 'what were you thinking?' about people's clothes etc. ... They (the girls) are in a very critical context/potentially destructive context or so they think. Scary.*

It emerged from the data that the girls were apparently consciously and/or unconsciously adopting strategies in their own social contexts to avoid similar judgments about their appearances. In particular, they took steps to improve their appearances and others to ensure that they only stood out in ways that were acceptable to them. I explore these strategies next.

Enhancing Appearance

The sun was perceived to have the capacity to improve participants' looks. I was told how being in it could have the effects of making skin glow and glisten (in conjunction with sun cream) and making hair look good. The sun was also perceived to facilitate the wearing of nicer, summer clothes and although it was acceptable to wear fashionable clothing to cover up in the sun, this was an expensive option to achieve and so its potential was limited. It was also limited because, for example, I was told that covering up with a tee shirt would defeat the object of wearing a bikini. Apparently an important factor in looking good was a having a tan and this ticked all the boxes of the appearances agenda from the girls' point of view because having a tan was not only fashionable and an 'in look', it directly enhanced their appearances as Ann disclosed:

> *Me: Do you think that's important then?* (I was referring to a tan)
> *Ann: What? - important to get a tan?*
> *Me: Mm.*
> *Bella: Yeah!*
> *Me: Yeah? (*all laughing*)*
> *Ann: It is in some ways - you don't want to walk around all pasty do ya?*
> *Me: So, what do you think a tan does for you?*
> *Ann: Makes you look good!*

Participants told me how they believed they looked slimmer with a tan, their clothes looked better and how having a tanned skin influenced the colours they could wear; they had a greater choice. Although it was possible for those in magazines to be pale and beautiful, the girls did not conceive that it was an achievable look for them. They thought the media images of attractive pale people were unrealistic because their own realities would be that they would look unhealthy on the beach; blotchy and with bad complexions. They also believed that the pale people in the magazines were made to look attractive with the use of make-up or their photographs being airbrushed to give them a good appearance. The girls thought that those who had not gone to these lengths would appear in the celebrity 'blunder' pages. Although being pale and beautiful was not perceived as a viable option, being tanned was. A suntan had the added bonus of having an appearance-

enhancing effect. I was told for example that a suntan 'hides all your imperfections'. The knock-on effect of the desirability of a tan was that it apparently influenced the girls' behaviours in the sun. Based upon self-reports of participants' own activities and their observations of peers, ways for gaining a tan were many and varied ranging from strategies for maximum sun exposure and the use of sun beds to more sun protective activities such as just being outside, not 'baking' on purpose and using sun protecting products in order to tan slowly. As I explored the significance of a tan with the participants in the study, it emerged that a tanned appearance not only helped them to express that they were fashionable but they believed that tans also portrayed elements of their lifestyles, such as being 'outdoorsy', 'healthy' and 'more interesting'. Alternative appearances, such as peeling or having pale skin apparently had undesirable connotations. Jo told me how a person with peeling skin gives the impression that they 'can't manage in the sun' or 'can't tan'. In itself, this belief infers some kind of inadequacy attached to being pale. The girls' perceptions were that looking 'pasty' indicated to others that a person had an indoor lifestyle and this was undesirable. As Ann explained, this was another reason that she wanted a suntan - to show that she had been spending time out of doors, not indoors.

> *It's like weird, like come back from a 6 week holiday and it's been sunny the whole time and you come back all white. Think you've been in the house for 6 weeks or something! So that's why, like.*

The influence of the skin as an indicator of lifestyle and the need to conform to peer expectations was apparently important in determining tanning behaviour. I was told how peers expected that their counterparts would have suntans when they returned from holidays. There would be comparisons to see who had the darkest skin and if individuals were not tanned, questions would be raised about what they had done whilst they had been away. The undesirable inference would be that they had stayed indoors. The consequential need to conform to the tanning agenda in order to fit in with peers was illustrated by a conversation with Nancy. Nancy had a familial history of skin cancer and reported that she took care to protect herself in the sun because of this. She had a pale complexion and knew of her risk of burning however she told me that she 'made an effort' to get some sort of tan but not to burn in the process. I gained further insight into the significance of a sun-tanned appearance when I had been showing Ruth and Queenie magazine pictures of a pale model and a tanned model in order to glean their opinions.

Queenie commented on how the sun-tanned model looked a 'bit over the top' (apparently because she had an orange tinge) and Ruth divulged that because she had pale skin it would be unlikely that she would acquire that colouring. However she said if she did have tanned skin she would be '... Proud' and she repeated the word 'proud' adding that if she had skin colour like that she would 'make the most of it'. Unfortunately, I did not ask Ruth to elaborate on why she would feel proud and how she would make the most of it but I took her expression of pride as an indication of the value a tan was perceived to hold. Having a suntan was perceived by others to make some people feel more confident in themselves and so perhaps this would have been the case for Ruth too. It is noteworthy that Lupton and Gaffney (1996) found that young Australians believed that it took effort to have pale skin, because of the sunny, Australian climate. Although they believed that a sun tan was an accomplishment, they also perceived that *not* having a tan signified strength of mind. This is further evidence to indicate that the significance of skin colour is complex in itself.

Standing Out

Based upon the appearance expectations or 'norms' of looking good and have a tan, it was perceived that fitting into the appearance agenda could also depend on if and how, a person might stand out on the basis of their appearance. The girls were aware of the potential attention they might attract particularly from peers. There were accounts of how they could attract positive attention through looking good and how this was acceptable and striven for. I was struck by the lengths the girls would apparently go to in order to look better than their peers. Carly for example, told me about how the pressure to look good led to competition between the girls at school to look the best. One tactic they employed was that they did not share information about purchases with friends. Further, if they were going out together, they would not divulge what they would be wearing in advance. The purpose of this was to look better than their peers. Conversely, there were accounts of how participants might be noticed because they were 'looking bad' or looking 'stupid'. I categorised accounts of attracting negative attention through appearance as *Negative Standing Out* and I defined negative attention as attention that was unacceptable to the girls. It was unacceptable because it was believed to incite derision from peers and potentially affected how participants fitted in. The effect of this in terms of sun-related behaviour was that the girls avoided situations that could lead to them standing out in a

negative way. I categorised accounts that described these avoidance tactics as *Avoiding Negative Standing Out*. Evading hats was an example because wearing them could result in the sun leaving 'lines'. Hats could also cause embarrassment because they lead to people having white faces and brown bodies. An unfashionable hat could cause problems more directly by making the person wearing it 'look stupid'. Hats could also pose problems to those they did not generally suit. Indeed, wearing anything that did not suit was to be avoided. On one occasion, given the negative reaction to hats, I suggested using a hand-held umbrella for shade (as people do in Asia). The idea was dismissed as a joke and rejected on the basis that 'you'd look a right pleb'. Sunglasses were generally acceptable if they were fashionable and some reported that they wore them for fashion purposes alone. However their use was avoided during sunbathing for fear of the marks they might leave behind (as described earlier). Using sun cream was also perceived by some as a problem and it was avoided on the basis that it was visible to other people and tended to give skin a shiny appearance. Because high factor sunscreens tend to be white, these were avoided in favour of lower factors that were less conspicuous.

The issue of standing out positively or negatively was not straightforward. For example, it emerged that it was possible to attract negative attention by looking *too* good. The complexity of the issue was borne out when I showed some of the girls an advert from a magazine that contained the image of a 'beautiful', pale woman. The girls' responses were not what I had expected. Because the person appeared pale and beautiful, their perceptions were that she would stand out in a negative way. Looking too good, was not acceptable. It would not aid *fitting in*. As Helen described:

> *...You want to look nice but not so nice you're out of place or anything.*

It also emerged that the acceptability of skin colouring depended on the season. For example, although it was deemed appropriate to be pale in the winter and brown in the summer, the reverse - being white in the summer and brown in the winter was not. This meant that the use of fake tan would not be wise in the winter months. In any event, there were pitfalls associated with fake tan that lead to a person attracting the wrong sort of attention. Because of its unnatural orange colour it had a tendency to 'look stupid' and I was party to descriptions of how attempts to apply it had gone wrong. Other observations I was party to included that it could give a streaky appearance, 'you can see the drips' or

sometimes it was possible to see where the tan applications had ended. For these reasons, fake tanning products were avoided unless expensive formulations were available (although then there were issues of affording such products). Despite there being distinct issues associated with being particular colours at particular times, it emerged that it could be best for some people to keep their natural skin tones. Having pale skin was believed to be appropriate and best for ginger-haired people for example. In a similar vein, participants who identified themselves as those who would easily burn tended to prefer a pale appearance rather than a red, sunburned one. This was because being red and sunburned was perceived to 'look bad' and was 'not an in look'; being sunburned led to them standing out in a negative way. There were accounts of individuals not wanting to 'look like a lobster' because of the negative attention this brought along with the potential for derision and embarrassment. On balance, it was better to be white, than red through sunburn.

In summary, the essence of the category of *Fitting In* is that young women fulfil their needs to be socially acceptable in an appearance-led social context. This is in order to meet the expectations of their peers and the wider social context. Fulfilling the need to fit in is conditional on conforming to an appearance agenda that includes looking good and having a tan. Conforming, enhancing appearance and avoiding attraction of negative attention are strategies to facilitate *Fitting In*. Concern or worry about being left out and not *Fitting In* drives the need to fit in, to conform and avoid negative attention. However, there are limits to fitting in to the appearances agenda, and some young women behave more independently of it. I discuss the findings from this category next and in the discussion, I propose how the findings explain why young women do what they do. The basis of my argument is that they believe their social acceptance depends on their appearance and so they conform to this end. This is because they become aware of the significance of the appearance norms surrounding them. It is generally accepted that individuals do not function in social isolation and so others' perceptions of them are important. Because of this, they present themselves to others in ways that are in their interests and their physical appearance is implicated. Based on this, their perceptions, experiences and behaviours in the sun (and in general), can be understood. I begin the discussion by considering the cultural bases of appearances norms and explaining how these are communicated to young women. The consequences are then considered along

with limits to conformity for social acceptance. The discussion ends with consideration of the implications of the findings for future health promotion and research practice.

Discussion of the Findings of the Category Fitting In

The exploration of participants' experiences revealed that they were influenced by a social context in which appearances matter. Social context defines ideal appearance through cultural influences (Pipher 1994) and these are reflected in fashion trends (Cholachatpinyo *et al.* 2002). In Ancient Greece for example, a cultural preference for white skins led to a fashion for women to wear a white, lead-based ointment (Giacomoni 2001). More recently, a similar fashion reflecting cultural preference for pale skins, emerged for people in white skinned races of the Northern hemisphere, and persisted until the 20th century. Then, the preference for pale skin was derived from socio-cultural circumstances (Burgess 1998), but the fashion did not last, because of social transition related to indoor work for the working classes. This led to reduced working hours and guaranteed holidays. As a result of this transition, attitudes to sun exposure changed and in the 1920's a tanned appearance became fashionable. Endorsing the fashion, the designer Coco Chanel created clothing to enhance a tanned appearance (Burgess 1998), and the fashion for a tan has continued until today. The cultural norm for a tanned appearance has been noted in studies from other countries such as Norway (Wichstrøm 1994), the United States of America (Leary and Jones 1993; Jackson and Aiken 2006) and Canada (Shoveller *et al.* 2003), reflecting that this norm is not confined to the UK. The implication is that research findings based on the same appearance-related cultural norms may be transferable to the UK setting, and are included within the forthcoming discussions. Given the value placed on a tanned appearance in local and global cultural contexts, the desire of the participants in this study to have suntans has a logical basis.

The findings indicate firm views about what constitutes desirable and undesirable, sun-related and general appearances, and some participants conform with those they perceive desirable. It emerged that magazines were a source of information about what was acceptable and what was not, supporting the view that magazines have a role as socialisation agents[24] and in constructing attractiveness norms (Ballentine and Ogle 2005).

[24] Socialisation agents enable people to 'learn to conform society's prevailing norms and values' which is referred to as socialisation (Bilton *et al.* 2002, p.548).

In 2003, Shoveller and her colleagues found that similar issues about the influence of the media emerged in their study of 20 Canadian teenagers aged 12-16. The purpose of their study was to explore the factors that influenced adolescents' sun tanning and decision-making about sunbathing. The study was similar to this, in that it was exploratory, had a qualitative design which incorporated grounded theory method, involved a similar age-group and was based in a setting with close proximity to an environment that offered outdoor recreational activities. It differed however, in that it included male as well as female adolescents, and because it was based on assumptions about adolescents' desire to suntan. Although the researchers used similar methodology to mine, theirs was specifically intended to explain how decisions about sunbathing were made in adolescence and their interviews were based upon previous literature about sun tanning and skin cancer prevention.

Despite the study differences, Shoveller and her colleagues found that the young people in their study sought to emulate appearance images conveyed by the media and they described their participants as 'fitting the picture'. Although magazines sometimes seek to challenge the dominant appearance agenda by presenting alternatives, Chow (2004) has suggested that they still tend to reinforce dominant cultural messages and conformity with them. Ballentine and Ogle (2005) explored the content of beauty magazines aimed at adolescent girls and they found that the publications portrayed the body as a malleable entity that can be manipulated and controlled to meet the appearances agenda. In the UK, such control over appearance has been illustrated in news stories about teenage girls considering plastic surgery in order to improve their appearance (BBC 2005) and on a smaller scale, the findings here, that participants enhanced their appearance with suntans and by other means.

In this study it emerged that some participants copied the appearances of celebrities in magazines and followed the styles of fashionable peers. The celebrities and peers were apparently leading and directing those who followed, by role modelling an appearances agenda that included and subsumed, sun-related appearance. Following and leading is a way of communicating appearances norms and such a process of communication (based upon Rogers' theory of diffusion of innovation from 2003) has been recognised by the fashion industry. In the industry, it has been termed 'fashion diffusion' whereby 'innovators' provide the style to be followed and guide their followers by modelling. The

followers then become the consumers of the same fashion (Beaudoin *et al.* 2003). Applied to this study, celebrities were potentially copied by peer innovators (identified by the girls in this study as 'The Plastics'). The peer innovators were then followed either consciously or sub-consciously by 'The Sheep' and the price of not following was perceived to be rejection by peers.

Beaudoin and Lachance (2006) studied the significance of clothing brands to adolescents and whilst discussing peer influences in fashion diffusion, they suggested that peers provide others with credible information about what is fashionable (i.e. what to follow). They also suggested that peers can be the source of reward and punishment in terms of others conforming to the norm they have set. My findings concur and appear to provide further empirical evidence supporting the role of peers in fashion diffusion. The process of fashion diffusion may also explain peer influence in the transmission of cultural norms and why some participants perceived that conformity with the appearances agenda, being fashionable and having a tan were required for social acceptance.

That young people follow role models has been recognised in other sun-related adolescent studies (Shoveller *et al.* 2003), and acknowledged by organisations advocating SunSmart behaviour (Harper *et al.* 2002; Cancer Research UK 2004). As a consequence, the involvement of celebrities in campaigns has been advocated (Harper *et al.* 2002) and incorporated (Cancer Research UK 2004). However, in this study, celebrity influence emerged as a factor operating at the level of the individual rather than universally, meaning that it is difficult to identify role models relevant to all. Findings from this study also suggest that if celebrities are used to communicate messages about being safe in the sun, the message portrayed needs to be consistent with the celebrity's appearance and/or behaviours; this is in order for the message to be credible to the young women who follow them.

Wichstrøm (1994) found that adolescents who sunbathe value appearance, suggesting that they too, are opting into the appearances agenda. According to the findings in my study, they are likely to be emulating the celebrities and peers who communicate the appearance norms (such as a need to look good and to have a tan), apparently at the root of 'the problem'. Although well intended, in a document written on behalf of The World Health Organisation, Harper *et al.* (2002) proposed that school staff should role model appropriate

sun behaviours. However this may not be effective for some adolescents, unless the staff members are people who have an appearance that the young people wish to emulate. Given the discussion about the transmission of appearances norms, it would seem that the 'innovator' celebrities and peers are likely to be key personnel in influencing sun-protective behaviour in their followers. Wichstrøm (1994), for example, has suggested that the fashion diffusion effect may work in relation to the wearing of sun cream. Evidence from my study suggests that the diffusion effect may work because participants told me that if celebrities produced sun cream people would use it, and since consumer brands portray an image (Beaudoin and Lachance 2006). I would suggest that a celebrity sun cream would portray the user as fashionable and would be acquired for this reason. Whether or not the cream would be applied and whether the right amount would be used, might be a different matter.

Conformity and Social Acceptance

The process of taking on or conforming to societal expectation has long been recognised in the field of social psychology. Hence, it should not have been surprising to discover that the young women in my study conformed. According to Mead (1934) the development of 'self' begins in childhood and occurs in relation to other people. Initially, children merely respond to what is happening around them without considering what others might expect of them. However as they develop, they become more aware of their relationships with the people around them. They become 'self-conscious' (Mead, 1934). As they begin to engage with the social group they belong to they become aware of their social context, community and group attitudes, and adopt the attitudes and behaviours of the group in order to fit into society; they conform.

Mead called the 'self' that takes on the attitudes of the group in this way, the 'me self'. In the case of this study, the 'me self' attitudes were derived from, and reflected, a social context where appearances matter, explaining why some participants conformed to the attitudes and behaviours determined by it. Applied to this study, the participants were able to reflect on their past experiences of being younger children and the times when they had been unaware of their wider social structure with its appearance norms. Then, appearances had not mattered to them and they had protected themselves in the sun in ways adults expected. However, for some, the situation changed with age and they reported how they

had become more aware of and concerned about their appearance as they had grown older. They had become particularly concerned about what peers thought of their appearance, suggesting that they had become aware of the appearance norms and expectations of their social context. Now they were conforming with those norms and expectations in order to be accepted.

It emerged in this study and also that of Shoveller *et al.* (2003) that having a suntan was just one aspect of a broader appearances agenda that some of the participants perceived they needed to conform with in order to be accepted by peers. For example, I found that wearing fashionable clothes was important and in the study of Shoveller and her colleagues (2003), 'fitting the picture' included having 'the right clothes and hair'. Adolescents' perception that acceptance by peers depends on their conforming to expectations about appearance has also been found in relation to the clothing industry. For example, Beaudoin and Lachance (2006) found that adolescents were interested in branded clothing because wearing it was perceived to lead to acceptance by peers (Beaudoin and Lachance (2006). Based on experiences in America, Pipher (1994, p23) has suggested that the need to conform stems from 'lookism culture' or 'the evaluation of a person solely on the basis of their appearance'.

Presentation of Self to Others

Physical appearance is a nonverbal means of self-expression and research findings have demonstrated how people make inferences about others based on their physical attractiveness (Leary 1995). Goffman established the concept of self-presentation and likened individuals to social actors who can shape the way they are perceived by others (Goffman 1967). Shaping others' perceptions can be intentional or unintentional and can be achieved by people presenting themselves to others in ways that suit their purposes. By presenting themselves in particular ways, individuals elicit the responses they desire from third parties. Such control over others' perceptions has been termed 'impression management' (Leary 1995). Leary has described how people interacting with others, use 'self-presentational tactics' in order to gain the responses they wish for. Applied to my study, the participants were apparently presenting themselves to peers in ways to attract positive, rather than negative attention in order to be accepted by them. It appears that participants used the 'self-presentational tactics' or strategies to enhance their appearance;

being fashionable, gaining a tan and/or avoiding a pale complexion to facilitate acceptance. In their research with adolescents, Shoveller *et al.* (2003) also identified that being perceived positively (categorised as positive recognition), gaining popularity and avoiding being shunned by peers were all motives for sun tanning. In a study of Swedish adolescents, Sjöberg *et al.* (2004) found that for girls, tanning was instigated by what they termed 'cosmetic motivation' and they surmise that this is to do with affiliation motives or the need for the company of others and acceptance by them (Gross 2005). This adds further support to my argument that self-presentational tactics are used in the way Leary has suggested. Concerned that most self-presentation studies related to adolescence and health had been with American adolescents, Martin *et al.* (2001) carried out a study with teenagers in Ireland to see if the same issues applied. The researchers found that self-presentation motivation did apply to their group of participants suggesting that it is may be a common influence. Although their study did not consider self-presentation related to sun-related issues in particular, its findings are transferable to my study. Other evidence to suggest that self-presentation issues influenced participants in my study, is that they believed that a tanned appearance communicated personal attributes such as being fashionable, healthy, 'outdoorsy' and interesting. In other studies, external appearances including a suntan have been perceived by adolescents to portray particular information to others (Bell and Bromnick 2003; Eadie and MacAskill 2003; Shoveller *et al.* 2003). Just as I have, Lupton and Gaffney (1996) discovered that young people associated a tan with an outdoor lifestyle and believed a tanned appearance made them look healthier. Studies with adults have demonstrated similar findings (Keesling and Friedman 1987; Koblenzer 1998). I also found that a pale appearance was believed to portray inadequacy in terms of the ability to tan and apparently indicated that the person had an indoor lifestyle. Both of these were perceived to be undesirable impressions, and the findings are consistent with others' studies with adolescents (Shoveller *et al.* 2003) and adolescents and young adults (Eadie and MacAskill 2003). Leary *et al.* (1994) have identified how self-presentation or impression management can lead to behaviours that are not conducive to health. They have cited sunbathing and skin cancer, risky sexual behaviours, and nutrition and weight issues as examples.

In 1995 Leary reflected upon how he came to consider the relevance of self-presentation theory in relation to sunbathing. He described a situation where a woman who had been cured of skin cancer had become sunburned. When he had expressed surprise, she told

him that to contrary health advice she strove for a suntan in the summer. Because of this encounter, Leary and Jones (1993) investigated the relationship between concerns about self-presentation and appearance and sun-related behaviour. Their quantitative study sample comprised young men and women aged 17-23 years old and they based the study on the assumption that people who like to gain a suntan are conscious of their physical appearance and aim to become tanned in order to be physically attractive and to prevent negative evaluation by others. Leary and Jones' assumptions and findings reflect the issues that emerged in my study from the participants of a younger age group and so the study has relevance to the discussion here. Leary and Jones (1993) found that 'skin cancer risk behaviours' were related to concern about personal appearance and the belief that a tan enhances appearance. They also found others' evaluations of personal appearance and social identity [25] to be important. The question that Leary *et al.* (1994, p.467) saw as key, and posed is:

> *How do you lead people to pay less attention to public image and to physical health, when health and self-presentation collide?*

The issue of the 'collision' of physical health issues and self-presentation has emerged as a major issue within this study and its implications are discussed in due course when considering the primary prevention of skin cancer in the light of the findings.

The Worry

Conforming by looking good, being fashionable and having a tan were perceived by some to be requirements for social acceptance. If they did not respond to peer pressure to conform to the appearances agenda, the perception was that there would be undesirable and uncomfortable consequences. There were concerns that not making the right impression could lead to negative evaluation by peers, and this could result in not being able to not fit in. The findings of this study suggest that it was concern (or *The Worry*) about these consequences that drove participants to conform to the appearances agenda. Similar adolescent concerns have emerged in a study carried out by Bell and Bromnick (2003).

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[25] Social identity is defined by Leary and Jones (1993) as the degree that identities are based on relations with others.

Their study involved 361 male and female British schoolchildren aged 14-15. Bell and Bromnick (2003) wanted to gain adolescents' perspectives of their worries, in order to conceptualise what mattered to them, and why. The issues their participants were found to worry about included their image, being in fashion, friends, being the subject of rumours and feeling left out. 'What other people think' emerged as participants' overarching worry, because of their perceptions that negative evaluation by peers could affect their popularity, friendships and the ability to fit in (Bell and Bromnick (2003). Bell and Bromnick (2003) also found strong implications for conformity in general, and that participants did not want to be thought of as being different from others. In a similar vein, Sjöberg *et al.* (2004) proposed that sun tanning was likely to be motivated by affiliation issues. All of these findings concur with mine, suggesting that the issues that affected the participants in my study apparently affect others too.

It emerged in this study that for some participants, their worry or concern about being left out and not fitting in had stemmed from previous experience of derision. For others, it stemmed from what they anticipated others may be thinking about them, (without direct evidence to that effect) and was based on how they made judgments about others' appearances. They assumed others did the same in relation to them. Cooley's concept of the Looking Glass Self (Cooley 1967) may explain why. Cooley proposed that people looking in a mirror judge their appearance and that this invokes particular feelings. He also suggested that a similar process occurs in a person's imagination when they consider what others think of them; they imagine their appearance in the eyes of the other person, they imagine that person's judgment of them and experience a feeling as a response. In thinking through the situation, the person will be thinking in the context of the 'group discourse' (Cooley 1967 p.179). In this study (as discussed earlier), the context of group discourse was found to be one where appearances matter. Applied to participants in my study, they may have been considering peers' views of them, anticipating the peer judgments, and then becoming concerned about being socially acceptable on the basis of their appearance. The girls were apparently consciously and/or unconsciously adopting strategies in their own social context to avoid such judgment about their own appearances, hence some were driven to looking good, having a tan in the summer and being mindful of the potential to attract positive or negative attention based upon their appearance. Leary (1995) explains that there are consequences for the way in which individuals present

themselves to others in social situations and that early on in their development people learn about the link between what others think of them and their wellbeing.

It emerged that *The Worry* was not necessarily all consuming or something that was anticipated because it could be a sub-conscious issue. However, when some participants perceived that they were vulnerable to being left out, this had consequences for their sun-protection. It emerged that even though they may have had the intention to protect themselves from the sun, people around them influenced whether or not they saw the intention through. In 2005, in a study with 500 Dutch young people aged 15-20 years old, de Vries *et al.* 2005 noted findings that compare. Some of their participants perceived that they would be less likely to use sunscreen if their friends did not wear it. Although the researchers noted that there were only two questionnaire items to explore the issue in their study (and identified this as a limitation) my findings would support theirs. The young women in this study could not risk people leaving them out. It emerged that *The Worry* stemmed from the peers around them, although not all peers created it. Concern grew with acquaintances who participants did not know well. I suggest that this was because the likely reaction of such acquaintances was an unknown quantity. Hence, in the presence of these people, the young women were likely to modify their behaviours according to what they thought the others expected. It seems they did what they supposed they needed to do in order to fit in.

The Symbolic Interactionist perspective of social interaction gives insight into group life and the significance of members interacting with each other (Blumer 1969). Blumer (a Symbolic Interactionist influenced by Mead's work) has explained the possible effect of social interaction on an individual who may need to fit in with or adapt to others' actions. Group life involves members interacting with one another or in relation to each another. According to Blumer (1969, p.8):

Put simply, human beings in interacting with one another have to take account of what each other is doing or is about to do; they are forced to direct their own conduct or handle their situations in terms of what they take into account. Thus, the activities of others enter as positive factors in the formation of their own conduct; in the face of the actions of others one may abandon an intention or purpose, revise it, check or suspend it, intensify or replace it. The actions of others enter to set

what one plans to do, may oppose or prevent such plans, may require a revision of such plans, and may demand a very different set of such plans. One has to fit one's own line of activity in some manner to the actions of others. The actions of others have to be taken into account and cannot be regarded as merely an arena for the expression of what one is disposed to do or sets out to do.

People do not function in isolation. They are constantly interacting and interpreting with others and perhaps this explains the dynamic nature of the sun-related activities that emerged in my study. I have already referred to the work of Mead (1934) in relation to the structure of 'self' and return to this for a moment to explain. As described previously, Mead identified the 'self' that takes on the attitudes of the group as the 'me self'. He also identified an aspect of self, the 'I self', whereby the 'I self' reflects the individual's response to group or social situations. Participants changing their behaviour in the presence of certain others may be explained by application of 'me' and 'I self' theory. Mead acknowledged that although individuals may be aware of group expectations and assumptions, they may choose not to abide by them. It may be that some participants in this study were aware of the societal expectations for a tan but did not comply, perhaps because of an awareness of their vulnerability to burned skin and skin cancer. They intended to protect themselves in the sun. They were then confronted with a social situation that was oriented to the 'me self' or group, for example peers they did not know well. They needed to fit in and so switched from their planned ('I self') behaviour, to conforming, 'me self' oriented behaviour. This was to be in keeping with their perceptions of peer expectations. My findings about *The Worry* challenge the basis of the skin cancer prevention message. This is because the assumption it appears to make is that young women will be persuaded to implement behaviours to protect themselves in the sun (physically) now, if they fear skin cancer and premature skin aging in later life. As the findings from this study show, a fear-based intervention may have an impact on some people, at some times, in particular social contexts. However, it would seem that campaigns based on fear alone, will not be likely to achieve universal change toward sun-protecting behaviours because of the different ways in which fear manifests itself in individuals and the different personal, situational and social variables that control its influence (Averill 1987). Interventions based on fear do not account for the immediate and potentially dynamic concern young women may have about making themselves vulnerable

to social rejection. As I found in this study, this concern can lead to the antithesis of sun protection behaviours.

In 2004, Stanton *et al.* Carried out a comprehensive review of previous Australian and international research about behaviour associated with the primary prevention of skin cancer. The review covered the behaviour of children, adolescents (aged 12-18) and adults (identified as being over 18 years of age). Although the researchers were particularly interested in behaviour associated with sunscreen use (they found sunscreen use to be the most prevalent protection activity), they considered other protective strategies too. Within the literature, they identified that despite the success of primary prevention efforts in increasing awareness of the dangers of sun exposure, the literature revealed that a lack of understanding remained about sun awareness, and attitude and behaviour change. Based on the literature reviewed, Stanton *et al.* (2004) cited the enigma that exists whereby women in all age groups still have positive attitudes towards sunbathing, tanning and the use of sun-beds even though they know about skin cancer and its prevention. The findings from my study explain this because they indicate that the women are affected by the cultural appearance norms that surround them.

Limits to Conformity for Social Acceptance

There was no consensus around the existence and effect of *The Worry*, and not all participants subscribed to the appearances agenda. The appearance issue was just one of many in the lives of participants, and they would have been interacting with many different social groups (Mead 1934). Some participants reported that they protected themselves in the sun irrespective of the appearances agenda and the perceived peer expectation to look good and have a tan. These individuals knew the 'cultural script', but chose to act independently (Sinats *et al.* 2005).

Having self-confidence emerged as being involved in participants *Being Different*. This study raises a paradox, in that the message about skin cancer prevention prioritises the safeguard of physical rather than psychosocial health. A consequence of this is that the guidance does not reflect the 'me self' attitudes of the appearances-led society people live in. Following the SunSmart code requires an 'I self' unconventional response to the appearances agenda. Bell and Bromnick (2003) found adolescents' confidence to increase with receipt of compliments and reduce with derogation and negative evaluation. By not

conforming to the cultural norms of appearance, an individual risks disapproval of the community (Mead 1934) and it seems logical that they will need self-confidence to take this risk[26]. In my study, having a tan emerged as a factor that could boost self-confidence, perhaps because of the compliments it is likely to attract. The role of self-confidence in being able to be different is an area requiring further investigation, but provides direction for future theoretical sampling. I propose that having self-confidence is necessary for young women to comply with sun safe appearances and behaviours.

Other factors associated with *Being Different* emerged as unconditional acceptance from others, and participants' acceptance of themselves. In accepting themselves, participants had recognised the reality of their appearance and limitations related to the appearances and tanning agenda. They acknowledged, for example that experience of skin cancer in the family meant that they would need to take care in the sun. Self-acceptance apparently related to age, and reflected experiential learning about the girls' limitations. In time, some learned that although it might be desirable, being suntanned was not necessarily an appearance they were able to achieve. Older adolescents were able to reflect on how they had learned about their sun protection needs through the experience and consequences of acute sunburn; sunburn was avoided because it attracted negative attention and caused physical discomfort. Shoveller *et al.* (2003) studied adolescent decision-making in tanning and proposed that adolescents go through a process of experimentation in the sun before establishing themselves as an 'intentional or unintentional suntanner'. Although I did not categorise people according to their intentions to tan, I found that a similar process of testing or experiential learning emerged in this study. Just as self-confidence appeared to relate to age so did 'self-learning'. Some participants learned the relevance of the protection message and the importance of caring for themselves, suggesting that they are more likely to protect themselves in later adolescence. However, the issues are complex and indicate direction for future research and theoretical sampling because the work of

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[26] On reflection, I have wondered if Freya was a participant who believed she might risk negative evaluation by others in her group because she had proclaimed her indifference to her appearance. Her behaviour made me wonder if she became uncomfortable despite her initial confidence. Although she did not admit this to me, I noted that there were two occasions when she excused herself once groups had begun. I have also surmised in the light of the findings that a barrier to volunteering to participate in the study might have been that the girls could not predict whom they would be with in a group. This could indicate of the value of recruiting friendship groups in studies to counteract this as a possible influence.

Eadie and MacAskill (2003) has suggested that increased sun protection in later adolescence is not necessarily the case. Their findings imply that learning about being in the sun may have more to do with having the opportunity to learn. Eadie and MacAskill (2003) explored the attitudes and behaviours of young people in the UK towards the sun, sun protection and skin cancer. The work was commissioned by Cancer Research UK and was to inform development of a SunSmart strategy for young people and carers of young children. Cancer Research UK has kindly given permission for me to access and refer to the main findings section of the report here. The groups of participants identified in the study were male and female: teenagers living at home aged 12-13 and 16-17 years, 'independents' - young people living independently aged 21-24 years and mothers (of toddlers) aged 25-35 years. They were involved via focus group discussions (Eadie and MacAskill 2003). Whereas my sample group was self-selecting with no behavioural selection criteria, the participants in Eadie and MacAskill's study were recruited based on market research technique and particular behavioural selection criteria. The criteria related to levels of alcohol consumption (having drunk more than 10 units of alcohol in the past seven days) and cigarette smoking (having smoked more than 10 cigarettes). The rationale for the selection criteria is not available in the documentation I have access to and my assumption has been that it is some way indicative of risk and lifestyle. I have also assumed that these would not be criteria for the people recruited to the study under the legal age to drink alcohol and smoke. Eadie and MacAskill (2003) found participants in the age group 21-24 to be ambivalent towards sun protection. They found they were at risk of sun exposure when holidaying abroad without parental support, partly because of hedonism and inexperience (although inexperience of what, is not specified). Although the people in the study of Eadie and MacAskill were older than the ones in mine, it seems that contrary to my findings, learning about their limitations in the sun had not apparently occurred with age. The people concerned were from geographical areas of the UK identified as the North East, the Midlands and the South East and Eadie and MacAskill acknowledged that their participants' sun protection behaviours were likely to have been learned passively. By comparison, the young people in my study came from a rural and coastal environmental context. Here it seems, they had been exposed to learning experiences that enabled active learning and shaped their perceptions and behaviours. The effects of these differences in learning opportunity and environmental context may be significant and warrant further investigation, since others have identified the influence of geography and weather on the opportunity for sun exposure too (Wichstrøm 1994).

The discussion of the findings from this study explains the possible bases of participants' experiences, perceptions and behaviours in the sun. These have emerged as complex. The young women live in a cultural context that values particular appearances and some conform to appearance norms for social acceptance. I have argued how this can be justified, and propose that conforming to the appearances agenda is a condition of *Fitting In*. Fashion Diffusion Theory may explain the communication of cultural norms by celebrity and peer role models. Conformity to the appearances agenda is demonstrated by outward appearance and this can lead to behaviours and perceptions that contradict sun safety. Early on in this study, it emerged that individuals orchestrate a range of sun-related behaviours, sometimes sun-protective and sometimes not. They do not fit static typologies and I found that their sun-protection behaviours were changeable and dynamic. Shoveller *et al.* (2003) discovered the same in their grounded theory study. These and others' findings (Bell and Bromnick 2003) challenge the tendency for adults to represent young people in their work as a homogeneous group. Adolescents are all different (Thomson *et al.* 2004). Some conform to the appearances agenda because of concern about being left out by peers, leading to perceptions and behaviours that contradict sun safe messages. Others may protect themselves in the sun for fear of skin cancer or because they do not subscribe to the appearances agenda. In any event, behaviours are dynamic and transient according to social context and the presence of certain peers.

The findings from this category so far lead to two main issues that need consideration in the primary prevention of skin cancer. First, the findings overall have indicated that the participants in this study were not part of a homogeneous group, their behaviours could not be classed as typologies and their behaviours were dynamic and transient. As indicated in the rationale section of this study there has been research to suggest that adolescents do not engage with sun safety. However, the findings from my study challenge this and I propose that it cannot be taken for granted that all young people are 'difficult to reach' as some previous work has perhaps implied. In the group I studied, the primary prevention of skin cancer needs were potentially many and varied and could depend on participants' social circumstances. Despite apparently being conscientious about sun protection, some participants did not demonstrate this in their behaviours consistently because of the influence of their social circumstances. Conversely, the findings imply that in the right social circumstances, appearance-conscious individuals may protect themselves. In either

scenario, young women need to know how to protect themselves in the sun. Because of this, I propose that primary prevention of skin cancer activity needs to embrace the range of sun-related behaviours young women may engage in and to reflect the range in its strategy.

In the beginning chapters of this study I proposed that there was a need to gain the perspectives of young people about the issues that affect them in order to establish appropriate health interventions. As Leary and his colleagues proposed in 1994, understanding why people do what they do is the first step in developing health interventions. The second main issue that has emerged from extrapolating the views of young women in this study is that a social context where appearances matter influenced them. Based upon perceptions of their surroundings, they perceived that they needed to conform to the appearances agenda in order to gain social acceptance. I also understood that in consciously and/or unconsciously conforming to the appearances agenda, the young women were addressing psychosocial health needs rather than the physical ones the sun safe agenda assumes. I have argued that the young women have legitimate concerns and that they are justified in addressing their immediate psychosocial needs. Hence, for the primary prevention of skin cancer to be relevant and practical to them, interventions need to account for their social circumstances and concerns. On this basis, I discuss two possible options for the primary prevention of skin cancer that involve changing cultural norms for appearance and dealing with existing ones. It is noteworthy that the appearance-based cultural norms, self-presentation and appearance issues that seem to have affected the girls in this study also hold significance with other groups (Broadstock *et al.* 1992; Martin *et al.* 2001; Grunfeld 2004). Adults for example also desire suntans (Keesling and Friedman 1987; Leary and Jones 1994; Cafri *et al.* 2006; Jackson and Aiken 2006) suggesting that appearance issues do not just apply to female adolescents (Leary 1995; Koblenzer 1998). The implication of this is that the practice issues raised in the following discussion may also be applicable to adults.

Changing Cultural Norms for Appearance

The findings suggested that lack of sun protection behaviour of some young women was caused by their need to conform to cultural norms to look good. Although changing cultural norms may be a drastic measure, the learning from this study suggests that it is

unrealistic to expect young people to ignore their cultural context and the appearance norms to which society subscribes. Researchers from a range of nations have noted the effect of the wider social context and appearance on sun-behaviour in their studies (Keesling and Friedman 1987; Wichstrøm 1994; Hillhouse and Turrisi 2002; Eadie and MacAskill 2003; Shoveller *et al.* 2003; Cafri *et al.* 2006; Jackson and Aiken 2006). However, their opinion is divided over the extent that cultural norms may be altered in order to effect change and improve sun protection behaviours. Some have doubted the reality of cultural change given the magnitude of the issue (Wichstrøm 1994; Grunfeld 2004) and the influence of the fashion industry (Eadie and MacAskill 2003). Researchers have proposed that rather than tackling cultural appearance norms wholesale, future sun campaigns could focus on and counter tanning norms by emphasising the desirability of pale skins (Eadie and MacAskill 2003; Jackson and Aiken 2006).

Jackson and Aiken (2006) claim to have been the first to increase sun protection by changing normative beliefs about standards of beauty. They also claim to have been the first to gain empirical evidence to confirm the effectiveness of interventions that instil the belief that a pale appearance is attractive. Given these claims, further consideration of their study is warranted. Jackson and Aiken (2006) carried out their intervention study with 211 American students aged 18-25 years. The intervention comprised a 35-minute education session that included demonstration of the unattractive nature of skin cancer and the surgery to treat it, consideration of photo-aging, education and advice about the practicality of sunscreen use, as well as material to demonstrate change in tanning shades over the past 30 years. Jackson and Aiken (2006) used celebrity images to illustrate the popularity of different tanning shades over the years. As well as aiming to undermine tanning, they wanted to change their participants' perceptions of societal image norms by modifying their views about what is attractive. They sought to change beliefs about the attractiveness of a tan by demonstrating to participants that people can look good without one. Participants were given pre and post tests to assess their knowledge, health beliefs and sun protection and sunbathing behaviours on the day of the intervention. A final post-test was administered two weeks later (although the researchers acknowledged high attrition at this point). The two week post-test indicated that participants who had not received the intervention reported increased sunbathing behaviours. This was in comparison to those in the intervention group, who reported a decrease in their sunbathing behaviours. These findings led Jackson and Aiken (2006) to conclude that their

intervention had been successful in changing behaviours and, as part of their conclusion, they suggested that modifying image norms and reducing the perception that a having a tan is advantageous, could be enough to reduce intentions of young people to sunbathe.

Jackson and Aiken (2006) were successful in changing behaviours although the study only established the change in the short-term. However, the findings from my study would not have predicted their apparent success in increasing sun protection. This is for several reasons, the first being because they increased sun protection by modifying image norms at an individual rather than societal level. The findings from my study suggest that those young women subscribing to the appearances agenda would only aspire to a pale appearance if this was desired universally. I suggest that changing perceptions of image norms at the level of the individual as in the study of Jackson and Aiken in 2006, will have a limited effect on sun-behaviours. This is because people around the young women will still be abiding by the cultural norm for a tan and/or to look good. Such a social context means that having a pale appearance indicates difference and based on my findings, not all young women are willing or able to go against the norm in this way. The second reason why the findings from my study contradict the apparent success of Jackson and Aiken is because of the influence of peers on participants' perceptions and behaviours. Although Jackson and Aiken acknowledged the strength of peer norms in their study, they also identified that they were unable to influence them. In my study, a more generic agenda to look good, subsumed the sun-related appearances agenda. Desire for a tan emerged as just one aspect of the broader appearances agenda. The implication of this is that interventions intended to change the cultural norm for a tan (Leary and Jones 1993; Cafri *et al.* 2006) will also have to account for some people needing to look good without one. For example, some participants in my study did not perceive that having a pale skin was a feasible option because they wanted to look good, and because a tan enhances a flawed complexion. It may have been that the group that Jackson and Aiken studied was older and the people in it had more means available to them to help them to look both pale and attractive. Alternatively, the participants in the study of Jackson and Aiken may have been more predisposed to non-conformity than those in my study, and they may not have been as concerned about others' opinions of their appearance.

Issues around changing cultural norms are potentially complex; however, they are not new. In 1998, Burgess recognised the difficulty facing the primary prevention of skin cancer agenda in reversing inculcated views about the desirability of a tanned appearance. She noted the role of the media and fashion industries in potential change, and currently, almost two decades on, the fashion industry is being confronted with its effect on the appearances agenda through the employment of extremely slim models on the catwalk. Rather than confronting the media and fashion industries over the appearances agenda, working in partnership with them might be more effective, either through efforts to change the appearances norms to look good overall, or in dealing with existing norms. Public health practice advocates partnership working in order to address complex issues (Costello 2003) and this could be a legitimate strategy in the primary prevention of skin cancer. Partnership working is justified, given the scope and complexity of the issues to be dealt with, as well as the nature of the potential stakeholders. Eadie and MacAskill (2003) inferred the potential of this approach when they suggested that there should be collaboration between Cancer Research UK and the sunscreen and clothing industries. They identified that there is a dearth of products available for teenagers. Hence the potential exists for the development of skin products, and affordable clothing and accessories that may help young women to protect themselves in the sun whilst still meeting their appearance criteria. The findings from this study suggest that it would be crucial to involve young women in any partnership arrangement, given adults' need for their perspectives (Bell and Bromnick 2003), the process of dissemination of fashion ideas by innovator peers, and the effectiveness of peer-to peer interventions (Shoveller *et al.* 2003). Other potential partners could be members of the fashion industry, the media and celebrities (although celebrity relevance would need to be recognised). An option could be involvement of celebrities who advocate rejection of the appearances agenda such as the 'alternative' pop singer 'P!nk' (*sic*) (Pink). P!nk's song 'stupid girls' apparently critiques celebrities who subscribe to the appearances agenda[27].

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[27] Excerpt of lyrics from the song 'Stupid Girls' sung by P!nk (2006):

> *... the disease is growing it's epidemic, I'm scared there ain't a cure. The world believes it and I'm going crazy, I cannot take anymore!!!!! I'm so glad that I'll never fit in. That will never be me. Outcasts and girls with ambition. That's what I wanna see! Disasters all around. A world of despair. Your only concern – will it f*** up my hair???*

Dealing with Existing Norms

Tackling specific appearance norms such as a tanned appearance, rather than the whole agenda to look good, may be effective to some extent but my findings imply that in order for interventions to be feasible and relevant, they also need to account for the broader appearances agenda. Hillhouse and Turrisi (2002) have produced evidence supporting this view. They designed and implemented a skin cancer prevention programme that acknowledged the significance of appearance for young women. It was partly based on the assumption that having a suntan was a strategy to enhance appearance. Hillhouse and Turrisi (2002) aimed to improve attitudes to healthier ways of improving appearance, for example through exercise, personal grooming, hairstyle and the use of cosmetics. The researchers acknowledged the short-term, personal and social benefits of a tan and how these outweighed long-term health-risks. The evidence that appearance motivation and the desire to be attractive had a negative consequence on health for young people was also recognised in the study. Hillhouse and Turrisi reported a success in terms of behaviour change amounting to a 50 percent reduction in their participants' indoor tanning activity. I argue that this success could have been due to their accounting for the broad, cultural appearances norms in their research. The researchers' intervention focused on the effects that tanning in general could have on appearance and it focused specifically on indoor tanning behaviour. The preferred outcome of the study was that participants would give up indoor tanning. Alternatively (perhaps more realistically), the researchers wanted their participants to have at least reduced indoor tanning activities and to have adopted safe practice, such as wearing eye protection. Their intervention with 147 American young women at university, with a mean age of 20.8 years, emphasised risk to appearance rather than skin cancer, and the researchers acknowledged that there had been few health education studies and interventions carried out on this basis. The intervention group received a workbook that included information about indoor tanning. The material comprised information that young people had previously told the researchers they would like and the researchers acknowledge that it did not necessarily represent the focus of health professionals. It included information about tanning history, current trends in tanning popularity, effects of tanning and ultraviolet radiation on skin, information about skin tanning and aging , indoor tanning guidelines, sunless alternatives to tanning and ways of improving appearance without tanning. The effect of the workbook intervention was a reduction in indoor tanning by 50 percent. The researchers showed how this success was

significant given the usual limited change in behaviour other education strategies attract. They suggested that their success had stemmed from a number of factors, including that the young people had been given the information they had asked for. This made it inherently relevant to them. The researchers concluded that future research was required to directly compare their approach (which suggests there is an advantage in focusing on issues that have immediate and social advantage to the person) with the more traditional approaches that do not. My study contributes to this agenda by offering reasons why the former strategy would be likely to be effective.

I propose that the findings from my study would have predicted the success of Hillhouse and Turrisi in changing their participants' behaviours. This is because the researchers acknowledged the influence of appearance issues in sun protection. Their intervention did not require participants to be different. It also potentially accounted for *The Worry* or the concern about not being accepted by peers because it allowed conformity with the appearance agenda. My findings associated with this category would also have predicted success because the intervention of Hillhouse and Turrisi did not focus on the risk of skin cancer.

Moving away from the risk agenda in work with adolescents has been advocated (Chow 2004; Ginsburg 2003) and I came across the positive effect of this by chance during data collection. During interviews with the girls, I explored their sun-related experiences trying to establish their actions and the reasons for them. I did this in a non-judgmental way, and my intention was not to educate the girls but to accept what they told me and to explore their responses. By encouraging them to think and tell me about the bases of their actions, an unintended by-product emerged. Participants apparently started to develop insight into the peer, media and cultural factors influencing them. Our discussions also led to the girls asking questions and making requests for more information about certain aspects of sun-safety, including the use of sun beds. I had inadvertently engaged them and had apparently begun to raise their awareness of the contextual issues that affected them. Pipher (1994) has advocated the use of similar but intentional interventions to enable young women to explore how their social and cultural contexts affect them. Such interventions give participants the opportunity to understand their contexts, see how different agendas such as the appearances agenda are derived, and to explore how such agendas may affect their wellbeing. Based on findings related to the communication of the appearances agenda,

young women could also benefit from being made aware of how commercial enterprise and businesses such as fashion retail, marketing, advertising and research, intentionally target them as a consumer group given their fashion consciousness and consumer power (Grant and Stephen 2005). The development of media literacy skill has also been seen as a means of young people understanding and evaluating sociocultural media messages (Ballentine and Ogle 2005; Chow 2005). Through exploration of the issues that affect them, young people are empowered to 'fight back' (Pipher 1994). It emerged that those in my study who were able to 'fight back' against conformity with peers and the appearances agenda were participants who had acknowledged their appearance limitations, accepted themselves for who they were, had been accepted by their social groups, and had the self-confidence to follow their own ways. This suggests that interventions to foster and develop such characteristics may increase the ability of other young women to resist cultural norms that may harm them. Not everyone would advocate this type of approach in the primary prevention of skin cancer because it does not emphasise the physical risk of skin cancer (Grunfeld 2004). Some participants in my study appear to have been influenced by the risk agenda and that emphasis was suitable for them. However, the risk approach is underpinned by the perception that health is a physical entity. Based on my findings, I propose that the primary prevention of skin cancer interventions need to reflect the holistic nature of the concept of health by recognising the psychosocial issues that may affect young people in their lives. This might lead to a more inclusive strategy that makes the primary prevention of skin cancer interventions more relevant to more young women, and potentially makes the interventions more effective in changing sun exposing behaviour. If an holistic view of health does not underpin prevention interventions, I anticipate that some research findings will continue to conclude that primary prevention of skin cancer strategy, (particularly the prevalent message[28]) has a limited effect on some adolescent females' behaviours in the sun. Chow (2004) has identified that taking an holistic view of adolescents is a challenge to health care providers and educators. This could be because it leads to less than ideal, but possibly more viable intervention options. For example, my findings about the value of a tan suggest that it is important for young women to learn about effective application of sun cream and tanning more safely (Wichstrøm 1994; Eadie and MacAskill 2003). As Eadie and MacAskill (2003) have proffered, tanning more safely may be the only viable protection option for some people.

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[28] to wear protective clothing, use and apply correctly, appropriate sun protection factor sunscreen, wear a wide-brimmed hat and avoid the midday sun (Stanton *et al.* 2004).

The implications for primary prevention of skin cancer practice, based on the findings from the category *Fitting In* have been discussed above, and are summarised as follows. Interventions need to be underpinned by a holistic definition of the concept of health rather than a perception of health as a purely physical concept. Whilst some young women may respond to messages about the risk of skin cancer others may not; they are not a homogeneous group, and a range of interventions is needed to address their sun protection needs. Given the effect of a social context where appearances matter, some young women perceive a need to fit in with the appearances agenda in order to be accepted by peers and this can affect their sun protection behaviours. Options for the primary prevention of skin cancer practice to account for this include changing cultural appearance norms at individual and societal levels and dealing with existing norms. I have identified partnership working (with young women seen as vital partners) as an appropriate strategy to explore these options in practice. To deal with existing norms, practitioners need to acknowledge them. They need to accept the influence appearance norms may have on some young women and provide interventions to suit. Although this may mean compromising sun protections ideals in practice, it may be a more realistic approach to take with some people. I have also proposed that strategies to raise awareness in young women could include helping them to critique the derivation of cultural and media messages considering how cultural norms may affect their health. Innovative strategies are called for to achieve sun awareness and protective behaviours (Stanton *et al.* 2004). Because of the complexity of the issues that have emerged in this study, I propose that my findings could underpin pilot work to provide such innovation. This could be in the form of action research or a practice development project that has the flexibility to deal with possible contextual issues such as geographical factors, and the peer issues that have emerged as significant in adolescent perceptions and behaviours. The findings from this category have indicated a need for further investigation into the ways in which young women may learn about sun protection as well as further exploration into the issues that affect them.

Overall the issues that emerged from my conversations with participants were very complex and this was partly due to the young women being individuals, each with their own personal preferences and issues to do with being in the sun. In the next section of this chapter, I present the findings from the category of *Being Myself* which give further insight into what influences young women in the sun.

Being Myself

It emerged from the analysis of the data that the girls were individuals with diverse agendas, behaviours and preferences in the sun. *Being Themselves*[29] was conditional upon participants following their individual agendas and adopting different transient 'selves' according to their social contexts and the people around them. Discussion revealed that the girls' different agendas, preferences and varied roles, influenced their behaviours in the sun and the details of these findings are presented below.

The Participants' Agendas

> *Ann: ... If I was going in the sun, I wouldn't do any of this* (indicating the SunSmart code card).
> *Me: No, so, so what, why would you say you don't? What is it you're ....*
> *Ann* (interrupts)*: I dunno, I....*
> *Me* (interrupts)*: What stops you d'you think?*
> *Ann: I dunno, I've always been in the sun right, ever since I was little though.*
> *Me:* (clarifying) *So you just see it as a natural thing to do.*
> *Ann: Yeah, like every summer ever since I was little, going down the beach every year.*

This excerpt illustrates that being in the sun was part of who Ann was. Going to the beach was a facet of her being herself, and although going to the beach was an aspect of her agenda, considering sun safety was not. For Ann, being herself and following her own plans meant that sun safety advice except for that advising to protect children was 'asking too much', and was the antithesis of her agenda. Her perception was that if she followed the advice, there would be no point in going out in the sun. The sun safety code also spoiled others' agendas to the point that it was perceived as punitive and it was described as 'extreme'. Molly commented on how it was inapplicable and that people did the opposite of what it recommended. One example of individuals doing the opposite related

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[29] To aid the flow of the text, reference to participants *Being Themselves*, is synonymous with the category *Being Myself.*

to avoiding the sun at certain times of day. The sun safe code recommends staying in the shade between 11 in the morning and three in the afternoon but paradoxically, this emerged as the time the girls perceived to be the best part of a sunny day in the UK. It was during this period that they usually went out with friends. It was also perceived to be the best time for tanning and some participants told me that this was a reason they avoided the shade during those hours. Eadie and MacAskill (2003) experienced similar responses in their group of young adults and teenagers of mixed gender and age. Staying in the shade and covering up was perceived to spoil their enjoyment of sunshine too.

It emerged that generally having fun and being with friends was an important part of the participants' agendas and activities such as discos were priorities. There was more to do in the summer in contrast to the winter, because the weather was better. I was told about the importance of making the most of the times when the sun was shining and the opportunities these presented. The influence of the UK weather on participants was indicated by data sources other than interviews. During April and May 2006, I was planning to recruit a group of participants from a sport setting and had arranged to travel to early matches in the season in order to introduce myself and the study to potential participants. As it transpired, all of the matches had to be cancelled because of rain and that year memoed about the irony that it had rained heavily for the duration of National Sun Awareness Week.

Participants held the opinion that when the sun shone, it was important to be outside in the sunshine to the extent that they thought that sunny days spent indoors were wasted. They also believed that being in the sunshine could enhance their mood and make them feel good. I was also told how being in the sunshine made them feel healthier and it could make them look good. Although it was enjoyable to be in the warmth of the sun, it was also acknowledged that it was possible to become too hot and to burn and that this was undesirable. A sunny day was perceived to facilitate social activity, although what this entailed varied between individuals. Whilst some participants told me that they enjoyed sunbathing, others considered sunbathing to be boring and prefered to spend their time at the beach being active playing football and sports. The beach was a popular venue for activities, although not all of the girls enjoyed being there and the following excerpt from discussion with Ann and Carly, illustrates their different preferences. We had been discussing how the weather affected choices of activity:

Carly: If it was like this (cloudy and windy) *then we'd probably go shoppin' or just go round friends' houses 'nd stuff, but if it was like our last Staff Day we had, I think it was quite hot. Everyone went down to the beach 'nd um people were makin' like plans on Monday. They were lookin' on the internet to see what the weather was like on Friday, so, yeah, everyone's like 'let's go down the beach!'.*

Me: So (pausing), *and how about you?* (talking to Ann) *is that the sort of thing that you would do?*

Ann: Yeah, but as soon as I see sun, I automatically think about ***beach***

Me: Mm.

Ann: Even if it's like a bit windy or whatever. Still go down the beach.

Me: Mm, mm, and what's the attraction of the beach d'you think?

Ann: I just love it - sand and sea, it's just great ....

Carly (interrupts)*: I don't like the beach!* (giggling)

Ann: And fish! I like snorkelling, I've got a thing about snorkelling.

Carly told us later, that she did not like the beach because the sand was uncomfortable. This and others' accounts reflected participants' many and varied activities, preferences and priorities in the sun, illustrating that young women are not a homogeneous group. Also in the UK but in 1996, Diffey *et al.* drew a similar conclusion albeit based on measurements of children's' ultraviolet exposure. The researchers measured the personal ultraviolet exposure levels of boys and girls in both primary and secondary school settings. The investigators rejected their null hypothesis that children behave as a homogeneous group because they found that individual sun exposure levels varied considerably.

The Consequences of Participant Agendas

Participants being themselves was conditional upon them following their own varied agendas. As I discussed the girls' activities in the sun, I explored the relevance of sun safety to them. Opinion about the usefulness of the sun safety code reflected the lack of homogeneity as illustrated by Ann, Carly and Bella in the following example. I had asked them about the relevance of the sun safety code to those in their age group:

Ann: I don't think these leaflets are a waste of time. It's like, it just depends. Different people feel differently about the sun....

Me: Yeah,

Ann: So you can't say 'our age group', 'cos not all of our age group are the same.

Me: No, no you're right. Mm. So d'you think if people have got this (referring to information about sun safety) *then they can choose what they do? D'you think it's important they at least* ***know****....*

Bella (interrupts)*: Yeah.*

Me: That they could do these things? (Referring to sun protection).

Carly: Yeah, it is important that they know because people that are our age group that smoke, they know they can get lung cancer from it but they still choose to smoke ....

Me (interupts)*: Mm.*

Carly: But they don't have to go out in the sun but they choose to do that as well and they know they can get like things from goin' out in the sun.

Bella: There are consequences for everything 'nd you can't sort them all out.

When participants perceived the risk of skin cancer to be 'real' or they might be likely to experience physical discomfort or harm from sun exposure, the sun safety code emerged as more relevant to them. For example, Gill and Nancy came from families that had experienced skin cancer and as I explored the use of the SunSmart message in a group with Daisy, Emily, Freya and Gill, Gill was keen to explain to the others that skin cancer 'can happen' but it can be prevented by knowing the risks. Sun protection was on Gill's agenda and this apparently led to her having a conscientious approach to physical protection. However, other issues could impinge and intentions did not necessarily lead to action. The risk of skin cancer was not an immediate issue for everyone and as I explored the use of the sun safety message, I asked Daisy, Emily, Freya and Gill, if it was good to have the information on the card. Emily replied that it was 'good for everyone else', but not for her. When I asked why it was not for her, she told me that it was good to keep everyone else safe but that she would 'risk it'. In discussion with the others in the group, it emerged that they considered skin cancer to be part of the future and something to be dealt with later, when they were older. It was also believed to be an issue that could be resolved and I was

told about skin checks that could detect skin problems if they arose. We talked about people who appear wrinkled through sun exposure and I was advised that being wrinkled would be something else to be concerned about later, with Botox injections as a treatment option. These and others' views implied that physical protection from the sun was not a priority, even for those like Ruth and Queenie, who had previously told me about how they protected themselves in the sun. As I tried to establish what their priorities were, I asked Ruth and Queenie what they thought about if they were going out on a sunny day. Was it the SunSmart code, or other things?

> *Queenie: Umm, I'm going down the beeeeeeeeeach, wooooooo!*
>
> *Ruth: Probably other things to be honest.*
>
> *Me: Other things, yeah* (clarifying). I *must be honest, that is sort of the impression I get .....*
>
> *Ruth* (interrupts)*: It's not* ***that*** (referring to the SunSmart code). *It's sort of in the back of my mind, don't, don't* ***forget*** *to put cream on, but it's not,* ***plaster*** *it on just before you go out sort-of-thing.*
>
> *Me: So it's not kind of thinking about all of this before you go - oh, it's a sunny day, therefore I will....*
>
> *Ruth* (interrupts)*: No, not really, it's more about what you're actually gonna do.*
>
> *Me: So your agenda is more about getting out there.*
>
> *Queenie: Yeah.*
>
> *Me: And doing things* (clarifying).
>
> *Queenie and Ruth: Yeah* (in unison).

Generally, the sun safe code did not fit with participants' activities because its recommendations were perceived to be inconvenient, impractical and expensive (Cockburn *et al.* (1989) have also noted the expense of sun cream). Despite the apparent limitations of the recommendations however, participants in my study believed that knowing about the risk of sun exposure and its prevention was important. I was told that information to avoid sunburn was useful and that additional advice about what to do in the event of sunburn or dehydration would be helpful. Although sun safety was not necessarily a priority for them, the issues needed to be put on their agenda because the participants acknowledged that they were important. During interview 14, there was a consensus that people did not

realise the consequences of sun exposure and that more needed to be done to demonstrate the consequences of ultraviolet radiation induced skin damage. The view of the participants in this particular group (Molly, Nancy, Olivia and Polly) was that the sun safe message needed to be more explicit and direct with information about the incidence and effects of skin cancer, perhaps with cards showing different stages of the disease. These participants were not alone in suggesting such a graphic, direct approach and suggestions previously from Emily and Daisy had been for more realistic means of communication. For example, skin cancer images and 'a sad story about someone young' were suggested for inclusion. Participants perceived that other types of approach did not adequately reflect reality and the serious nature of skin cancer.

The participants' general requirement for realistic materials was demonstrated further within my study during initial approaches to a particular research setting. As a form of introduction of the study and myself to potential participants, I was invited by one particular school to deliver a lesson to a class of 14-15 year old girls. The topic was Premenstrual Syndrome (PMS). In preparing for the session, I discovered a lack of health promotion information targeted towards this particular age group and decided to encourage the girls' participation in the lesson by asking them to make their own leaflets for peers based on the theory and information about PMS I had given them. When the girls had produced their contributions and I was reviewing them with the class, I was surprised by the explicit nature of the posters and leaflets that they had produced, and how this contrasted with the health promotion materials for adult women I had seen which dealt with the topic in far more discreet and subtle ways. My first impression of the girls' contributions was that they were on the verge of being distasteful and that is was unlikely that health professionals would sanction the same style of presentation as an appropriate one. In retrospect however, this experience and subsequent data from my study reflected that the young women were likely to be engaged by lifelike materials. Other ideas about the presentation of the sun safety code were that the information card 'needs to be pink' (co-incidentally, later versions were) and that information should be accompanied by samples of sun cream. Emily thought the format would be more appealing and people would take more notice of it if it showed good-looking boys and girls (who she stated should be brown) and involved celebrities. This data is also indicative of the significance of appearances to some young women discussed previously.

It emerged that issues of relevance could determine whether young people would access sun awareness information. For example, I was told how people in their age group were not likely to search out information and pick up leaflets because they 'don't read that sort of thing'. I was advised that if material is not of interest it is not accessed and so use of television and radio was perceived to have the potential to make the information more available to them. Another idea was that information, warnings and displays should be located at places where young people go when they are outside, for example at the beach.

Acting the Part

As participants and I discussed their activities in the sun, it emerged that adolescence brought with it a range of roles and transient 'selves'. The girls slipped in and out of these. Participants *Being Themselves* was conditional upon taking on these different roles at different times, and consequently the girls had varied transient 'selves'. The girls' relationships with the people around them at a particular time determined the social roles and 'selves' they in turn adopted. The girls' roles, level of independence and their level of responsibility for themselves and/or others influenced their sun protection. It emerged that with adult family members participants took the role of the dependent child afforded them by the adults. They were protected. With friends, they were acting more independently of adults and tended to adopt the role of adolescent, conforming to peer expectations. In the presence of younger children they adopted a more responsible adult role, and although they did not necessarily subscribe to the protection agenda themselves, they would protect the children who they were with. The influence these varied roles had on participants' sun protection is illustrated by the response Daisy made to a question I posed. I asked whether being with any other people affected her sun safety activity. She replied that if her parent told her to put sun cream on then she would. If she was with her friends she would not put sun cream on (partly because she might forget), but if she was with younger children, she would protect 'the kids' she was with. The effects of the girls' different social roles and 'selves' on sun protection are considered in more depth below.

Being the Child

The incidents categorised in this sub property reflected participants' dependence on adults for protection measures in the sunshine. With adult family members, they tended to

conform to the adults' requirements to wear sunscreen, cover up and to protect themselves from burning. As illustrated in the following excerpt, Carly's grandparents required her to wear a hat for protection from the sun. We had been talking about wearing hats, and Ann and Carly had asked for clarification of what was meant by a 'wide-brimmed hat' as advocated by the SunSmart code. I explained that wide-brimmed hats had large brims and demonstrated that they provided shade for noses and faces. At that point, Carly interjected:

Carly: (Giggling). *My Nan and Grandad had one of them. If I'm out with my Nan and Grandad they, this isn't in public* (clarifying and laughing) .... *in the back garden, they make me put the hat on but no one sees me!* (all laughing).

Me: Don't worry, this is confidential to us.

Carly: No one sees me, it's like, like a straw thing that like comes over like that (Carly demonstrates. She and Ann are laughing).

Me: So has that got a wide brim?

Carly: Yeah, 'cos your face is all shaded. It does feel better when you're sunbathin' with it on, yeah, but it could look better! (giggles)

Me: Yeah, so you're saying that if you're in their garden....

Carly (interrupts): *Yeah, 'cos they make me* (laughing). *I have no choice!*

Me: Would you walk outside, outside with it on?

Carly: If I'm somewhere where no one knew who I was! (laughing).

This account not only illustrates how Carly may have behaved in child 'mode', by conforming with adult wishes for protection, it also serves as data to illustrate how she was in a different, adolescent 'mode' with me and her peer, in the interview. She had apparently realised that she had made herself vulnerable by disclosing the information about wearing an unappealing hat, and, as the excerpt shows, she was keen to tell Ann and I that she did not wear the hat in public but had no choice about wearing it with her grandparents. This is an illustration of *The Worry*, discussed in the previous chapter, about fitting in. During the excerpt I mentioned that the discussion was confidential to our small group to make her feel more comfortable about what she had told us and also as a reminder to the other participant, Ann.

As participants reflected on sun protection earlier in their childhoods, their perceptions were that protection had been easier then. This was because their parents were in control. The participants had no choice about protection and simply responded to being told what to do. As young women, even now, being out with their parents led them to greater sun protection. Participants told me about how they were encouraged and reminded by the adults in their families to protect themselves from sun exposure. This is illustrated by the following extract from interview 17:

Queenie: With parents....

Ruth (interrupts)*: Yeah, with parents, if you're with your parents you have to be careful.*

Queenie: You have to do everything to the maximum, everything to the extreme, put on twenny times what normally you'd put on (referring to sun cream and jokingly sounding frustrated).

Ruth: Yeah.

Me: (laughing) *but you go with the flow then* (clarifying).

Ruth and Queenie (in unison): *Yeah.*

It emerged in discussions that one reason for the enhanced protection in the presence of adults was that they provided protection 'infrastructure' in the form of sun umbrellas, sunscreen and reminders to protect in the sun. The participants had also noticed a difference in the emphasis on sun protection during their transition from primary to secondary school. In primary school, there had been an emphasis on taking sun cream to school and applying it. However, perceptions were that now they were in secondary school the 'set up' was different. There was less emphasis on the practice of sun protection, with the inference being that it did not happen.

Being the Adolescent

Participants told me about being with peers in the sun independently of adults and taking responsibility for themselves. I categorised these accounts as *Being the Adolescent.* Although the role of the adolescent brought freedom from adult influence, it also meant that the girls experienced a lack of the sun-protection infrastructure such as the umbrellas and sun cream that tended to accompany them on family outings. Participants told me that

they and their friends did not take the same protection paraphernalia when they went out. Another consequence of the freedom of the adolescent role was that they had fun and became engrossed in their own agendas, forgetting about sun protection. There were accounts from some of the girls suggesting that they began with good intentions not to burn, and that they applied sun cream before they went out. However, they also told me that they forgot to reapply cream. The adult cues to protect were no longer there because as they were growing older, the young women tended to go to the beach with their peers rather than their parents. It was also easy for them to forget to protect in the sun because peers neither encouraged sun protection nor provided reminders in the same way as adults. The following excerpt illustrates this. I had been in a group with Helen, Isabel, Jo, Katie and Linda, exploring the effect different people might have on their sun protection:

Jo: Well, like if you're with your mates down the beach, you don't wanna be sat there like sprayin' suntan lotion every two minutes, do you really?

Me: No.

Isabel: With a white line down your nose.

Me: Yeah so, so you do do different things (qualifying).

All participants: Yeah.

Jo: Yeah, but when you're with your parents you do what they wannoo. You just carry on don't you?

Isabel: It shuts 'em up.

Me: What would happen if you .... (laughing). *It shuts 'em up, so it's for a quiet life then is it?* (laughing), *so what would happen if you didn't fit in with them 'nd what they thought?*

Isabel: They'd start naggin'.

Me: Yeah.

Helen: (mimicking a high pitched voice)*: Oh, you'll get* ***burnt!***

(giggling). T*hat's what they keep doin'.*

(All laughing).

Me: So you do it for a quiet life (clarifying).

Helen: But your friends aren't gonna say 'you'll get burnt put some cream on again'. They don't really care (all laughing).

Isabel: They'd say sit there 'nd ***burrrrrn*** (said in a deep and gruff voice)!

With the peer group being more influential than parents now, some of the young women were finding that life was no longer straightforward. They found that peers could actively discourage sun protection. However, decisions had to be made leading to dilemmas about whether to 'do the right thing' or to follow others.

Being the Adult

Even though some participants reported that they might not protect themselves in the sun, I was told that they would protect the younger children who were with them. There was a perception that younger children were vulnerable because they were not aware of 'the dangers' or the potential for sunburn and they would not apply sun cream for themselves. I categorised incidents of participants being with younger children and taking responsibility for their sun-protection, as *Being the Adult*. Participants believed that it was important for them to have sun safety information for these circumstances and I was told that they would be 'stricter' with their younger charges in its application, than with themselves. Eadie and MacAskill (2003) noted similar findings in their study whereby young mothers reported safeguarding their children in the sun but the mothers did not afford the same protection to themselves.

Overall, the essence of the category of *Being Myself* emerged as the young women needing to follow their personal agendas in the sun and adopting the different transient 'selves' that their social contexts determined. The consequences of participants *being themselves* in these ways and not being part of a homogeneous group were that their behaviours in the sun were many and varied, as were their levels of sun protection. The latter were partly determined by the aspects of 'self' (child, adolescent or adult) individuals adopted at particular times. The sun safe code was not relevant to everyone all of the time and the issue of relevance emerged as an influence on sun safe behaviours. Although the sun safety agenda was not necessarily subscribed to, participants recognised the importance of the issues it raised and they advocated that it needed to be made a part of their agenda. Their critique of current information suggested that a more direct graphic approach could be engaging, as well as locating media messages and information, warnings and displays at outside venues. Those young women whose agendas did not predispose them to sun safety behaviour, perceived that provision of advice applicable to their worlds would be

beneficial. Next, I discuss these findings and consider how they explain the participants' experiences in the sun. First, the influence of environmental conditions and experiences of wellbeing are considered in relation to sun-related perceptions and behaviours. Then I examine developmental aspects of adolescence and identity issues and suggest how these account for different behaviours in the sun and influence how sun safety information is used. In the final section, I discuss the implications of the findings from this category for the primary prevention of skin cancer and research.

The Sun as 'Friend': The Basis of the Participants' Agendas

In 1998, Wharton and Cockerell wrote an article about the positive and negative effects of ultraviolet radiation on humans and other life forms. The title of their article: 'The sun: a friend and an enemy' sums up the paradoxical nature of the sun's rays. In the following discussion, I propose that the participants generally perceived the sun to be a 'friend', rather than the foe the sun safe code assumes. I explain the basis of this analysis and suggest how it accounts for the agendas, priorities and behaviours of the young women in the sun, including their lack of spontaneous attention to sun safety.

It emerged that when the sun shone, participants enjoyed being outside in the sunshine and their priorities were to have fun, be with friends, play games and sunbathe. The young women perceived a need to make the most of sunny weather and the opportunities it brought for outside activities. Other researchers, for example Eadie and MacAskill (2003) and Jones *et al.* (2000), have also reported how young people actively enjoy being in sunshine. In their study, Jones and his colleagues explored skin protective behaviour in 39 male and 39 female students at a UK university. They retrospectively assessed participants' skin protection using a questionnaire with qualitative and quantitative elements and they focused their assessment on a period of good weather in the UK. In their study, the researchers explored contextual factors, how their participants enjoyed being in sunshine, the harms and benefits they perceived in relation to sun exposure, and their sun protection behaviours. As in my study, they found that participants' main priorities in the sun included playing outdoor games and sunbathing. They also found that participants' activities did not reflect a sense of risk from the sun or a need to protect themselves from its rays. As MacKinnon (2007) has explained, young people who take risks may not see their behaviours as risky and in any event see adults doing the same

thing. It is noteworthy that Jones and his colleagues had people in their sample group who were older than those in mine. The purpose of their research was to investigate young adults, and whilst the mean age of the participants was appropriate (24 years), the sample group overall had an age range of 18-*52* years. Although this age range is outside the study's frame (given its purpose to investigate *young* adults), the findings themselves are still of interest in the context of my study. This is because they concur, indicating that that the enjoyment of sunshine and priorities for outdoor games and sunbathing tend to supersede consideration of risk from the sun. The factors that emerged in my study apparently apply across a wider age range than I investigated. Jones and his colleagues included males as well as females in their sample, extending the transferability of my findings further.

The Influence of Weather on Sun-related Perceptions and Behaviours

The girls in this study valued sunny days because opportunities for outside activities were limited due to the unpredictable climate. This is understandable because ambient temperatures and rainfall fluctuate year-round in the UK. Temperatures can fall as low as 13 degrees centigrade in mid summer, and average daily hours of sunshine are below those experienced in Southern Europe (Jones *et al.* 2000). Other studies have also noted the influence that erratic environmental conditions may have on the emphasis people place on outside activity in good weather and the value they place on experiencing the sun's warmth (Jones *et al.* 2000, Bergenmar and Brandberg 2001, Eadie and MacAskill 2003). Like the UK, Sweden is another country with an unpredictable climate and there, in a study of young, adult men and women, Bergenmar and Brandberg (2001) found the most important reasons for their participants to sunbathe were to feel warm and comfortable. This also arose in my study and being in the sunshine led to participants experiencing feelings of physical and emotional wellbeing. Such findings are not new and positive emotional health and wellbeing have been linked with the sun's warmth and light (Koblenzer 1998; Jones *et al.* 2000; Holick 2001; Eadie and MacAskill 2003). The link between being in the sun and feelings of wellbeing are believed to have a physiological basis (Koblenzer 1998; Holick 2001). In the following discussion, I will explain how issues of wellbeing may have influenced the perceptions, agendas and behaviours of the young women in the sun in this study, and the participants in studies cited above. I will draw on two philosophical perspectives of wellbeing, Hedonism and Eudaimonism, both of which have ancient

origins and are based on human nature (Ryan and Deci 2001). First, I will consider how the Hedonistic perspective of wellbeing may explain the girls' agendas in the sun and the relevance of sun safety to them.

Experience of Wellbeing as an Influence on Sun-related Perceptions and Behaviours

Hedonistic philosophy reflects wellbeing as happiness or pleasure, with the experiences of sensation, pleasure and self-interest at its core (Ryan and Deci 2001). The findings from this study included that the girls relished the sensation of the warmth of the sun when it shone, and they enjoyed the opportunities sunny days offered. Whilst in the sun, the girls' priorities were to have fun, be with friends, play games and sunbathe; all implying the 'hedonic enjoyment' that Waterman has referred to (1993, p.679) and which is felt 'whenever pleasant affect accompanies the satisfaction of needs, whether physically, intellectually, or socially based.' I argue here that as a result of behaving according to their agendas and priorities in the sun, the young women were experiencing hedonistic wellbeing. This explains why sun safe behaviour was not spontaneous, was not a priority, was forgotten and was perceived by some to lack relevance. It explains why future skin cancer and wrinkled skin was not of immediate concern. It also explains why following the code was perceived by young people to spoil their enjoyment of being in the sun (a finding that other researchers have also made for example Jones *et al.* (2000)), and why it was not of interest, even for those who had previously told me about how they intended to protect themselves in the sun. The experience of hedonistic wellbeing explains why staying in the shade between eleven o'clock in the morning and three o'clock in the afternoon was not perceived to be a realistic proposition; it was the best part of the day for meeting friends and socialising. It also explains why one participant in my study described the sun safe code as 'extreme'.

In contrast to the hedonistic view of wellbeing with its emphasis on enjoyment and happiness, the perspective of Eudaimonism is that wellbeing is derived from human self-actualisation or fulfilment (Ryan and Deci 2001). Eudaimonism is about people living according to their true selves or daimon (Waterman 1993). It is about individuals being who they really are. People who live according to their deeply held values personify the eudaimonic conception of wellbeing because they are in harmony with their true selves (Waterman 1993). Eudaimonia comes from a person realising their potential and it

involves them in activities that are 'personally expressive' (Ryan and Deci 2001). According to Waterman, an activity is personally expressive when an individual is intensely involved in it, they feel a 'special fit' with the activity; they feel 'alive' and 'complete' during the activity, they feel as though it was what they were 'meant to do' and that this is who they really are (Waterman 1993, p.679). I propose that for some people, being in the sun is a personally expressive activity and that this explains why for example, Ann in this study perceived being in the sun to be natural. Being in the sun was part of who she was.

Ryan and Deci (2001) have acknowledged the controversial nature of the concept of wellbeing, defining it as (2001, p.141) 'a complex construct that concerns optimal experience and functioning'. Discussion of the findings of this category so far suggest that from the perspectives of the young women in this study, wellbeing or the optimal experience and functioning of which Ryan and Deci speak, may revolve around their hedonic enjoyment, and eudaimonic behaviour in tune with their sun-related values. I have argued above how the hedonistic and eudaimonistic conceptions of wellbeing could explain the bases of their perceptions and behaviours and that a holistic conception of wellbeing underpins the perceptions and behaviours of young women. This holistic conception has been recognised as important in the definition of health (Harper *et al.* 2002)[30] but it is noteworthy that the sun safe message reflects that it is concerned with wellbeing in a physical sense, rather than in a holistic one. The sun safe code does not accept the sun as 'friend' rather it requires people to direct their behaviour towards dealing with the negative effects of the sun, such as preventing skin cancer.

The discrepancy between the conception of wellbeing assumed by the sun safe message and the nature of wellbeing apparently desired by some people in life not only explains my findings but also allows for reinterpretation of others'. For example, Bergenmar and Brandberg (2001) found that the prevention of malignant melanoma skin cancer was not a priority for young adults with hereditary risk. The participants in their study were men and women aged between 18 and 30 years. They were selected because they all had hereditary risk of malignant melanoma. In their study, the researchers intended to describe the

[30] The Ottowa Charter 1986, defines health as physical, mental and social wellbeing and being the state for individuals to achieve (Harper *et al.* 2002, p.40).

group's attitudes to sunbathing, to examine their sun-related behaviour and to provide an intervention designed to change sun-related behaviours. The work was quantitative in design and it involved focused, semi-structured interviews with 10 participants. It also involved the administration of a structured questionnaire three times to 79 participants over 15 months. The interviews were analysed using content analysis and were used to gain the young adults' perceptions of sun-related behaviour, and the value of sunbathing and sun protection. The questionnaires were used to establish reasons for sunbathing (or not), perceptions of risk and action taken by participants to prevent malignant melanoma.

The researchers found that whilst some participants reduced their sunbathing activity during the study period, others involved in the study had attitudes and behaviours that led them to experience extensive UV exposure. The participants in the research not only knew that they were at risk of the most fatal form of skin cancer, they were also well informed about sun safe practice. Despite this, one third reported that they sunbathed either often or very often and a third reported that they used sun beds. There is an assumption associated with skin cancer prevention, that if people are aware of the risks of sun exposure they will protect themselves against them. However these findings of Bergenmar and Brandberg do not support this assumption. I propose that the experience of hedonistic and/or eudaimonistic wellbeing explains why some participants sunbathed and used sun beds in the knowledge of their risk and contrary to sun safe advice. The participants were doing what they enjoyed; for them, being in the sun was a 'personally expressive' activity. It is also noteworthy that Lupton and Gaffney (1996) suggested in their Australian study that young people valued being outside and enjoying themselves. This is significant, as assuming that the participants in the study of Lupton and Gaffney experienced better weather in their geographical location, their penchant for outdoor activity was not necessarily linked to climate. Rather, it could be due to hedonistic and /or eudaimonistic elements of wellbeing raised before.

It is timely to mention that during this research the study of Bergenmar and Brandberg raised issues for me from a personal, reflexive point of view. I refer to the issues here because their contribution is a further indication of the complexity of the topic under discussion. As I read the findings of Bergenmar and Brandberg, I was surprised by them. I was particularly surprised by the results inferring that people with hereditary risk of malignant melanoma were not more attentive to sun protection behaviour. On reflection, I

have realised the irony of my surprise because although I have personal experience of basal cell skin cancer (BCC) and the surgery to remove it, I am not as mindful as I should be about sun protection. I have been made aware of my predisposition to the development of more lesions including malignant melanoma. Given this knowledge, the 'medical' expectation is that I will protect my skin in the sun conscientiously in order to avoid further problems. However, during the production of this thesis I have memoed the paradox (several times), that despite my knowledge and despite this thesis being on the subject of the prevention of skin cancer I often forget to protect myself in the sun. On some occasions, I am enjoying the sunshine so much that I consciously delay applying cream, seeking shade or covering up. Prior to my experience of skin cancer 12 years ago, I sunbathed regularly; on reflection, although I do not do that now, being in the sun is part of who I am and what I enjoy. The lifestyle change that is required of me is fundamental and difficult, which explains my activities above. I propose that this personal experience is further evidence to support hedonistic and eudaimonistic wellbeing as a basis for sun-related behaviour albeit from the perspective of a middle-aged adult.

Discussion of the category *Being Myself* so far suggests that the importance the girls placed on being in the sun, and their agendas and priorities are justified when considered in the context of holistic wellbeing. I have argued that the participants' agendas in the sun were influenced by their different conceptions of wellbeing and what it comprised for each of them. I have proposed that participants' acting towards feelings of wellbeing explains the individual and varied perceptions and behaviours in the sun that emerged in this study. Other factors that emerged as influential were related to adolescence as a developmental stage and these are discussed next.

Adolescence as a Developmental Stage and the Transient, Dynamic Nature of 'Self'

Adolescence heralds social, as well as biological change (Stevens 1995; Gross 2005) and literature explains how adolescents develop and gain independent identities through linear, temporal processes. Young people are represented as moving through discrete stages of being children, becoming adolescents, and finally developing into adults (Mead 1934; Koblenzer 1998). Because the participants in this study were at the adolescent developmental stage, they were able to reflect upon how their sun protection behaviours had changed since childhood. During childhood, parental influence had ensured that they

were protected in the sun through reminders and the provision of protection commodities such as sun cream[31]. It emerged that such protection practices had been mirrored in primary school. Generally, now, the young women perceived their sun protection to be less than in childhood. Their experience was that sun safety did not have the same emphasis in secondary school, protection infrastructure was not readily available and peer influence had superseded the influence of adults in some contexts. Similarities between these findings and the discoveries of researchers overseas suggest that the findings do not only apply to young British women; other studies have also found that as adolescents grow older and become more autonomous, their behaviours in the sun are affected (Alberg *et al.* 2002; Shoveller *et al.* 2003; Stanton *et al.* 2004). For example in 2002, Alberg and his colleagues studied 2775 American girls and boys aged 10-16 years old. This was in order to describe their knowledge, attitudes and behaviours regarding sun exposure and skin cancer. The researchers found that their participants' attitudes toward sun protection and their sun protecting behaviours eroded with age. Further, a study involving Canadian adolescents discovered as I did that participants' behaviours could be attributed to parental influence having waned, and peers and the media taking over as referent groups (Shoveller *et al.* 2003).

My findings and the research cited above reflects adolescence as a 'middle stage' of development and one that assumes movement toward independence from adults (Gross 2005). I argue here that viewing the period of adolescence as a specific stage within a sequential, developmental process infers that there is one corresponding 'adolescent' way of behaving. Although my findings did reflect adolescence as a stage of development, I did not discover that the participants had adopted one static role within it. Nor did I find that the young women had one 'adolescent' way of behaving. Instead, they adopted a range of roles and transient 'selves' that they slipped in and out of. B*eing Themselves* required individuals to take on different roles and 'selves' at different times according to who they were with; they were *Acting the Part*. This had consequences for sun-related behaviours since the different roles they took in the presence of different people, determined the girls' levels of independence. In turn, this affected the level of responsibility they accepted for their own sun protection and that of others. It emerged that with adult family members, participants took the role of the dependent child. They were

[31] This finding compares with others' studies such as that of Lupton and Gaffney (1996).

protected in the sun and they tended to conform to parental requirements to wear sunscreen, cover up and protect themselves from burning. As in my study, Shoveller and her colleagues found that in the company of parents, their participants perceived that they were nagged about sun protection, their fun was spoiled and so was the spontaneity of their being young. Even so, the young people complied with parental expectations for sun protection whilst in their company, reflecting that children tend to please their parents (Koblenzer 1998). On the other hand, when in the role of adolescent with friends, the participants acted more independently. They assumed responsibility for their own safety in the sun although some experienced conflict given differences in the expectations of parents and peers. They tended to conform to peer expectations. These findings could be expected as Gross (2005) suggests that adolescence involves young people renegotiating relationships with parents, and their peers become a referent group as they bid for independence. In the presence of younger children, the girls in my study adopted a more responsible adult role. Although they did not necessarily subscribe to the protection agenda themselves, they would protect children in the sun. To my knowledge, no other study has found or discussed adolescent sun-related behaviour in this way, but young people behaving differently in different relationship contexts has been noted before.

My findings that the participants adopted different roles concurs with the belief in social psychology that the self has many facets and that people adapt behaviour to different interpersonal relationships and contexts (Gross 2005; Harter *et al.* 1997; Stevens 1996). According to Mead (1934) social reactions determine which 'self' a person will be at a particular time and socialisation pressure leads to the development of different 'selves' in different roles and relationships. Gross (2005) has used the symbolic interactionist perspective of Mead to explain how a person becomes socialised and how their 'self' develops. Children learn about different social perspectives in their games, and the roles they take on influence how their own behaviour is determined. In 1986, Rosenberg appraised the theory of self-concept in adolescence and noted how people in relations with young people all require them to show different attributes. Because there are no absolute points of entry and exit to adolescence (Rosenberg 1986), others' expectations of young people tend to relate to assumptions about age (Stevens 1996). For example, some treat adolescents as children, others as adults. My findings suggest that parents were likely to view the participants as children, peers expected them to have independence from adults and society viewed them as developing responsibilities in anticipation of a forthcoming

adult role. Given adolescents' concerns about others' appraisals of them, they apparently have a tendency to adopt the roles they perceive are required of them. The consequence is that their roles fluctuate (Rosenberg 1986). It seems that the range and transience of the roles the girls in my study took on, could be explained by this tendency to respond to others' expectations and attitudes. It could also account for why the girls behaved diversely in the sun and the different extents to which they used the sun safety code according to the roles they adopted. For example, in the company of adults the young women tended to be passive recipients of the sun safety message, whilst in the company of peers they were inclined to forget about sun safety and/or conform to peer behaviours in the sun. When they were with younger children they reported that they would implement the sun safe code with their charges. These findings challenge the view that adolescents do not use the knowledge of the sun safe code because it seems that they use elements of the code selectively in different social contexts.

According to Stevens (1995), a human's sense of self is synonymous with their identity and he refers to two aspects of identity: personal identity and social identity. Personal identity is derived from personal experience and reflection upon it, whereas social identity derives from a person's interaction with their social world and the characteristics and roles that others attribute to them. I propose that the findings from this category of *Being Myself* provide empirical evidence to support both of these aspects of identity. Firstly, this is because the category property of *My Agenda* reflects elements of the participants' personal identities based upon their individual experiences of being in the sun. The findings from *My Agenda* indicate each participant's individuality in relation to being in the sun, which may be influenced by issues of wellbeing and the influence of environmental conditions. Secondly, the category property of *Acting the Part* reflects elements of the participants' social identities derived from their interactions with others in their social worlds; they apparently took on the roles and responsibilities determined and defined by the expectations of others. The discussion above has explained how these expectations may influence the sun-related behaviour of individuals. It has also explained the use of sun safety information in different social contexts. Overall, the discussion of the findings from this category so far reflects that young people are not members of a homogeneous group who each adopt a static adolescent role. Each individual may adopt different roles within their period of adolescence and exhibit a range of sun-related behaviours according to their

social context. The implications of the findings for skin cancer prevention strategy and research are discussed next.

The findings from this category of *Being Myself* challenge the relevance of the primary prevention of skin cancer to some young women in two main ways. First, some participants did not see sun exposure as a problem and this affected how they related to sun safety advice. Although their agendas in the sun were many and varied, the girls generally viewed being in the sunshine as a positive experience with physical and psychosocial benefits. They were driven by hedonistic and eudaimonistic feelings of wellbeing. They tended to consider the sun as 'friend' rather than 'foe', and some considered sun safety advice as irrelevant and impractical. In response to this first challenge, I will explore issues related to the relevance of sun safety and consider ways to address them. The two options I will discuss involve the health lobby accepting positive views of sun exposure, and young women accepting sun exposure as problematic. The second challenge to the relevance of the primary prevention of skin cancer I consider toward the end of this section derives from the girls' transient and dynamic roles within adolescence. Just as their roles were transient and dynamic, so it emerged was the relevance of sun safety. I will present the implications of this and in doing so, propose that young women should continue to be targeted by primary prevention strategy. I will also suggest ways in which sun safe behaviour may be encouraged and supported.

The Relevance of Sun Safety - Different Perceptions Explained

A range of information sources underpins problem definition in health promotion practice. The range includes behavioural and social research about the determinants of health, epidemiological and demographic information, and the perceived needs of the community. Whether an issue is defined as problematic will depend upon the information sources consulted about it (Nutbeam 2006) and this has become evident in my study. It is epidemiological evidence about the negative effects of ultraviolet radiation on human health that defines sun exposure as a danger and although sun exposure may have been defined as problematic from this point of view, information gained from the participants during this study revealed a different perspective. The girls did not consider sun exposure to be a problem in the same way. Reflecting on 20 years of SunSmart activity in Victoria, Australia, Montague *et al.* (2001) noted similar discrepancies in problem definition related

to skin cancer. Montague and her colleagues appraised that preventing skin cancer was not naturally on the agenda for most people and they also, attributed this to the risk of skin cancer having an epidemiological basis. Montague and her colleagues' work was evaluative and did not specifically relate to young women, but it is noteworthy because it reflected a similar lack of concern about skin cancer community-wide. This suggests that the findings from my study could apply to a broader group than the one with which I engaged.

According to Nutbeam (2006), successful health promotion activity requires the people it targets to perceive they have a problem to deal with. This is because they will only engage with health promoting solutions that are likely to address their needs. In other words, the problem and its solution need to match. In relation to this study, when sun exposure is perceived to be a problem, action to reduce it is logical and relevant but when sun exposure is valued, it is not. During data collection, I was struck by participants' perceptions and behaviours in the sun being the antithesis of sun safety. I asked myself what the participants' advice to others in the sun might include and I noted in a memo that it would be to:

> *Go in the shade when you have burnt or are too hot, cover up when you have burnt, expose skin for a tan but don't overdo it because it can make you look ill, use sun cream to make your skin look good, wear sunglasses if they are fashionable.*

I observed (rather tentatively at the time):

> *To some extent, this clashes with the sun safe code. Their problem could be that it's* (referring to the sun safe code) *not a practical solution. The sun protection message doesn't encompass a life out of doors.'*

Later it emerged that the girls were not dealing with sun exposure as a problem, rather they valued it. They were being expected to apply the sun safe solution to a problem that did not exist for them. This explained why their perceptions and behaviours apparently contradicted sun safety advice, and why for some, sun safety lacked relevance and priority.

The Significance of Problems Matching Solutions

Social Marketing is an approach to behaviour change that aims to match its target group's problems with relevant solutions and it has been acknowledged as effective in changing health behaviours (Sargeant 2001). Current Government health-promoting strategy in England is underpinned by its principles (Department of Health 2006), and for some time Cancer Research UK has recommended a social marketing approach (Cancer Research UK 2006a). Despite the advantages of social marketing as a process, and reports about its success in behaviour change, it can fail when target audiences do not perceive a problem (Kotler *et al.* 2002). I predict that this would be the case with some young women, assuming that the intention would be to change their behaviours in the sun. I justify this claim after outlining the concept of social marketing.

Social Marketing was conceived in America in the 1970's, by Philip Kotler and Gerald Zaltman who proposed that marketing principles and techniques could be applied to social, as well as commercial ventures. They defined the concept as:

> *... the use of marketing principles and techniques to influence a target audience to voluntarily accept, reject, modify, or abandon a behavior* (sic) *for the benefit of individuals, groups, or society as a whole.*

Kotler *et al.* (2002, p.5).

Social marketing aims for behaviour change to be voluntary rather than imposed. It aims for the change to come about through new or modified behaviour being 'sold' to the public like commercial products. It is intended to have a customer 'focus'. Social marketers use four marketing tools to influence their target market or audience, identified as The Four P's: product, price, place, and promotion. The *product* refers to the desired behaviour to be 'sold' based on future benefits. In health, the product is a behaviour that promotes health more effectively than a competing behaviour the targeted people consider or carry out. The product needs to be attractive to the target audience in order for them to engage with it. The *price* of the product reflects the costs of giving up the 'old' behaviour and social marketers aim to keep this low. The *place* refers to the environment where the target audience will perform the behaviours or access services and *promotion* refers to the

nature of the message for behaviour change and the medium of its presentation or distribution (Kotler *et al.* 2002).

The Department of Health and National Consumer Council (2005, p.2) have described the aim of health-related social marketing as the achievement of behavioural goals 'relevant to improving health and wellbeing'. In the light of this, my findings suggest that a social marketing approach would fail to influence the sun-related behaviours of some young women. This could be on three counts. First, because I found they have no problem to address; the participants' experience was that they achieved wellbeing through being in the sun, not through avoiding it. The second reason that a social marketing approach might fail to influence the sun-related behaviours of some young women relates to the social marketing process itself. In order to succeed in achieving their goals for behaviour change, social marketers only invest in target groups who are likely to change their behaviours (Kotler *et al.* 2002). Based on this, social marketers are unlikely to direct their activities toward young women who perceive sun exposure positively. The third reason why a social marketing approach might fail to influence some young women is that it relies upon an appropriately 'priced' behaviour replacing sun exposure. My findings suggest that it is unlikely that an acceptable alternative behaviour will be found, particularly for individuals who see being in the sun as part of their personal expression and part of their Being.

In this discussion so far, I have shown the effect of mismatched perceptions of sun exposure and solutions. The implications for skin cancer prevention are that problems and solutions need to complement each other and I propose two options for consideration. First, the health lobby could accept that being in the sun has a positive influence upon wellbeing and they could create health-promoting solutions to match. Alternatively, young women could accept sun exposure as a problem along with its concomitant solution of sun safe behaviour. These options are discussed below, beginning with the former.

Matching Problems and Solutions - Accepting the Sun as a Positive Influence on Wellbeing

To some extent, those involved with the primary prevention of skin cancer and advocating the dangers of sun exposure have recognised the value people place upon being in the sun. It seems they have tried to incorporate the latter perspective into their materials. An example of this is the WHO Intersun project. As part of the project, WHO produced a

leaflet presenting the sun in a positive manner, and I would argue that it would potentially engage young women who have hedonistic and eudaimonistic tendencies. The leaflet is entitled: 'Sunshine and health. How to enjoy the sun safely' (WHO 2006) and its content acknowledges the advantages and disadvantages of sun exposure. It informs that sun-related disease can be prevented whilst people can still enjoy the sunshine. I propose that although the leaflet may initially appeal to individuals who value being in the sun, its guidance will disengage them. This is because the advice does not match the positive perceptions of being in the sun. Instead, the guidance recommends limiting time in the sun at midday, using shade, wearing protective clothing and using sunscreen. It also seems that the WHO anticipates that effort will be expended in thinking and making decisions about sun safe activity. They make suggestions for using the shadow rule (short shadow, seek shade), calculating the local solar noon and knowing the UV index to plan safe outdoor activities. According to my findings, these suggestions comprise part of an incongruous solution, based upon epidemiological definition of sun exposure as a danger. I propose that accepting the sun as a positive influence upon wellbeing and then appending sun safety advice perpetuates the mismatch between sun-related problems and solutions discussed previously. The implication is, that full acceptance of the sun as a positive influence upon wellbeing dictates that primary prevention messages and strategies require review. However, propositions for such compromise have proven controversial in the past. For example, in 2004, Dr Neil Walker (the chair of the UK Skin Cancer Prevention Working Party at the time) publicly expressed his opinion that advice given to people holidaymaking abroad to avoid suntans was 'unnecessary and draconian'. Walker's view was that a more realistic approach was needed because the message that there is no such thing as a safe tan, advocated by his counterparts in the Skin Cancer Prevention Working Party 'invited ridicule' (Laurance 2004).

My findings suggest that compromise with information and strategy relevant to the worlds and problems of young women may be the only way to engage some of them. For some, secondary prevention measures might be more appropriate. Whilst primary prevention activity aims to prevent skin cancer in the first place, secondary prevention aims to detect and cure disease in its early stages (Jones and Douglas 2000). Raising awareness of secondary prevention measures reflects complete acceptance of the view of the sun as 'friend' and relevance of the 'solution' is inherent. Secondary prevention of skin cancer is already an element of the Cancer Research UK strategy as people are encouraged to check

their skins for suspect lesions (Cancer Research UK 2006b) and the findings from this category suggest it has a vital role. Another option with relevance would be to provide young women with the solutions they seek related to their agendas in the sun. Identification of their specific needs is an area for further research but in this study, I gleaned that that information about how to deal with sunburn and how to prevent dehydration and sunburn would have been useful to participants.

Matching Problems and Solutions - Changing the View of Sun Exposure

The alternative approach I have proposed to address perceptions of relevance of sun safety is to change the view of sun exposure as unproblematic and this has been achieved in Australia. Here, the organisers of the Anti-Cancer Council of Victoria (ACCV) campaign recognised that they needed to create a 'community of concern' about skin cancer, before people would engage with sun safe solutions (Montague *et al.* 2001). In my study, the participants themselves recognised that they needed sun safety to be made a priority for them and they suggested ways in which concern about skin cancer could be generated. These included the use of direct approaches, with graphic and explicit materials presenting information about the incidence and effects of skin cancer. Montague and her colleagues noted similar feedback in the ACCV campaign when the community requested graphic and hard-hitting messages to shock them into action. Although the girls in my study and the Victorian community in Australia deemed shock tactics appropriate, use of such strategy is complex and there can be limitations to its effectiveness. This is because it relies on individuals acting in fear (in this case the fear of skin cancer) and their responses are unpredictable. Fear manifests itself differently in individuals with diverse personal variables controlling its influence (Averill 1987). For example, it can result in denial rather than the 'desired' effect of persuasion. Eadie and MacAskill (2003) have suggested that shock tactics used in skin cancer prevention can be counter-productive because they cause anxiety and defensive responses. In my study, denial may have been at work in participants who told me they would worry about problems from sun exposure in the future. By denying the problem, sun safety did not apply to them. Although the shock tactics the participants advocated may not lead everyone to desired behaviour change, I found that sun safety was relevant to participants when they perceived that the risk of skin cancer applied to them, or when they knew they were prone to harm or discomfort through sun exposure. They did not necessarily change their sun exposing behaviours because of

these factors, but they protected themselves with sun cream. This is not a new finding (Shoveller *et al.* 2003 and Jones *et al.* 2000) and in 1993 in a study with 266 mixed gender American students aged 17-23 years, Leary and Jones ascertained that knowing about skin cancer, or knowing someone with it predicted sun protective behaviour, particularly the use of sunscreen. Knowing about skin cancer, or knowing someone with it however, did not predict risk behaviour such as sunbathing (Leary and Jones 1993; Jones *et al.* 2000). The implication of this for skin cancer prevention is that some young women may respond to strategy advocating good protection practice rather than reduction of sun exposure.

Both of the options to address the incongruence of perceptions of sun exposure considered above have potential in practice but are complex. What does seem to be important in practice is that problems and solutions need to match, and that provision of secondary prevention measures are required to accommodate those who are unlikely to see sun exposure as a problem.

The Relevance of the Primary Prevention of Skin Cancer as Transient and Dynamic

Although the girls generally viewed being in the sunshine as a positive experience, their agendas were many and varied. It would be an over-generalisation to assume that adolescents do not heed sun safety at all. It emerged that perceptions about the relevance of sun safety not only varied between individuals, but also according to the roles they took at particular times and in particular social contexts. For example, I found that even those who exposed themselves to the sun implemented the sun safe code with younger children. This was in order to protect them. The implication is that it is important to continue to target young women about the prevention of skin cancer. Despite an apparent lack of association between knowledge and behaviour, they still need to know about the issues (Alberg *et al.* 2002) because they seem to use the information in certain circumstances. I found that sun safety was least relevant and young women were most at risk of over-exposure in the sun when they were in the role of adolescent and out enjoying themselves. It was then that peer influence superseded that of adults. The girls tended to forget about sun safety and/or to conform to peer behaviours in the sun. They missed the protection infrastructure that adults had previously provided. Given that teenagers are prone to over-exposure when they are away from adults, Eadie and MacAskill (2003) have suggested that they should be encouraged to take more responsibility for their own protection. Based on

my findings, they might be supported in doing this in several ways. First, with the provision of sun protection infrastructure and information in the places they frequent. For example, participants in my study potentially had access to a coastal environment. Here, the provision of public, sun-shaded areas that are free of charge might be an option. The young women acknowledged that they did not search out information about sun safety (in keeping with the findings of Eadie and MacAskill (2003)) and they suggested that information would be best located where they needed to use it, for example at the beach. Whether such an approach would be effective would need to be the subject of formal evaluation, but a similar intervention has been reported to have been successful in Canada. The intervention comprised a community-based intervention run by youth leaders and it involved public information booths containing sunscreen and protective clothing at the beach (Shoveller *et al.* 2003). This type of multi-agency intervention is feasible in the UK given the public health responsibilities now afforded to Local Authorities. However adequate resources would need to be secured because funding can determine a project's success (Hicks 2002).

Another way young women may be supported is through the schools system. The secondary school emerged as a context with potential for young people to be encouraged to engage with sun safety more fully. There is evidence to suggest that sun protection policies in secondary schools have been effective in increasing adolescents' sun protection (Stanton *et al.* 2004) and Cancer Research UK have produced SunSmart guidelines and advice for secondary schools. This is in order to inform their development of school policies and practices. The girls' perceptions were that once they had left the primary school environment there was little emphasis upon sun protection issues and/or practice. This could be because their schools had not yet developed relevant policies. In any event, implementation of policy is not without its problems and there can be unforeseen complications. Harper *et al.* (2002) for example, writing on behalf of the WHO, have suggested that hats could be a component of a sun safe school uniform but Lupton and Gaffney (1996) have noted that once garments become items of school uniform, wearing them becomes 'uncool' in the eyes of the secondary school community. Then hats are avoided for fear of derogatory comments from peers. In order to avoid such faux pas, I propose that young women are vital partners in the development of sun safety policies in secondary schools.

The implications for primary prevention of skin cancer practice based upon the category of *Being Myself* have been discussed above and are summarised as follows. In essence, problems need to match solutions; otherwise, the solutions such as sun safety advice are likely to be perceived as irrelevant. In order to match sun-related problems and solutions, the health lobby could accept that being in the sun can have a positive influence upon wellbeing. In this case, secondary rather than primary prevention strategy may be the most appropriate to accommodate some young women's needs. Alternatively, efforts could be made to modify the beliefs of the young women who do not currently perceive sun exposure as harmful. This would involve creating concern, and the effect of fear campaigns is not straightforward. Whilst some may respond with increased sun protection, others may deny the issues. In the case of the first response, health promotion activity could involve interventions to ensure effective sun protection. The implication of the second response is that secondary prevention measures would be appropriate. The relevance of the primary prevention of skin cancer is transient and dynamic, and young women need to be targeted because they do use information in certain circumstances. They could be supported in pursuing sun safe activity by the provision of infrastructure and information where they need it, and through school policies. Involving young women as partners in the development and implementation of any interventions is crucial in order to avoid unanticipated barriers. The findings from this category have indicated a need for further investigation into what information young women require in relation to their agendas in the sun, and what factors influence sun protection versus exposure behaviours. In this study, I have tended to focus on the participants' experiences of being *in* the sun and a major influence emerged as their need to be physically comfortable. The findings from this category are presented next.

Being Physically Comfortable

The findings indicated that it was important for participants to be physically comfortable when they were in the sun and I categorised accounts that related to the physical effects of sun exposure in this category of *Being Physically Comfortable.* The following quotation from a discussion with Carly, shows that she had both experienced and observed the unpleasant physical effects that being in the sun could bring.

*Carly: I went to (*names an overseas resort*) and they had um like 14 hours of sun, and that was just like average and that was, that was too hot. I, that's the only place I've ever burnt, and it was just too hot. I'd never like go over there y'know? I don't know how people can live over there. It was, it was really bad. It was like all the time you're out in the sun, 'nd it's not a nice feelin', and you just sit there 'nd 'nd you sweat. It's like, a big eff, after a while it's a big effort to like get up 'nd move, 'nd at night time you're like really stiff. 'nd it's not nice 'nd you can tell, everyone was lookin' ill through the sun. It was like, they weren't like 'ooh, they've got a nice tan!' - they were lookin' like, looked disgusting.*

Me: Oh what, they looked um ....

Carly (interrupts)*: They looked ill.*

Me: In what way did they look ill?

Carly: Well you can see when someone's got a suntan - it looks really nice. 'Cos most people's like skin, it looked like really tight like wrinkled 'nd it looked like everyone was just like sitting like, 'nd no one had any like, any energy inside them to like do anythink. Not many people were eatin' at night time either. That's, a lot of people were like, to the point where they just couldn't be bothered.

As for Carly, physical comfort was important to other participants when they were outside. Feeling too hot and sweating were amongst the effects of sun exposure that determined whether they felt comfortable; they liked to feel pleasantly warm but not too hot. Other unpleasant effects the young women mentioned in relation to sun exposure were to do with feeling sunburned, having headaches, feeling dizzy, having taut skin and dry eyes, and

experiencing symptoms of sunstroke and dehydration. It transpired that the young women used two main strategies to maintain their physical comfort in the sun and the first was characterised by anticipation and planning; anticipation of adverse physical effects of sun exposure and planning to prevent them. I categorised accounts that reflected this approach in the category property of *Planned Protective Strategies.* The second strategy I discovered, did not involve anticipation or planning. Instead, it relied upon participants feeling uncomfortable in the sun and reacting to their feelings of discomfort. I categorised activities in the girls' accounts that reflected this type of spontaneous approach in the category property of *Avoiding Discomfort.* It emerged that individuals did not use either strategy exclusively but most of their protective activities were oriented to *Avoiding Discomfort.* I found that both strategies could be limited by the social acceptability of comfort solutions. For example, sunglasses were avoided because of the unattractive marks they could leave behind. Both the planned and avoidance approaches to maintaining physical comfort are considered in more detail below.

Planned Protective Strategies

It emerged that *Planned Protective Strategies* were employed in anticipation of physical discomfort such as sunburn and future experiences of skin cancer. The young women were more inclined to plan to protect themselves in the sun when members of their families had experienced skin cancer or they had first hand experience of the pain of sunburn and peeling. Sally for example, told me how she had become 'aware of the dangers' of being in the sun, and Nancy, whose mother had undergone surgery for a non-melanoma skin cancer, protected herself from burning. The main forms of planned protection were the wearing of sun cream and hats, but these had limitations. Hats tended to be worn by those they suited, and the sun creams applied generally afforded sun protection lower than the recommended minimum of SPF 15. Holly, Isabel, Jo, Katie and Linda for example, used a range of sun creams with protection factors between two and ten. This was because they (and others) viewed sun protection factor SPF 15+ as excessive.

Avoiding Discomfort

Compared with the *Planned Protective Strategies* the young women used to maintain their physical comfort in the sun, *Avoiding Discomfort* relied upon them feeling *un*comfortable

before they took action. The following excerpt illustrates this. Ann did not protect herself from the sun's rays until she had experienced the physical sensation of sunburn.

> *Ann: I'd put it* (a tee shirt) *on like, I dunno. I tend to put them on like* ***after*** *I've* ***burnt.*** *It's like if I go out in the sun and I can feel myself burning that's when I would cover up. I wouldn't think of covering up before I go out.*

This extract illustrates how judgment about when to protect from the sun's rays could be based upon feelings, such as being hot or in Ann's case sunburned. Feelings of discomfort acted as cues for protection, meaning that the actions participants engaged in were reactive rather than precautionary. The reactions included participants seeking shade, applying sun cream and covering up with tee shirts or hats (if they suited). One reactive practice I discovered was the opportunistic use of clothing, such as tee shirts for face and eye protection. I also found that reactive responses were characterised by their instinctive nature and did not necessarily rely upon knowledge of sun safety or fear of skin cancer. The following example epitomises this. I had been talking with Queenie and Ruth, clarifying their use of shade. They told me about how they did not seek shade when the sun was at its hottest when they were in the UK. When they were abroad however, they went indoors at lunchtimes. It transpired that this was not because they were acting on advice to avoid the midday sun, but because they were feeling uncomfortable and reacting to physical cues. Ruth perceived that her body *itself* indicated when she had received sufficient sun exposure.

> *Ruth : It's not necessarily because it's that* (midday), *its just because* ***you've had enough.***
>
> *Queenie: Yeah.*
>
> *Ruth: Or it's so hot that you* ***want*** *to go in, so, it's not necessarily* ***because*** *it's lunchtime.*
>
> *Queenie: Yeah, it's just because you feel uncomfortable. You started gettin' uncomfortable.*
>
> *Ruth: Yeah.*
>
> *Queenie: 'Nd if you've been out there since like 7 o'clock 'nd you, it does start doesn't it?*

Ruth: Yeah.

Queenie: Y'do, do feel it.

Me: 'Cos I was gonna ask you. When is enough enough for you, would you say?

Ruth: Well I, well when I've had enough of the sun I tend to get headaches.

Me: Right.

Ruth: So that's when my body's sort of telling me that I need to go into the shade for a bit 'nd stuff, or like have a drink of water or something, so (pauses),

Queenie: Mm.

Me: So is it about keeping yourselves comfortable really?

Queenie: Yeah.

Ruth: Yeah, I think so, because I wouldn't stay in the sun just for the sake of it.

Ruth and others told me that they did not 'sit there and roast' if they felt uncomfortable in the sun and I was scorned when I asked participants if they lay out in the sun regardless of its heat. It was 'commonsense' to go indoors on these occasions and this pragmatic view was reflected in the response to one of my other enquiries. I had asked Sally and Yvette to describe their advice for being outside in the sun and they advocated going in the shade or going home in the event of burning. The rest of their advice reflected the logic that being too hot in the sun requires cooling measures and it comprised suggestions for keeping cool by having ice creams, drinking water and going in the sea. In practice however, a problem arose from the application of this logic. Although cooling activities helped participants to achieve thermal comfort they did not provide protection from the sun's ultraviolet rays. A dip in the sea or a pool for example led to unanticipated sunburn in the longer term. This led me to conclude that *Slipping Up*[32] could be a consequence of *Avoiding Discomfort*. It could also be a condition of *Being Physically Comfortable* since participants would not be physically comfortable if they had slipped up and become sunburned. Another paradox

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[32] It emerged that participants unexpectedly experienced discomfort from the effects of ultraviolet radiation exposure on cloudy and sunny days. This led to unintended physical and psychosocial consequences of sunburn. I categorised accounts that reflected exposure to ultraviolet radiation and unexpected discomfort in the category of *Slipping Up*. Detail of this category is presented in the next section of this chapter.

that arose from the participants' pragmatic view stemmed from their more general requirement to be physically comfortable. Certain sun protection measures were avoided because they did not facilitate such comfort. For example, hats could be uncomfortable, sun creams were perceived to be 'sticky and messy', fake tanning products smelled unpleasant and were difficult to use. The sun safety advice to cover up in the sun was impractical because wearing clothes did not relieve feeling uncomfortably hot; rather they contributed to the sensation. These elements of sun safe practice did not aid participants in *Being Physically Comfortable.*

I found that the avoidance of discomfort could have an impact on how acceptable sun safety advice was to participants and I begin discussion of the findings from this category by explaining the basis of the participants' perceptions of physical comfort and strategies to avoid discomfort. I consider the sensations of feeling hot and burning and the influence these may have upon perceptions of physical comfort. I also explore the significance of physical *dis*comfort related to sun-related experiences. In the second section, I broach inconsistencies the findings imply and in conclusion, I discuss the implications these issues raise for the primary prevention of skin cancer practice.

Physical Comfort and the Sensations of Feeling Hot and Burning

Feeling warm and comfortable has been described as a motive for other adolescents to be in the sun. For example, Brandberg *et al.* (1998) found it was important in their study with Swedish adolescents. I found that *Being Physically Comfortable* in the sun relied upon participants feeling pleasantly warm but not too hot and this explains why some of their activities were directed toward protection from the heat of its rays. That the young women in my study acted in ways to avoid being uncomfortably hot provides evidence to support the belief that humans have 'thermo neutral' or comfort zones associated with body temperature regulation (Clark and Edholm 1985; Purves *et al.* 1998). The hypothalamus in the brain controls thermoregulation by acting as a thermostat with a set point of 37 degrees centigrade. Protective physiological mechanisms are triggered when the body is under threat of situations leading to thermal discomfort, and if body temperature falls below 37 degrees centigrade, heat generation mechanisms are initiated. If body temperature exceeds 37 degrees centigrade heat dissipation mechanisms such as sweating are activated to cool the body (Marieb 2004). Energy is required for these thermoregulatory mechanisms and

when they are in progress, the body's metabolic rate rises to account for the increase in energy expenditure they require. Thermal comfort or neutral zones are believed to reflect a range of environmental temperatures that do not affect metabolic rate. It is thought that people are not conscious of temperature until they are out of their thermo neutral comfort zones, and then they either feel too hot or too cold (Purves *et al.* 1998). This was reflected by Ruth's perception that her body 'told' her when she had enough sun exposure. When she became too hot (and was out of her thermal comfort zone), she became aware of her thermal discomfort. When people transfer from a thermally neutral state where they have sensed neither warmth nor cold to one where they feel too hot or too cold, they alter their microclimate to compensate. If they are feeling too cold, they may add clothing to prevent body heat loss to the environment. If they are too hot, they may remove clothing or as Zacharias *et al.* (2001) found, move to shaded areas or go indoors (like Ruth in my study). Compared with specific physiological protection mechanisms such as sweating, it has been argued that using such behavioural means to alter the microclimate is a significant method of thermoregulation in the longer term (Gagge *et al.* 1967).

I found that participants advocated and carried out activities to cool down when they were too hot in the sun. This suggests that they were altering their microclimates in order to return to their thermo neutral, comfort zones. Based upon the preceding discussion, the activities they engaged in to cool down, and their pragmatic views about being in the sun were rational and justified. Arguably and for the same reason, so were their perceptions that sun safety advice to cover up in the sun was impractical. I propose this given the paradox that the recommendation to cover up creates in terms of thermal comfort. When a person is too hot, covering up with additional clothing is an adjustment of microclimate in an illogical direction - one likely to exacerbate rather than relieve the discomfort of feeling too hot. When the nature and extent of sun safe clothing is considered, this compounds the issue further. For example, the ultraviolet protection afforded by a fabric is influenced by its weave, colour, weight, stretch and wetness (Pailthorpe 1998). Light, summer weight cotton, bleached fabrics (arguably more comfortable in the warmth of the sunshine) offer lower ultraviolet protection than fabrics that are dark and thick (El Sayed *et al.* 2006; Boe and Tillotson 2006) such as polyester which is suitably protective (Almarhoos and Kurban 2003; El Sayed *et al.* 2006). I found that young women did not cover up with clothing in the sunshine in advance of feeling sunburned. Others too, have found that covering up is an underused protective strategy amongst adults (Pruim *et al.* 1999; Eadie and MacAskill

2003; Stanton *et al.* 2005) as well as young people (Cokkinides *et al.* 2001). Eadie and MacAskill (2006) have found that covering up in the heat is a problem and that in their sample of people aged between 12 and 35 years, people wore fewer clothes in the heat. I argue that this could be because clothing creates feelings of being uncomfortably hot. The same explanation could encompass my findings and those of other researchers whereby people favour the use of sunscreen as a protective measure (El Sayed *et al.* 2006). In my study, the preference for sunscreen arose as a *Planned Protective Strategy* and other researchers worldwide have noted similar adolescent preference for its use in the UK (Diffey 2001), Australia (Lower *et al.* 1998), America (Cockburn and Hennikus 1989; Cokkinides *et al.* 2001; Alberg *et al.* 2002), Lebanon (El Sayed *et al.* 2006) and New Zealand (McGee and Williams 1992). The same penchant for sunscreen as a protection measure has also been found in studies with UK, Australian and Belgian adults (Pruim *et al.* 1999; Jones *et al.* 2000; Diffey 2001; Devos 2003) indicating that it is not confined to adolescents. The preference could be because sunscreen dispenses with the need to wear heat-enhancing clothing.

The Influence of Discomfort Upon Physical Comfort

I found that the maintenance of physical comfort in the sun primarily involved participants in reactionary strategies whereby they avoided discomfort. Activities to cool down were prompted by feelings of being uncomfortably hot. Because people are unaware of the sensation of temperature until they feel uncomfortable, it has been mooted that thermal comfort is an abstract notion that manifests as the 'absence of sensation of discomfort' (Clark and Edholm 1985, p.176). My findings provide empirical evidence supporting this view. Further, my findings are evidence that the notion of comfort as the 'absence of the sensation of discomfort' does not just apply to thermal comfort, but physical comfort more generally. I make this claim based upon my findings that physical 'agents' other than heat influenced participants' physical comfort. Just as the absence of the sensation of discomfort from heat led to their thermal comfort, the absence of the sensation of discomfort from the stickiness of sun cream and the absence of the sensation of discomfort from sunburn also determined elements of their physical comfort. The behaviours in the sun and the sun protective strategies participants adopted were influenced by these wider 'agents' of discomfort, because they avoided them. For example, I found that the *dis*comfort of feelings of sunburn led to reactionary behaviours such as going indoors,

seeking shade, wearing hats (if they suited) and tee shirts, and applying sun cream. These activities were in keeping with sun safety advice, but paradoxically others were directed toward avoidance of the discomfort of the sun protection methods themselves. For example, some participants avoided wearing hats and sun cream because they felt unpleasant. Similar barriers to the use of sun protection methods have been found by others (Cockburn *et al.* 1989; Banks *et al.* 1992; de Vries *et al.* 2005). This might be because the methods did not facilitate physical comfort. Further, the diversity of individuals' behaviours could be explained as being a consequence of people avoiding different sources of physical discomfort.

Using sunscreen was a protection measure that tended to be favoured and one that some participants used as a *Planned Protection Strategy*. However, it emerged that the use of sunscreen was not universal and some participants either did not apply it, or used products with SPF factors below the recommended 15+. This finding has been mirrored in a UK study with adults (Ling *et al.* 2003) and others have also found that adolescents have a tendency to use low factor sunscreens (Wichstrøm 1997; Boldeman *et al.* 1997). Although this reflects that people are not adhering to the sun safety advice to use higher sun protection factor creams, the findings may not be as contentious as they seem. I argue here that not using sunscreen or using low SPF factors means that people (albeit unintentionally) retain their ability to perceive the discomfort of sunburn, leading them to display reactive protective behaviours to avoid the discomfort of burning. To explain, ultraviolet rays are invisible and the pain of burning is a sign of acute sun exposure (Ezzedine *et al.* 2006) that prompts individuals to protect themselves from ultraviolet radiation (El Sayed *et al.* 2006). Sunscreens are intended to prevent sunburn (El Sayed *et al.* 2006) but an effect of their preventive action can be the reduced sensation of sunburn (El Sayed *et al.* 2006; Almahroos and Kurban 2003). It is believed that this may cause a false sense of protection from the sun's rays (Davis *et al.* 2002) leading to overexposure (Almahroos and Kurban 2003; Stanton *et al.* 2004; El Sayed *et al.* 2006; Ezzedine *et al.* 2006; Autier *et al.* 2007) and risk of long term skin damage such as photo-aging and skin cancer (Ezzedine *et al.* 2006). Sunscreen users have been found to experience similar (El Sayed *et al.* 2006) or higher incidences of sunburn than non-users (Ling *et al.* 2003) which supports this view. Whilst others have attributed the sunburn to individuals applying too little sunscreen and lacking understanding of how sunscreen use may affect their behaviours in the sun (Autier 2007), my findings suggest that there may be another

explanation. This is that people who use sunscreen may not experience the sensation and the discomfort of sunburn as it is happening. Hence, they lose the cue to protect that the discomfort of sunburn brings. They become over exposed to the sunlight and experience sunburn as a consequence because the stimulus to avoid the discomfort of burning has been removed.

Although it emerged that participants were *Avoiding Discomfort* and using reactive approaches in the sun most of the time, some individuals engaged in more planned protective activities. This was because they anticipated the adverse physical effects that sun exposure could bring. Whilst I found that some girls might be more inclined to plan to protect themselves when members of their families had experienced skin cancer, this notion is controversial in the literature. For example, whilst Jones and Leary (2003) have presented findings concurrent with mine (albeit related to young people aged 17-23), de Vries *et al.* (2006) and Banks *et al.* (1992) did not come to the same conclusions. In their studies young people were not more likely to use sunscreen if they knew individuals with skin cancer.

In their quantitative study, Banks and her colleagues surveyed the opinions of 220 male and female American adolescents between the ages of 12 and 19 years. As well as asking about skin cancer in their participants' families, the researchers also enquired about participants' use of sunscreen or the reasons why they did not use it. The researchers deduced that teenagers who had sensitive skin were only slightly more inclined to use cream than those who did not burn. The researchers attributed this to the teenagers underestimating their vulnerability to skin cancer. In contrast, in my study I found that participants were apparently more inclined to plan to protect themselves in the sun when they had first hand experience of the pain of sunburn and peeling. They were more vigilant about using sun block and in 2001, Cokkinides and her colleagues also found that the use of SPF15+ was highest in those with sun sensitive skin. The lack of consistency of the findings outlined above implies a need for further research into what leads to young women specifically planning to protect themselves in the sun.

The findings from this category have indicated that the participants' behaviours in the sun were influenced by their physical comfort. Sun protective behaviours tended to be reactions to feelings of physical *dis*comfort caused by the heat of the sun's rays, feelings of

sunburn and sometimes elements of recommended sun protection practice and products themselves. The sun safety code assumes that people are acting to protect from ultraviolet exposure rather than the range of discomforts that emerged in this study. The findings therefore challenge elements of the primary prevention of skin cancer that have the potential to exacerbate individuals' discomfort in the sun. The findings also explain why I found protection activities were predominantly reactionary rather than precautionary as the sun safe lobby would prefer. In the preceding section of this chapter, I discussed how health promoting solutions need to match perceived problems and here I propose that recommendations for sun safety will be more likely to be adopted if they do not compromise physical comfort. This is because if they do compromise it, the solution will be that the recommended practice will be avoided. Another implication of this argument is that sun protection information should not just include information about protection from UV. It should also include other elements of physical comfort for example prevention of overheating and dehydration. There is further evidence that general comfort in the sun is important and that it would be an appropriate consideration in health advice. In the study of Eadie and MacAskill (2003) the authors have cited one of their participants (identified as a female aged 21-24 years):

> *It can actually spoil your holiday. So some of these messages like keep yourself comfortable are as important as maybe the skin cancer itself.*

It seems that a specific issue that the primary prevention of skin cancer needs to address is the recommendation to cover up. This is because it raises a paradox in terms of physical comfort as discussed in the previous section. I propose that an effective partnership between the textile and fashion industries and young women could make thermally comfortable, fashionable and UV protective clothing conceivable. This is because the potential exists for the creation of innovative summer weight fabrics that are cool, but that also offer high UV sun protection (Pailthorpe 1998). Whilst some clothing can be uncomfortable because it reduces body heat loss in hot conditions, some forms can be comfortable and protective. Clarke and Edholm (1985) have given the example of the voluminous clothing that Bedouin Arabs wear in hot, dry environments. This type of clothing reflects solar radiation and encourages the loss of body heat by a bellows effect. The air movement this creates removes heat from the body. The exact design of the clothing (including hats) is an important consideration for young women as I and others

have found; fashion affects the acceptability of clothing (Lower *et al.* 1998; Almahroos and Kurban 2003). If fashion issues and the factors above could be combined, appropriate, protective and comfortable clothing could be produced, making covering up a more feasible, protective activity. Then, covering up might become a more viable alternative to the use of sunscreen that others (Miles *et al.* 2005; ElSayad 2006) and I have found to be more popular.

Another complex area the primary prevention of skin cancer needs to address is that of sunscreen use. For those who avoid sunscreens because they are unpleasant to use, sunscreens could be made more acceptable. In 1992, Banks and her colleagues found that their teenage participants perceived a need for sunscreens that did not irritate their acne and were not greasy. Anecdotally, the nature and range of sunscreen products on the market is testament to this having been addressed but paradoxically, a new sunscreen product that I have seen claims to have a cooling action. This could be a step too far because a sunscreen that provides a cooling sensation will remove the sensation of sunburn which I have argued may prompt protective UV avoidance activity. The use of sunscreen is already believed to lead to overexposure to UV and the addition of a skin-cooling agent could confound its potential to increase exposure and concomitant skin damage.

I found that the young women in my study tended not to use sunscreen or if they did, it had lower SPF protection factor than the recommended level of 15+. Given the roles sunscreens may play in overexposure to UV, I argued previously that indirectly, this may be protective. However, it brings into question what advice should be given about the use of sunscreens. Autier (2007) has argued that individuals need to be made aware of how sunscreen may have an effect upon their behaviour and I propose they also need to know how they work, and what exactly they protect against. The issue is further complicated by controversy that exists around the effectiveness of sunscreen in the prevention of skin cancer. Whilst sunscreens have been found to reduce sunburn and squamous cell skin cancer (Ling *et al.* 2003), their role in preventing malignant melanoma is controversial. Gefeller and Pfahlberg (2002) for example, had expressed concerns about the evidence-base of sun safety advice to use sunscreen. Their concern derived from sunscreens being marketed as products that prevent sunburn. They are not marketed on the basis of preventing melanoma skin cancer. Gefeller and Pfahlberg carried out a systematic review of the literature to establish whether sunscreen should be recommended in public

awareness information. Based upon the evidence they found, they concluded that the public should not be advised to protect from solar radiation with sunscreens. Instead, Gefeller and Pfahlberg proposed that advice should emphasise minimising UV exposure and advocate the use of other means of physical protection, such as covering up with clothing and sunglasses and avoiding being in the sun. To some extent, this stance has been reflected in a recent guidance document published by The Royal College of Physicians (RCP) (The Royal College of Physicians 2007). The guidance addressed the prevention, diagnosis, referral and management of melanoma of the skin. The authors recommended that those at risk of malignant melanoma should primarily protect themselves from UVR by avoiding sun exposure and wearing clothing, and that high factor sun screens should be used albeit as an adjunct. For some time, others in the field have also recognised the controversy around the use of sun screens and have advocated that they should be used in addition to other forms of protection, rather than as the main means (Cockburn *et al.* 1989; Miles *et al.* 2005; El Sayed 2006; Boe and Tillotson 2006). Although this approach appears to be widely recommended, findings of Eadie and Mac Askill (2006) suggested that in reality it is unlikely to be adhered to and that a compromise is required. Paradoxically, Eadie and MacAskill concluded from a study with young people and mothers that the most acceptable behaviour change and the most likely one that they would adopt would be the use of SPF 15+ and sunscreens.

Clearly, the issues surrounding the use of sunscreens are complex. From an ethical point of view, it would seem appropriate for the sun safety lobby to acknowledge the controversy that surrounds the use of sunscreen in the prevention of skin cancer. A further implication that arises from the discussion of the findings in this category is that more investigation is required into the role that feelings of the discomfort of sunburn plays in protective behaviour. In the next section about the category *Slipping Up*, the findings indicate that more also needs to be known about how young women believe sunscreens work and what they protect them from. First however, I will present and discuss the findings from the category.

Slipping Up

It emerged from the girls' descriptions that they experienced sunburn because of unintended ultraviolet radiation exposure. I categorised the accounts that reflected exposure to ultraviolet radiation and unexpected discomfort as participants *Slipping Up*. It transpired that the unintended over-exposure to ultraviolet rays could happen on cloudy as well as sunny days. Although participants believed that sunburn should be avoided and they protected themselves to this effect, they told me about how they had been caught out and burned. The unforeseen sunburn that resulted could be quite severe and it led to the girls experiencing psychosocial and/or physical discomfort as a consequence. The following excerpt illustrates the physical consequences of *Slipping Up*. I had been exploring the experience of unintentional sunburn with Linda, Jo and Isabel:

> *Me* (summing up and clarifying previous discussion)*:*
> *With the burning thing then, am I right in saying you don't intend to burn?*
> *Linda: Mm.*
> *Jo: Yeah.*
> *Me: 'Nd you, it's a bit of a concern if you do, because you peel* (clarifying).
> *The group* (in unison): *Mm.*
> *Me: 'Nd what's that ….*
> *Jo and Helen* (interjecting together)*: 'Nd it hurts as well!*
> *Me: Mm, it hurts* (clarifying).
> *Isabel: 'Nd you can't sleep.*
> *Me: You can't sleep* (clarifying).
> *Linda: 'Nd when you get into bed it feels the sheets are all itching.*

Accidental over exposure to ultraviolet radiation brought with it other physical consequences of discomfort for the young women. They described how they had become dehydrated and sore. They had experienced the symptoms of sunstroke as well as the pain of burning. Another set of consequences the girls described, related to looking sun burned. Looking red and burned was not perceived to be 'a good look' and it was believed to lead to individuals being derided by peers and feeling embarrassed. Hence, the uncomfortable

consequences of being sunburned could be psychosocial in nature as well as physical, as the following excerpt shows. I had been talking with Queenie and Ruth about their experiences of being very sunburned.

> *Ruth: I think I'd prefer to put it* (sun cream) *on, rather than the next day, going out with like bright red legs or whatever.*
> *Queenie:* (interjects, speaking at the same time) *'Geek!'*
> *Me: 'cos what d'you think bright red legs show?* (all giggling) .... *What's the thing with the bright red legs?*
> *Ruth: Just where you've bin burnt and lobstery ....*
> *Queenie: Lobster, aaaah!*
> *Ruth: So tacky!*
> *Me: So you don't really wanna to look like a lobster* (clarifying).
> *Queenie and Ruth together: No.*
> *Ruth:* (giggling) *'Cos my friend once, um right, on the beach, and she was lying like a set way, for the whole afternoon. So at the end of the day, the front of her legs were like white, and all the way down the back were red, with this line like, half way. It was so funny!*
> *Queenie: You always know that people will laugh at you if you're red so you don't wanna do it. You know you laugh at other people so ..*
> *Ruth : Yeah, I s'pose it's kind of this image conscience of being burnt I s'pose,*
> *Queenie: Yeah.*
> *Ruth: So I don't wanna look red, so ....*
> *Me: I was gonna say, what's the big thing about being burnt? but you think it might be an image thing* (clarifying).
> *Queenie: Yeah.*
> *Ruth: Yeah, but also it's really painful.*
> *Me: Yeah, which is the other thing, so you wanna avoid it because of that* (clarifying).
> *Ruth: Mm.*

Although there could be the consolation that sun burned skin could become tanned, burned skin was not desired. Even conciliatory tanning risked a peeling stage perceived as another 'bad look'. Since it was undesirable, I was keen to understand what led to the experience

of unexpected sunburn and it emerged that the causes were two-fold; the participants misjudged their environmental conditions and they forgot to protect themselves in the sun.

Misjudging

The misjudgment of environmental conditions stemmed from a lack of knowledge about the nature of ultraviolet radiation and the conditions that led to exposure. I grouped incidents related to misjudgments through lack of knowledge about ultraviolet radiation the as *Misjudging by Not Knowing*. I found for example, that ultraviolet exposure could be confused with exposure to the sun's heat and this misunderstanding came to light when I was discussing the use of sunscreen with Ann, Bella and Carly. The following excerpt indicates that whilst sun protection was perceived to be warranted abroad, this was because the sun there was perceived to be hotter. It was not because of the increased intensity of ultraviolet radiation in other parts of the world:

> *Bella: The only thing I do is wear sun protection and that's it, well I don't hardly wear that out either. I only wear that, like when I'm on holiday abroad.*
>
> *Me: Oh right, why's that then d'you think? Why do you put it on then?*
>
> *Bella: Dunno, because it's different heat to what it is down here.*
>
> *Me: Oh right, so you feel it's hotter is it? When you ....*
>
> *Bella* (interrupts)*: Yeah, yeah, because it's like I dunno, it just is*[33].
>
> *Me: You just feel different if you're on holiday?*
>
> *Ann* (interjects)*: It's different sun.*
>
> *Bella: It's a lot hotter*
>
> *Ann: It doesn't seem hot enough down here* (to wear sun cream).

In certain circumstances the participants did not realise they were at risk of burning. This was because they tended to make judgments about whether to protect themselves based on thermal cues; according to whether or not they were too hot. When thermal cues were not

[33] On a reflexive note, this is an example of when I needed to give options to refute or agree with. This tactic helped to keep conversations going rather than leaving answers at a stage of 'dunno'.

present, for example on cloudy or windy days the young women did not perceive a need to protect themselves from burning. The following comment from Carly illustrates this:

> *... and I went for a weekend ... with my mum ... and um I was just walkin' in the streets and it was so cloudy, and it was like near to rain? And I got home and I had like a skirt on and I had like tan marks? But I wasn't like burnin' or anything. I didn't feel the sun on me, but then like the next day, all of my knees* (giggles) *and my shins were really sore so I wasn't aware that I was actually in the sun.*

Carly had *Slipped Up* through misjudging her exposure to ultraviolet radiation on a cloudy day and she had burned. It emerged that other environmental conditions that had led to participants burning unexpectedly such as being in the sea or swimming pools. The girls had burned because they had been unaware that ultraviolet radiation could penetrate water. Another element that led to misjudgment was the wind. Ann told me about how she disliked windy days at the beach and this dislike stemmed from not being able to judge the effect the sun was having when it was windy. Her physical cues to protect were no longer there:

> *Ann: You can't feel yourself burning but you know you are because the sun's there. You're not aware that you're burning. It's like when you feel hot it's like natural to put a T shirt on or something, but then like as it's windy you don't know.*

Forgetting

It transpired that unexpected sunburn happened repeatedly and it did not just arise from misjudgment of environmental conditions. As I explored its incidence, I investigated whether the experience of unexpected sunburn led to subsequent prevention. It apparently did not, and the reason participants gave was that they simply forgot. They were absorbed in their own agendas.

> *Isabel: When you're out there 'nd you're having a good time, things slip your mind.*

Linda: You just don't remember.

Even when participants remembered to protect themselves, sustaining the protective behaviour was an issue. In the following example Linda describes how she burned unintentionally, despite her initial efforts to protect herself in the sun. The burning occurred because she forgot to reapply sun cream:

Linda: ...But I find as well like, when you're down the beach right, you put sun cream, I always put sun cream on, like when I'm getting' dressed, like before I go, 'nd then I get there, 'nd I think I'll just put a bit on me legs y'know, they'll be alright....
Me (interrupts)*: before you go* (clarifying)*, that's good.*
Linda: 'Nd then like I put it on, and I'm like layin' there, for about an hour, 'nd its ***really hot***[34] *'nd I'm just not thinkin' about sun lotion, 'nd I'm like, I get up 'nd I'm like, ooh, hurts a bit*! (Everyone laughs).
Isabel: (laughing) *Walking down the beach like John Wayne!*
Linda: 'Nd I'm sat on the bus 'nd I'm like ooooh!
Me: So you don't mean to get burnt (clarifying).
Linda: No, you don't mean to get burnt.

It emerged that forgetting to protect in the sun was most likely to happen when the young women were out busy with peers. In interview 19, the participant Sally epitomised this. She arrived at the interview with severe sunburn. The sunburn was sore and Sally was clearly uncomfortable. She felt the sunburn to be so severe that she had planned a visit to the General Practitioner the next day. She also asked me for advice about what to do. Sally told me that she would never burn like it again. Later, when we discussed how she had become sunburned, Sally told me about how she had been to the skate park the day before. She had been pre-occupied with activities with her friends and had forgotten to protect herself from the sun. Shade had been available but it had not been where the activities with her friends had taken place.

[34] Linda said 'really hot' sounding weary.

The findings from this category illustrated that the young women in this study experienced sunburn even though they recognised that being burned was undesirable. Next, I discuss these findings and explain this phenomenon. In particular, I consider how erroneous beliefs about the cause of sunburn influenced participants' behaviours in the sun and I discuss how the findings from this category may account for the high incidence of sunburn experienced by adolescents and other groups. In conclusion, I consider the implications for practice that the findings raise.

The Causes of Unwanted Sunburn

In certain circumstances, participants became over-exposed to ultraviolet radiation and they suffered the consequences of sunburn such as dehydration, the pain of burning and feeling sore. It emerged that outside activities involving water led to the young women being particularly vulnerable to *Slipping Up*. This was because apparently they did not know that ultraviolet radiation could affect them whilst they were in the water. In the previous chapter, I discussed how activities to cool down in the heat of the sun played a part in participants' sun-related behaviour. Problems arose because whilst dips in the sea or swimming pools were cooling, they did not offer the girls any protection from the ultraviolet radiation exposure. On the contrary, immersion in water has been found to exacerbate the effects of ultraviolet rays (Schemp *et al.* 1997). This, as well as participants' lack of protection compounded the conditions for them to become sun burnt. Their sunburn took the young women by surprise because they had not realised their susceptibility.

Davis and her colleagues (2002) have noted a similar connection between the incidence of sunburn and water-related pursuits in a study of American teenagers. The researchers involved 1192 male and female youths aged 11-18 years in a quantitative study to investigate their sun exposure and protection behaviours. Davis and her associates surveyed their participants' experiences of sunburn within telephone interviews. What constituted sunburn was clearly defined in the study and participants were asked about the circumstances of their 'most serious' burns, although the criteria for what comprised 'most serious' burns were not included in the research article. The researchers found there to be a connection between the young people being involved in water sports and swimming and acquiring their most serious burns. More than half of the teenagers who reported suffering

one or more bouts of sunburn also reported that they had been involved with water sports at the time of their worst burns. The investigators did not offer a reason for this but I propose that their participants may well have slipped up if, like mine, they did not know about the nature of ultraviolet radiation and the way it could affect them in the water.

I found in my study that participants could also burn unintentionally on cloudy days. They burned because they did not protect themselves from the sun's ultraviolet rays on these occasions. This was because they did not realise ultraviolet radiation could penetrate the clouds. Based on the knowledge that participants tried to avoid sunburn, it seems that they misjudged their vulnerability to it because of their lack of knowledge. As I will explain next, my interpretation that the girls misjudged and slipped up in these circumstances does not concur with an assumption made by Stanton and his colleagues in 2005. Their assumption was that people who do not protect themselves on cloudy days are apathetic toward sun protection. Although their work involved adults rather than adolescents, it warrants consideration because of the issues it raises about lack of protection on overcast days.

Stanton and his colleagues planned to address two research aims in their study. The first aim was to examine whether or not members of an Australian community thought they protected their skin adequately, and whether they accounted for relevant risk factors when they made their decisions about protection. In relation to this aim, the researchers found the public to be well informed and in a position to determine appropriate levels of protection to avoid sunburn and skin cancer. Just as I have acknowledged that misjudgment is possible, so did the authors, although they did not give details about what the misjudgment might have been about. The second aim of the investigators was to explore the reasons why individuals chose whether to protect themselves in the sun. The investigators' supposition that people do not protect because they are apathetic emerged in relation to this aim. The researchers had created seven categories as a basis for surveying and classifying participants' reasons for *not* protecting themselves from the sun. The seven categories included those of 'Image' (encompassing personal appearance issues), 'Family History' (encompassing responses that indicated no family history of skin cancer) and 'Anti-Authority' (encompassing answers indicating that authority figures or organisations are not granted respect). Others were 'Hedonism' (encompassing responses about pleasure), 'Disbelief' (encompassing answers suggesting that sun protection is not

important) and 'Apathy'. The classification of apathy incorporated responses the researchers thought reflected an apathetic attitude toward sun protection. The responses were derived from questionnaire statements that participants rated, based upon how much they agreed or disagreed with them. In relation to reasons why they did not protect in the sun, they were asked to rate statements including 'I'm lazy', 'I'm too stressed' and significant for this discussion, 'it was cloudy'. All of these statements, including 'it was cloudy', were considered by the researchers to reflect apathy toward sun protection. Based on my findings I question the assumption that people are apathetic if they do not protect themselves from the sun on cloudy days. This is because apathy infers indifference and this was not evident in my study. On the contrary, the girls aimed to avoid sunburn. The explanation that I derived from my study for lack of protection on overcast days was that they were unaware that ultraviolet rays could penetrate the cloud and burn them. Such misjudgment of environmental conditions caused by lack of knowledge does not constitute apathy in my opinion hence my disparate view.

Another issue in my study that emerged as significant in relation to knowledge and experience of sunburn was that the girls apparently presumed the heat of the sun's rays rather than ultraviolet radiation caused their sunburn. This was revealed when participants told me that they were more likely to protect themselves with sunscreen and to use higher SPF factor creams when they were abroad. Hughes *et al.* noted similar findings in a sample of British teenagers in 1993. Those who had been abroad had been more likely to wear a hat and sun cream than their counterparts who had spent their time in the UK. This could have been because, as in my study, extra vigilance was prompted by a perception that the sun was hotter and 'different' overseas. That the sun is perceived as hotter abroad is accurate because different parts of the earth receive different amounts of solar radiation with varied intensities. Air temperature is affected and it influences the climate (Purves *et al.* 1998). This means that depending on their destination, participants may well have experienced hotter sun overseas. Although participants' perceptions that the sun was hotter abroad were justified on this basis, their decisions to use sunscreen based on ambient heat rather than potential exposure to ultraviolet radiation were not. This is because sunscreens are designed to protect against UV rays. Further, their use of sunscreen based upon ambient heat indicates confusion about the cause of sunburn, the nature of infrared and ultraviolet forms of electromagnetic radiation and the purpose of sunscreens. The

confusion over the cause of sunburn may explain why participants believed that using an SPF of 15+ in the UK was excessive; to them, UK temperatures would not warrant it.

The same confusion over the cause of sunburn could also explain why young Danes used sunscreen whilst on holiday in Southern Europe but not whilst sunbathing in their home country. This finding emerged from a complex study by Thieden *et al.* (2005). Thieden *et al.* wanted to investigate the association between sunscreen use, age, sex, skin type, occupation, sunburn, UV exposure doses and behaviour. The researchers recruited a convenience sample of 340 male and female Danes, including 30 high school adolescents and 97 children aged between 14 and 15 years. Participants recorded diary information daily during three summer seasons between 1999 and 2001. They recorded information about their use of sunscreen, sun exposure, and incidence of sunburn. They noted whether they were off school or work, whether they were abroad, whether they had they sunbathed or sun exposed, been at the beach or near the sea, whether they had used sunscreens and if so, its sun protection factor. The researchers attributed the differences they found in the use of sunscreen at home and abroad to the members of the sample group knowing about exposure to ultraviolet radiation. They also surmised that the differences could be due their participants using sunscreen as a tanning aid when they were abroad. My findings suggest that an additional or alternative explanation is that they perceived the sun to be hotter in Southern Europe and that it was this that warranted their use of sunscreens.

Mine is not the only research to have identified that confusion exists between infrared (heat related rays) and ultraviolet forms of radiation. For example in 1997, Boldeman and her colleagues noted 'widespread misunderstanding' about ultraviolet radiation amongst the young people they involved in a study about sun bed use. Their participants comprised 1502 Swedish male and female students aged 14-19 years. The misunderstanding the researchers referred to was the belief that cold protects from sunburn and that burning by UV rays is neutralised by cool water or wind. The researchers suggest that their participants' views may have reflected selective learning to reduce their fear of disease. My findings do not support this latter stance because the young women in my study were more immediately concerned with avoiding sunburn rather than skin cancer. On this basis, it is unlikely that they would have disregarded factors that exacerbated their risk of sunburn.

The young women in my study relied on feeling hot as a prompt to protect in the sunshine. Because of this, they experienced sunburn when the temperature around them was an unreliable indicator of ultraviolet radiation exposure, for example when it was windy. The wind is one of a variety of environmental factors that can influence ambient temperature and it affects perceptions of heat (Armstrong 1994). Participants misjudged their vulnerability to ultraviolet rays because of the cooling effect of the wind. They *Slipped Up*. There is evidence to suggest that adults too are surprised by sunburn when they rely on the temperature around them to indicate when to protect from burning and this implies transferability of findings. In a British example, children had become sunburned because their parents had perceived it had been unnecessary to protect them. This issue emerged in an audit of a Scottish accident and emergency department by Macgregor and White (2001). The auditors recorded 46 attendances at the department that related to children being sunburned. When they explored the reasons for the children's sunburn 38% of their parents had not realised that 'the sun was so hot'. Similar misjudgment of vulnerability to ultraviolet exposure may also explain why Ling *et al.* (2003) found that people in the North West of England experienced most of their sunburns in the UK rather than abroad. If individuals believe that heat is the cause of sunburn then they will be caught out on occasions in Britain when it is cloudy and/or sunny and windy, or sunny but not a particularly hot day. In 2007, Carter and Donovan published a paper entitled 'Public (Mis)understanding of the UV index'. Their study involved 201 male and 203 female volunteers aged between 16 and 44 years of age in Perth, Australia. They too, identified a misconception amongst their participants that the intensity of ultraviolet radiation depends upon temperature. It is a further illustration that people may be caught out in the sun.

The discussion so far has indicated that the difference between the nature and effect of infrared and ultraviolet radiation is not clear to young women and adults, and that this leads to them becoming sunburned unexpectedly. Although the scientific and pharmaceutical communities are well versed in the differences, I have found that health advice and literature may inadvertently compound the public's confusion. For example in the professional literature, Macgregor and White (2001) have referred to sun awareness in the UK as being poor in relation to *hotter* countries. From a lay perspective, there are also materials that do not make the issues clear. For example during the summer of 2007 I picked up a small card at the checkout of a pharmacy (belonging to a national chain) that offered advice on using sunscreen. Given my interest in the topic, I scrutinised the card

and noted its convenient size, its tips for using sunscreen and its indication that the information was from a reliable source. On the reverse, there was guidance about how to choose the correct sun protection based upon skin type and geographical location. Geographical location was classified according to how *hot* it was. For example, the UK and Northern Europe were classed as 'moderate', Southern Europe and the Mediterranean were classed as 'hot' and places including 'the tropics' were classed as 'very hot'. Sun creams with sun protection factors of 15 and up to 50+ were specified as necessary according to the heat of the destination. Presenting information in this way may intend to help individuals to make appropriate choices of sunscreen and to simplify the issues. However, my findings imply that linking heat with sunscreen protection factors may create or perpetuate misperceptions of the causes of sunburn. Further, relating information about heat of geographical area and sun protection factors implies there is no need for sunscreens in cold conditions. In fact, the converse applies since ultraviolet rays are reflected and scattered by snowy surroundings (Harper *et al.* 2002). Sunburn has been found to be a common experience among snowboarders and skiers as Price and his colleagues (2006) discovered in New Zealand. The researchers hypothesised that the sunburn could occur because individuals misjudged their risk of ultraviolet exposure as low whilst skiing or snowboarding. My findings suggest an additional or alternative explanation could be that if people believe that heat causes sunburn they will not perceive a need to protect themselves in snowy cold environments. Price and his colleagues noted that current education messages did not appear to account for the sun-protection needs of skiers and snow boarders. Given the example I have cited above it seems their view is justified.

I have discussed how young women in this study became unintentionally sunburned through misjudgment. The misjudgment arose from a lack of knowledge and about the nature of ultraviolet rays. It also emerged that another cause for participants to slip up was their forgetfulness. In essence, the young women forgot to apply sunscreen and to protect themselves in the sun. Even when they remembered to protect themselves at the start of activities on sunny days, they found it difficult to remember to sustain protective behaviours. Others too, have found that forgetfulness affected the young people in their studies. Lovato *et al.* (1998) for example, found that the majority of their Canadian 15-24 year old male and female group forgot to protect themselves in the sun. Prior to this in 1992, Banks and her colleagues noted that their teenage participants did not use sunscreen because they forgot to take it out with them. That young people forget to protect may

explain the findings of Robinson and her colleagues in 1997. These were that the participants in their study became sunburned even though they knew about the risks of skin cancer (Robinson *et al.* 2997b). At the beginning of this study, I, like Robinson and her colleagues, believed this could be attributed to knowledge not influencing the behaviour of the young people. However, based on the findings from this category, it seems that they may have become sunburned because they had *Slipped Up*. This could have been because they had misjudged their surroundings or forgotten to protect themselves in the sun. The same explanation could also account for the findings of Richards and her colleagues (2001). Although fewer of their young volunteers in New Zealand sunbathed for a tan between 1991 and 1997, more of them experienced sunburn. They may have misjudged their need to protect themselves or forgotten about it. I propose that the findings from this category *Slipping Up* could explain why sunburn has been found to be so prevalent in adolescent groups (Alberg *et al.* 2002; El Sayed *et al.* 2006). It could also explain why others have found adolescent sunburn to be the norm (Davis *et al.* 2002) despite young people wanting it to be the exception. My experience was that they did not want to be sunburned, possibly because looking burnt led them to stand out in ways they would not have wished. It caused them to attract the wrong sort of attention and it could reflect what Leary (1995) has termed 'self-presentation failure'. Individuals attend to their physical appearance in order to present themselves to others in a particular way. However, when they slip up their appearance is compromised and attempts to present themselves in particular ways such as fashionable and attractive, fail if they are burned. According to Leary (1995) such failure can lower a person's self-esteem and cause individuals to experience negative emotions. This could explain why becoming sunburned was undesirable to the young women in this study.

Sun safe advice advocates the avoidance of sunburn in order to prevent skin cancer. Although participants also advocated the avoidance of sunburn, their motives were not to prevent future skin cancer but to evade the physical and psychosocial consequences that sunburn could cause. These consequences included the pain of sunburn and the embarrassment of a burnt appearance. Shoveller and her colleagues (2003) also found that their participants avoided sunburn for reasons other than the prevention of skin cancer. The young people in their study wanted to achieve the correct shades of suntan. Irrespective of the motives to avoid it, sunburn presents as a common concern of the sun safe lobby and adolescents. For this reason it has scope as topic for a social marketing

approach to behaviour change. In previous discussion of the implications for practice of the category *Being Myself*, I evaluated the role of social marketing in changing health behaviours. There I concluded that a social marketing approach would be unlikely to influence the sun-related behaviours of some young women. This was because they achieved wellbeing through being in the sun and had no problem to address. However, considering the findings from this category, avoidance of sunburn has emerged as an issue that is shared by the sun safe lobby and adolescents. In the context of *Slipping Up* the young women do have a sun-related issue to address and so avoiding sunburn could be an appropriate focus for a social marketing intervention.

My findings have implied that people lacked specific knowledge about the nature of radiation and this led to them becoming sunburned. It follows that developing knowledge in these specific areas may begin to address the misconceptions that lead to unintentional sunburn. In particular, I propose that curricula and sun awareness information for all groups need to raise awareness about the types of electromagnetic radiation that the sun emits. There needs to be clarity about which rays lead to which sensations and problems - that infrared rays lead to feelings of heat, and ultraviolet rays lead to sunburn and potentially skin cancer. Ultraviolet radiation is invisible to humans but there are teaching methods and aids that may make it more tangible in this quest. For example, devices exist to record the amount of ultraviolet exposure the body receives (Termorshuizen *et al.* 2002) and laboratory demonstrations have the potential to illustrate the effects of ultraviolet exposure. Harper *et al.* (2002) have suggested that school science experiments could explore the effects of ultraviolet radiation on items left in the sun. Another activity they have suggested, involves considering the effects of ultraviolet radiation upon human anatomy and physiology. I propose that a useful focus for education materials could be ultraviolet radiation *per se* and not specifically *sun* safety. This is because the headline of *sun* safety potentially precludes protection issues associated with sun bed use, ultraviolet radiation exposure in cold climates and protection on cloudy days when the sun is not shining. Further, emphasis on *sun* safety, may compound the misconception that the sun's heat causes sunburn rather than the ultraviolet radiation it emits. People in the UK appear to be misled by weather conditions, believing they are not at risk of sunburn unless it is hot outside. Based on this, there is also scope for specific explanation about the risks of sunburn at home, as well as abroad. I share the view of Eadie and MacAskill (2006) who have concluded that although people protect themselves abroad they are less inclined and

get caught out at home. This suggests that the significance of protection both at home and abroad needs to be emphasised. Other issues that emerged in this study as requiring clarification were the methods to protect from heat as distinct from ultraviolet radiation.

One more issue that has arisen from my findings is that sunburn is caused by young people forgetting to protect themselves. It follows that interventions to help them to remember may reduce their experiences of unexpected sunburn. Jones *et al.* (2000) have suggested that teenagers should be encouraged to prepare and protect themselves before they go out. Whilst I agree this is necessary, my findings imply that it is not enough. Young women also need help in maintaining protective behaviours during their time outside and they need to be reminded. Reminders could act at personal and/or community levels, for example individuals may be encouraged to set mobile phone alerts to prompt them to appraise their risks of sunburn. At a community level, Eadie and MacAskill (2003) have suggested that more explicit use of ultraviolet radiation warnings in national and local weather forecasts may be useful. Although this strategy has been adopted, young people may not access the information in these contexts. It may be more effective to provide information where activities likely to lead to sunburn occur, for example in water sports' surroundings. As well as information in relevant contexts, infrastructure such as the provision of shade could also serve as implicit reminders for young women to protect themselves. In practice, the involvement of young women as partners would be crucial to ensure that any interventions would be fit for purpose.

In an ideal world, young women would not be experiencing sunburn. Although I did not explore the extent of the participants' experiences of it, others have found it is the norm among young people and adults. This suggests that people not only require information about how to prevent sunburn but also first aid advice for occasions when they burn. An article published by The Harvard Medical School is an example of how this can be achieved in a way that balances the preventive and first aid messages. The article explains the basis of sunburn and what influences ultraviolet radiation and intensity. It raises and discusses how prevention is better than cure. It gives information about prevention, but also suggests first aid steps for mild to moderate sunburn and requirements for more severe cases (Harvard Medical School 2004). Whilst the article is not designed or intended as a health promotion resource, it is an example of how compromise can be achieved between the ideals of prevention and its realities.

The categories of findings presented and discussed so far (*Fitting In*, *Being Myself*, *Being Physically Comfortable*, and *Slipping Up*) are not only explanatory in their own right. They also comprise the elements and properties of the core category of this study, *Being Comfortable*. I identified *Being Comfortable* as the core category because it denoted the main concern of the participants. It was important for the young women to be comfortable in the sun and *Being Comfortable* emerged as a need that they endeavoured to meet. The category explains what I have found out about the sun-related behaviours of the young women; their perceptions and behaviours were directed towards achieving physical and psychosocial comfort. In the chapter that follows, I will present the core category *Being Comfortable* and the grounded theory I have developed around it, about adolescent female behaviour in the sun. The theory integrates the other categories and is derived from the theoretical links that emerged between the core and its properties of *Fitting In*, *Being Myself*, *Being Physically Comfortable* and *Slipping Up*. I have incorporated these theoretical links within hypotheses[35] and these underpin the theory. Before I introduce the theory of adolescent females' behaviours in the sun, I give an account of how the category *Being Comfortable* emerged as the core. Then I present the theory. Following this, I draw upon other theoretical constructs to expound why comfort matters in relation to being in the sun. In conclusion, I will consider the implications of the theory for health promotion practice.

Being Comfortable

The Emergence of the Core Category Being Comfortable

During the concurrent processes of collecting and analysing data, I was conscious that a core encompassing theme should emerge from the data and that I needed to be receptive to this. Participants were protecting their psychosocial 'selves' and for some time this was a recurrent issue in the data. For example, the young women believed that they needed to protect themselves from potential derision by peers and feelings of embarrassment. Although the emergent theme of psychosocial protection appeared to be an important one, I resisted accepting it as the core category for two reasons. First, it did not fully account for everything in the findings and did not embrace all of the categories such as *Being*

[35] See appendix sixteen for hypotheses.

Physically Comfortable. The second reason I was reticent to adopt psychosocial protection as the core category was that it did not adequately explain the diversity of sun-related perceptions and behaviours that had come to light.

Eventually, late in the data collection and analytic process, the core theme of *Being Comfortable* became apparent. The theme emerged during the 16th interview when I was summing up previous discussions I had had with Molly, Nancy and Olivia about sun safety advice. I had been checking my perception with the participants that, from what they had told me, sun safety was not a natural part of their agenda in the sun. The girls confirmed that this perception was correct and so I asked them what their agenda actually was. Molly thought about this for some time and then she said 'I want to be comfortable in myself'. She proceeded to clarify that when she was in the sun she did not sit and 'roast'. That Molly wanted to be comfortable not only explained her own personal agenda to meet her physical needs in the sun, it also shed light on the motives for the behaviours of the other young women in the study. It explained why they behaved as they did. They were acting to meet their physical and/or psychosocial comfort needs.

When I analysed the data from the interview I recalled that the notion of comfort had been raised before. I reviewed the data from the previous interviews and I could see that individuals needing to be comfortable had been a main theme from the outset of the study, albeit implicit. For example on one occasion, Ruth had told me about how she would not be comfortable if she thought she looked stupid as a result of her appearance. On another, Isabel had told me that people were not concerned with fitting in if they were comfortable with themselves.

I found that the girls in the study needed to be comfortable in contexts other than sunny ones. The need to be comfortable arose in different scenarios and in data sources other than interview accounts *per se*. For example, the young women needed to feel comfortable in order to participate in the interview situation in the first place. A youth worker had expressed surprise when a group engaged in an interview with me for what she perceived to be a long time. She told me that if the girls involved had not felt comfortable they would not have talked. This was compounded in a later situation when I had asked a group about 'The Plastics'. The participants had previously told me how the people in this group could be derisory and nasty. I asked the girls how they would have responded in

interviews with me if some of 'The Plastics', or people they had not known had been with us during our discussions. Linda's response to this was that she would have kept her opinions to herself. It seems she would not have been comfortable disclosing in front of these individuals. Based upon the data past and present I concluded that the emergent core theme for this study had emerged as a quest for comfort. I ultimately decided that the core category should be termed *Being Comfortable*. This was because participants' behaviours were directed to this end. The young women needed to be physically and/or psychosocially comfortable not only in the sun, but in general too. What follows is a grounded theory of adolescent females' behaviour in the sun, based upon this core category of *Being Comfortable*. It is a theory that integrates the categories of *Fitting In*, *Being Myself*, *Being Physically Comfortable* and *Slipping Up*, previously discussed and it incorporates the conditions for *Being Comfortable*, strategies to achieve it and its consequences. The theory is written in the conceptual style advocated by Glaser (2001).

The Theory of Female Adolescents' Behaviours in the Sun

Needing to be comfortable influences the perceptions and behaviours of young women when they are both in and out of the sunshine. Comfort is a conscious and/or subconscious need that young women must address and it has physical and/or psychosocial components. Physical comfort in the sun depends upon the absence of unpleasant sensations such as feeling sun burnt or uncomfortably hot, whereas *Being Comfortable* from a psychosocial perspective is signified by feelings of psychological and social ease. For some young women, this psychosocial ease depends upon them believing that their appearance is acceptable to others. This is because they perceive that an appropriate appearance is necessary in order for them to be accepted by peers and the wider social community and for these individuals, *Being Comfortable* (generally, as well as in the sun) requires them to fit in and conform to the social agenda whereby appearances matter. In order to be comfortable, they need to look good and be fashionable and this means enhancing their appearance by gaining a tan in the summer. What constitutes acceptable appearance and what determines others' expectations about it, derives from the wider cultural and social context. The appearance agenda is communicated to the young women by the media, celebrity role models, and their peers. If they do not conform to the appearances agenda some individuals worry about what others might think of them and this compromises their psychosocial comfort. They do not want to risk negative evaluation and so they conform

to the appearances agenda because of the consequences they perceive are feasible. Being concerned about being left out and not *Fitting In* can influence whether or not an individual's intentions to protect themselves physically in the sun translate into sun protective behaviour. This is because in some social situations such as those with peers, protection priorities can change and although a young woman may intend to protect herself from the sun's rays, her intention may falter if she risks social exclusion by doing so. In these circumstances, social exclusion becomes a more immediate threat than the physical effects of sun exposure. The maintenance of psychosocial comfort takes priority and behaviour is directed to this end. Sunburn is avoided for similar reasons. *Being Comfortable* depends upon young women managing exposure situations and not *Slipping Up* and burning. This is because a sunburned appearance leads to negative evaluation by peers and individuals risk not fitting in. Sunburn can also affect physical comfort, for example by causing dehydration and skin tenderness, which compounds the reasons to avoid sunburn; comfort depends on it.

Just as there are young women who are influenced by the appearances agenda there are also those who are not. These individuals do not feel compelled to look good and have a suntan. They do not want to conform to the appearance agenda and *Being Comfortable* for them does not rely upon concerns about fitting into it. They are not driven by the same worries about exclusion as their counterparts. Indeed, being psychosocially comfortable in the first place makes it possible for them to *Be Different*; *Being Comfortable* facilitates their independence from the dominant agenda. This 'freedom' may be possible because they have already been accepted by others for other reasons, because they have self-confidence or they have learned from experience about the benefits of behaving independently. All of these attributes can develop with age, suggesting that the need for some to conform may peak in early adolescence. Generally, *Being Comfortable* depends upon young women *Being Themselves* and following their own agendas. Because of this, the issues involved in *Being Comfortable*, both generally as well as in the sun, differ amongst individuals. Further, the adolescent role is not a static one. It is dynamic and transient because young women adopt the roles others expect of them. When they are with adults, they adopt the role of child. When they are with peers, they adopt the role of adolescent peer. When they are with younger children, they adopt the role of adult. The role each person assumes at a particular time determines the nature of their comfort needs and in turn determines the nature and extent of the sun protection they adopt on different

occasions. The girls' roles, levels of independence from adults and their levels of responsibility for themselves and others determine sun protection at the time. If they are with parents, they tend to conform to parental expectations that they will protect themselves in the sun. With peers, they may not be so conscientious but when they are caring for younger children, they apply the protection measures they do not necessarily take up themselves.

Given that young women need to be comfortable, they behave according to this end. Some of their activities have the effect of making them feel more comfortable and others have the effect of preventing experiences of discomfort. Examples of ways in which comfort is enhanced include conforming to the appearances agenda and basking in the warmth of the sunshine. The former enhances the individual's psychosocial comfort because gaining a suntan is perceived to improve appearance and creates the impression of being healthy and active, whilst basking in the warmth of the sunshine enhances feelings of physical wellbeing. *Being Comfortable* in a physical sense is not only maintained by strategies to enhance comfort, it is also maintained by *Avoiding Discomfort*. Avoidance tactics involve evading the potential sources of sun-related discomfort likely to be experienced in the long term as well more immediately. Short-term discomfort relates to over-exposure to the sun and the physical discomfort of sunburn. This is anticipated and avoided particularly when the individuals are aware that they are prone to burning and have had sunburned badly or peeled on previous occasions. However, the use of sun protection methods may be avoided if they are likely to compromise the individual's comfort. Protecting in the sunshine by covering up with clothing is a case in point because it is likely to make the individual feel hotter instead of more comfortable. Further, covering up by wearing an unfashionable garment brings the additional disadvantages of compromised appearance and potential psychosocial discomfort. This is because for some people, *Being Comfortable* is achieved by behaving in ways to fit in. This means that they need to conform with the social agenda where appearances matter. They need to look good and have a tan, avoid attracting unwanted attention and enhance their appearance. By wearing unfashionable clothes, they are risking psychosocial discomfort because they perceive they are creating the wrong impression. They believe that this will result in being derided by peers and in being excluded from the group. For similar reasons, steps are generally taken to avoid sunburn because a sunburned appearance and peeling skin is deemed unattractive. However, in this case, activity is directed towards sun protection rather than exposure. The

issues above relate to avoiding discomfort in the short term but a there can be consideration of the future, potential discomfort of skin cancer. Measures to protect from the sun are instigated in order to avoid this and are most likely to be adopted when a young woman has a family member who has experienced skin cancer. Protection in these circumstances involves anticipation and planning, but generally reactionary measures that protect a person from physical discomfort are more common. These methods involve reacting to physical feelings of discomfort as they occur, rather than anticipating and planning to prevent future problems.

In summary, this theory about young women meeting their needs for comfort explains the diversity of their sun-related perceptions and behaviours. Comfort matters to young women and satisfying their comfort needs in the sun is a complex endeavour that involves dealing with of a range of concerns. Their behaviours are directed toward realising their own unique comfort requirements and each person has different priorities as to whether these are psychosocial and/or physical at any particular time. Individuals' behaviours are contextual and can be altered in an instant if comfort in another sphere is threatened. For example, a young woman can switch from protecting her body from the sun's rays to not protecting herself if social circumstances dictate. This infers that behaviours are redirected towards meeting psychosocial, rather than physical comfort needs and that behaviour is transient. Generally, activities likely to compromise physical and/or psychosocial comfort goals are avoided, whereas those likely to maintain or enhance comfort are employed. Sun safe activity is only relevant and appropriate when it contributes to an individual achieving their specific comfort needs, or at least, does not impede their achievement. *Being Comfortable* is the goal of young women in the sun and hence comfort matters to them.

Next, I consider the proposals made so far in the context of existing theory. The extant theory offers insight into the physical and psychosocial elements of comfort identified in mine, and helps to explain why comfort matters. As mentioned previously, a prerequisite for generating theory using a grounded theory approach is that the researcher should be receptive to emergent theoretical codes. This precludes them from merely employing familiar theoretical frameworks in their work. It also leaves them free to discover and apply an appropriate overarching framework that encompasses the study concepts, irrespective of the expectations of their particular disciplines and professional peer groups (Glaser 1978). I believe that a theoretical framework that resonates with my study and the

elements that I have found to constitute comfort, is Abraham Maslow's theory of human needs. This is particularly because my theory revolves around comfort as a need; hence I have adopted Maslow's theory as a basis for discussion about why comfort matters.

Maslow was a humanist psychologist who, unlike his reductionist behaviourist and psychoanalytic counterparts, viewed human nature holistically. His work on human motivation recognised and embraced the relevance of disciplines other than psychology (Gross 2005). My theory assumes a similar holistic philosophy, based on findings that the perceptions and behaviours of young women incorporate psychosocial as well as physical elements. Like mine, Maslow's work also reflected an interactionist perspective and beliefs that a person's context was important in determining their behaviour. He also held that 'human goals' could have conscious as well as unconscious bases and, conscious or not, they were transient in nature. These views are also concurrent with mine. Maslow's theory provides insight into why physical and psychosocial comfort matters to young women. I will argue that in meeting their physical and psychosocial comfort needs the young women are addressing issues of group and individual wellbeing and that, based on this, their behaviours are justified.

Maslow supposed that human motivation involves people meeting goals, desires or needs (Maslow 1987). His view was that two motivational states affect human beings. The first is an advanced motivational condition of self-actualisation, reflecting that we have achieved a status where we have become all we can be intellectually and creatively (Gross 2005). The second is concerned with fundamental survival states that involve us meeting more basic physical and psychological needs. Maslow suggested that human survival depends upon the satisfaction of the latter and the needs he cites in his theory include physiological requirements such as temperature regulation, food and fluids. He also includes safety desires such as protection from physical and psychological danger as well as what he terms, 'love and belongingness needs'. Love and belongingness needs relate to affiliation with others and acceptance by them. In addition, Maslow proposed a need for people to hold themselves in high esteem and to have the respect of others (Gross 2005). Other basic requisites he identified were cognitive and aesthetic in nature, relating to knowledge and beauty respectively.

Maslow organised the basic and self-actualising needs into a hierarchy relative to their implications for survival (see appendix seventeen for a diagram). Self-actualisation features at the top of the hierarchy, because it is more to do with human development and fulfilment than survival and it signifies that a person has reached their full potential (Gross 2005). Although Maslow presented human requirements in a hierarchy, he did not propose that they would be met in any particular order. He also acknowledged that a person could have a variety of needs simultaneously, all at different stages of fulfilment (Maslow 1987).

Drawing further upon Maslow's theoretical perspective, he believed behaviours to be symptoms of human desires and not necessarily straightforward indications of the needs[36] they are fulfilling. He suggested that the observation of behaviour can be misleading because it does not always reflect the need it is addressing. His view resonates with my study because although the accounts of the young women suggested that their behaviours were driven by their desire to fit in, I discovered that their ultimate need was to be comfortable. Maslow (1987) explains how human desires can be understood as being the means to ends rather than the ends in themselves. Applied to this study, the participants' desires to conform and fit in to the appearances agenda could be construed as the means for them to be comfortable. Hence, the core category of *Being Comfortable* compares with Maslow's 'ends' and the other categories and properties within this study (the conditions and strategies for comfort) reflect the means.

Although Maslow did not expressly identify comfort as a human requirement, he did not exclude it either. He recognised that the scope of human needs precluded citation of each one. The physical and psychosocial elements that I have found related to comfort are implicit in his work, particularly in respect of the needs he classified as being physiological and those to do with love and belongingness, safety and esteem. Next, I explain why comfort matters by relating the psychosocial and physical aspects of comfort that I have identified in my theory to relevant elements of Maslow's framework of human needs. My argument is that comfort matters because of the consequences that unfulfilled needs may have for physical and psychosocial health, survival and wellbeing.

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[36] Maslow (1987) used the terms 'need' and 'desire' interchangeably indicating that he viewed their meanings as synonymous. I have used the terms in the same way.

In this study, I identified that comfort has a physical component and that young women work towards being physically comfortable. In his theory, Maslow professes that people need to maintain steady or normal physiological states, and that behaviour can be linked to maintaining such states by relieving or meeting their physiological needs. Although he mainly discussed hunger and thirst as examples of physiological needs to be satisfied, I propose that the physical comfort needs identified in this study compare. This is because they are derived from a need for physiological balance. For example, the need for the maintenance of a normal body temperature would have been met in part by behaviours that contributed to its maintenance. Meeting the need for physical comfort mattered because thermal comfort is believed to have protective advantage due to the consequences of overheating or becoming too cold (Li 2005) hence, in meeting their physical comfort needs, it could be supposed that young women were addressing issues of survival and physical wellbeing (albeit subconsciously) as Maslow suggests.

I found that for some young women, *Being Comfortable* depended upon social acceptance and I have proposed in this theory that *Fitting In* or belonging is a component of comfort. Likewise, Maslow (1987) recognised a basic human need for love and belongingness, and the human need to belong has been acknowledged before in sociology as well as psychology (Gross 2005; Kurzban and Leary 2001) albeit represented by different terminology and concepts. The implications that belonging has for group and individual wellbeing, are explained next.

Maslow related the basic need of love and belongingness to the concept of affiliation, which refers to the human need for the company of other human beings. We are believed to need the company of others (especially family and friends) and to be accepted by society (Gross 2005). A further construct from psychology that expounds the human need to belong is attachment theory as conceived by John Bowlby (1969a). Attachment theory proposes that attachment behaviour or seeking proximity to others is a form of social behaviour that reflects a need to be close to others. The significance of attachment in relation to this discussion is that Bowlby believed attachment behaviour to be a product of evolution with implications for the survival of individuals (Bowlby 1969b), perhaps related to protection from predators (Bowlby 1969a). In the social sciences there are parallels with psychological theories about the function of the human need to belong, for example regarding the role of the process of socialisation in terms of individual and social survival.

It also serves a function of enabling belonging and unity with others. This happens through a process of integration and involves development in relation to the connection with others (Adams and Marshall 1996). Baumeister and Leary (1995) believe it is plausible that based on this, humans strive for long lasting relationships and social groups. Historically, people have needed to cooperate for the benefits of group survival, food sharing, hunting and the need for protection. This explains why negative evaluation by others and social rejection is undesirable relative to the function of the group (Kurzban and Leary 2001).

Discussion so far indicates that the need to belong has deep-seated origins and may relate to evolutionary advantage and survival. It gives insight as to why comfort derived from belonging matters in the wider social context. Further insights as to why belonging matters but on a more personal basis are revealed when belonging and self-esteem are considered in relation to wellbeing. Although others have acknowledged that the concept of emotional health and wellbeing is difficult to define, it is thought to relate to happiness, calm and ease (Coleman 2007). Wellbeing is believed to be influenced by positive mood (Ryan and Deci 2001) and it has been supposed that a person's positive feelings can derive from knowing that they belong to a social group (Kurzban and Leary 2001). Individuals need to perceive that they are important to others (Adams and Marshall 1996) and so warm, trusting and supportive relationships are believed to contribute to wellbeing (Ryan and Deci 2001). Maslow has suggested that a person's psychological health is correlated with their degree of needs gratification so that an individual's belongingness needs being met has positive implications for their psychological health. The wellbeing of young people has been recognised to depend upon good relationships with others (MacKinnon 2007), explaining why the young women in this study needed to fit in and belong. Just as belonging has the potential to enhance mood and bring feelings of wellbeing, *not* belonging can bring the reverse. This is because having unmet love and belongingness needs can lead individuals to feel lonely, ostracised, rejected and friendless (Maslow 1987), with potentially damaging effects upon their wellbeing (Kurzban and Leary (2001). In addition, Maslow has suggested that everyone needs a positive notion of himself or herself in order to meet what he terms esteem needs; individuals need to perceive that they are significant to others but they also need to 'count' to themselves (Adams and Marshall 1996). Meeting esteem needs leads people to develop feelings of self-confidence and worth (Bell and Bromnick 2003). Although Maslow considers belongingness and self-esteem needs separately, the

concepts interlink because a person is more likely to be accepted and to belong when they have high self-esteem (Harter 2003). When they experience social exclusion, the positive notions they hold about themselves can be threatened with unfavourable effects on mental health such as feelings of inadequacy and inferiority (Maslow 1987). In the preceding discussion, I have drawn upon Maslow's theory of needs to explain why physical and psychosocial elements of comfort matter to young women. I have proposed that they matter because of the implications they have for a person's survival and wellbeing in the context of the group as well as an individual. Because the young women are behaving in ways to meet their physical and psychosocial comfort needs and addressing issues of group and individual wellbeing, their behaviours are justified and are not necessarily derived from a wish to be risky. This raises issues for research and health promotion practice regarding adolescents' motives and these issues are discussed next.

When people are considering adolescent issues, they sometimes assume that young people have an agenda of risk (Coleman *et al.* 2007) and evidence of this assumption exists in studies investigating adolescent sun-related behaviours spanning two decades (Keesling and Friedman 1987; Wichstrøm 1994; Lupton and Gaffney 1996; Koblenzer 1998; Eadie and MacAskill 2003; de Vries *et al.* 2005). I have produced a theory proposing that the sun-related activities of young women are driven by a motive to be comfortable and that this is linked to their wellbeing. This challenges the assumption that young people automatically subscribe to a risk agenda and on reflection, I have been surprised by the outcome of my own study. In retrospect, the findings should not have been such a revelation because I actually set out to develop a theory that reflected the participants' perspectives. That the findings were surprising to me suggests that I was anticipating results of a different nature. I was probably anticipating that they would be more in keeping with discourses of risk and adolescents being troublesome. This infers that I am more entrenched in, and influenced by, these discourses than I had imagined[37]. The risk discourse was conceived in Victorian times when adults were concerned about the behaviour of young people. Their concerns were that adolescents endangered themselves and behaved in ways to threaten society. They believed that adolescence involved a process of storm and stress (Mackinnon 2007) and a consequence has been that adolescents

[37] Notwithstanding, it seems that Glaser's guidance about how to stay open to the emergent helped me to break free from the risk paradigm, demonstrating the value of grounded theory method in exploratory work and in gaining new perspectives.

have traditionally been perceived as problematic and deviant (Tucker 2004). This has been to the extent they have been held responsible for social problems, teenage pregnancy being cited as a case in point (Griffin 2004). Another reason why adolescents may be viewed as risky could stem from adults' creation of the risk agenda. It has been argued that behaviours labelled as risky and unhealthy, derive from adults' definitions of health and the health promoting strategies they develop. These strategies can be focused on avoiding unhealthy populations in the future, and young people are considered risky when they do not comply with them (MacKinnon 2007). Maslow believed that when a person judges another's motivation, the nature of their conclusions reflects whether they have an optimistic or a pessimistic view of the other. He also believed that the pessimistic view tends to predominate (Maslow 1987). This could be the situation in the case of adults appraising adolescents, and as I have argued above, possibly due to the discourses that define adolescence as problematic. An implication is that dominant discourses can influence perceptions and determine professionals' views. Concern has been expressed over the effect that these views may have upon the provision of services (Tucker 2004) because they have the potential to lead to inequity (Coleman *et al.* 2007).

The National Institute for Health and Clinical Excellence (NICE) guidelines for interventions supporting attitude and 'behaviour change at population and community levels' have reflected concern that extant inequalities can influence whether people have the capacity to change their behaviours (NICE 2007). It is arguable that dominant discourses that present adolescents as troublesome and risk taking could cause health inequalities in relation to young people. If health promotion strategy or research studies are devised without questioning the relevance of assumptions about adolescents as risky and troublesome, they may not only overlook the needs of young people but also compromise healthcare provision for this group. Their needs could be disregarded in initiatives for the prevention of skin cancer for example. I raised this as an issue at the beginning of this study because resources tend to be directed to other groups who are perceived to be more receptive when there are perceptions that teenagers 'don't listen'. There is an irony attached to adult perceptions that young people do not listen. This is because teenagers are stakeholders in the health promotion agenda (Shepherd *et al.* 2002), inferring that in health promotion activity adults should be the ones to listen in the first instance if they are to demonstrate their commitment to inclusion and to secure the participation of young people. Not listening to young people may be construed as

discriminatory practice according to Roche (2004). Roche noted the requirements of the Children Act 1989 (DH 1989) and the United Nations Convention on the Rights of the Child (United Nations Office of the High Commissioner for Human Rights 1989), for adults to consider the views of children and to account for them. Indeed, Macfarlane and McPherson (2007) have highlighted that although 15 percent of the total population of the UK was aged between 10 and 19 years in 2007, specific health service provision for them was lacking. They have suggested that this could be because teenagers lack political influence and it could suit others to view them as risk takers and as careless about their health. There is now scope for a cultural shift since services are supposed to be designed and delivered around the needs of children and their families. This is as a result of the National Service Framework for children, young people and maternity services and the national standards for the health and wellbeing of children, young people and women (Department for Education and Skills and The Department of Health 2004).

In this study, I endeavoured to avoid making assumptions about young women in order to establish their perspectives and their sun-related agendas. What I have produced is a theory about young women behaving in ways to meet their comfort needs. I believe that this theory contributes to existing literature about the behaviour of young people in the sun, because it explains their motives in terms of their comfort. To my knowledge, no one has previously explained adolescent girls' sun-related activities in this way[38]. Although mine is a substantive theory with concomitant limitations, it reflects a different way of thinking about their behaviours. This is because it derives from the girls themselves and their agendas. They were striving for comfort. That they were acting toward *Being Comfortable* reflects the meaning underpinning the behaviours of young women. That I have discovered meaning in this study is an outcome that is in keeping with the Symbolic Interactionist perspective that underpins grounded theory method. In preceding chapters, I have alluded to the work of George Herbert Mead who believed a mechanism of self-interaction formed and guided behaviours. Whilst others saw humans as organisms that behaved in response to particular factors, Mead recognised that human beings are objects to themselves. He believed that because of this, humans are not just responsive, rather their behaviours are constructed and based upon interpretation of the world around them. People account for the things around them and determine the significance they may have

[38] This claim is made on the basis of the literature searching strategy in appendix eighteen.

for their actions. In this way, activity is constructed (Blumer 1969). To illustrate this point, I found that some of the girls' actions were based on their interpretations of the social implications of their activities. An upshot of the Symbolic Interactionist view is that we need to look for the meaning that underpins behaviour instead of trying to understand behaviour in terms of the factors that produce it (Blumer 1969). According to Blumer, it is because human activity has been considered to be reactive that there has been a general focus on human attitudes, social roles, norms and values, rather than the meanings people ascribe to things. Blumer (1969) suggests that instead, the researcher should look at the way the behaviour is formed by looking at the 'actors'' perspectives (Blumer 1969), as I have in this study. In this study, I have presented the girls' perspectives and have concluded that issues of comfort underpinned their behaviours. That the theoretical outcome of this study is about comfort rather than risk, supports the notion that exploratory research that does not assume the risk paradigm applies, is necessary with adolescents. As Michaud (2006 p.482) suggests:

> *... instead of labeling behaviours as risky, attempt to understand the role, the meaning, the motives and the potential consequences of these behaviours.*

In terms of the implications for further research with young women relative to sun behaviours, I propose that the theory related to comfort that I have generated in this thesis could be tested and developed further. There is also scope to evaluate critically the notion of risk relative to adolescents' sun-related behaviour. This could be achieved by qualitative and exploratory inquiry. My theory not only identifies new avenues for investigating the behaviours of young people in the sun, it also infers that comfort could be a consideration in health promotion practice and the primary prevention of skin cancer. For instance, it may be helpful for those involved in health promotion to consider how psychosocial and physical comfort may influence the sun-related behaviours of young women. Personal comfort needs could be assessed and interventions could be mutually agreed on individual bases. A further implication of my theory (that individuals behave in ways that help them to meet their need for comfort in the sun) is that young women appear to be comforting themselves in the ways they act. It has been mooted before that it is conceivable that people do comfort themselves. Lowe and Cutcliffe (2005) for example, have noted how people apparently deriving comfort from knowing that they belong

socially. They also suggest that personal comforting can involve intrapersonal processes whereby individuals acquire comfort through their own resources such as self-confidence, feeling competent, being at peace with themselves and feeling valued. Although not related to health promotion specifically, there is also some empirical evidence to support the notion that young people are capable of comforting themselves. In a descriptive, qualitative study, which investigated childrens' experiences of being ill, Forsner *et al.* (2005) found that young people were able to comfort themselves actively. The researchers investigated the experiences of a small group of children comprising four girls and one boy between the ages of 11-18. Although the sample was small, the in-depth nature of the interviews resulted in rich description, providing Forsner and her colleagues with adequate insight. The researchers discovered that whilst the young people in their study received comfort from others, they also comforted themselves when they were ill; they knew what they needed to feel good.

In an opinion article in the past, Gropper (1992) has suggested that health promotion could involve strategies to promote comfort. One of the strategies she proposed involved teaching people about how to comfort themselves. However, this approach would need to be adopted with caution, because the motive of comfort can raise a paradox. One of my arguments has been that the sun-related activities of young women are driven by the motive to be comfortable and that because *Being Comfortable* is linked to their wellbeing their behaviours in the sun can be justified. This is irrespective of the potential for their behaviours to be damaging to health. For example, young women in my study apparently derived comfort from knowing that they fitted in and they conformed to the appearances agenda accordingly. Although such conforming behaviours were rational as comforting behaviours, they could lead to damaging, over-exposure to the sun. The implication is that it would be inappropriate for health promoters to encourage people to comfort themselves in ways that could harm them. Gropper has recognised this relative to other adolescent behaviours. Although the basis of her opinion is not clear and she recognised that hers is an unconventional view, she proposed that behaviours such as alcohol and drug abuse and attempts at suicide could be construed as ways of people comforting themselves. She wrote:

> *... it is often because of feelings of discomfort that individuals would involve themselves in these practices.* (Gropper 1992 p.7).

Although they may be construed as comforting behaviours it would be wholly inappropriate for health promoters to encourage them.

Crossley (2001) has shed light on how other 'unhealthy' behaviours such as unsafe sexual practices and alcohol consumption also have rationality. She has proposed that the rationality derives from what is happening around young people. She believes that young people apply strategies to help themselves to adapt to their social contexts. Applied to my study, conforming to the appearances agenda and striving for a suntan acts as an illustration of this. Because potentially damaging behaviour is rational in the social context of young women, the rationality constitutes a challenge to the prevention of skin cancer. However, there is an approach that may go some way in addressing such a challenge. Just as it is important for researchers and health promoters to explore why people do what they do, it is also important for young people to discover and understand their own motives. This is because they are not necessarily consciously aware of the influences upon them (Crossley 2001) and, according to Deci and Flaste (1995) the first step in sustained behaviour change involves people discovering their own motives.

In the narrative above, I have discussed why physical and psychosocial comfort matters to young women in the sun based upon Maslow's theory of human needs. I have argued that in meeting their physical and psychosocial comfort needs the young women are addressing issues of group and individual wellbeing and that based on this, their behaviours are justified. My theory of comfort challenges assumptions that young people are necessarily risky. By explaining the motives of young women in terms of meeting their comfort needs I hope to have contributed to existing literature about the behaviour of adolescent females in the sun. Future research and health promotion practice could be influenced by a theory of comfort despite the paradoxes it raises.

The overall aim of this research has been to explore the sun-related experiences of young women in order to generate a grounded theory to explain their behaviours in the sun. The essence of the theory that I have developed is that when in the sun, young women direct their activities toward meeting physical and psychosocial comfort needs and that comfort matters to them because it has implications for their wellbeing. At the outset, I had

intended to illuminate the issues involved, in order to make skin cancer, primary prevention strategy more relevant to young women. Ultimately, I hoped that this would reduce their risk of skin cancer development in later life. In the next and final chapter I present the conclusions of this study. I present them in the light of the research aim and my intentions, and highlight how the work contributes to existing knowledge.

CHAPTER FIVE

Conclusions

The overall aim of this research has been to generate a grounded theory to explain the behaviour of young women in the sun. The essence of the theory that I have created is that when in the sun, young women direct their activities toward meeting physical and psychosocial comfort needs. Further, comfort matters to them because it has implications for their wellbeing. In developing the theory, I have explored the sun-related experiences of young women in order to gain insight into the issues that influence them. My premise at the outset of this study was that if such insight could be gained into their perspectives, and their behaviours understood, skin cancer prevention strategy could be made more relevant to this group. On previous occasions within this work, I have drawn out conclusions and implications for health promotion and research in relation to each specific category of findings. Here I present the conclusions of the research overall, in terms of its aims. I draw conclusions based on the explanatory theory and consider what the study explains about the sun-related behaviours of young women. Furthermore, I refer to the overall contribution my work offers in terms of direction for future health promotion and research practice. I also include the contribution I believe this study makes to the body of knowledge overall.

At the beginning of this research, I proposed that more needed to be known about the factors that influence young people in the sun. I referred to authors who had alluded to the possibility of the factors being socially and/or culturally derived. In relation to young women, I too, have concluded that the issues are related to social context and culture. Furthermore, they are related to physical comfort and, comfort overall. The theory of *Being Comfortable* and the categories that have contributed to it[39] not only give insight into what it is that influences young women in the sun, they also provide explanation for why young women do as they do. For example, girls like to conform to the appearances agenda determined by their wider social context. This is manifest in their attempts to enhance their appearance through wearing fashionable clothes and gaining a suntan. It is also manifest in their attempts to prevent negative evaluation based upon their looks. They do not want to be perceived as different. Reluctance to adopt sun safe practice, the avoidance

[39] The categories of *Fitting In*, *Being Myself*, *Being Physically Comfortable*, *Slipping Up*.

of sunburn and adapting behaviour to social circumstance can all be explained by the elements of my theory proposing that young women are comfortable when they are conforming to, and fitting in with, their social context (that in this case reflects an appearance agenda). Their wellbeing is implicated and this explains why they behave in ways to fit in; people do not function in social isolation.

It is noteworthy that the predilection for a suntan has been reported in countries other than the UK, suggesting that appearance-based cultural norms may apply in contexts and to groups further a-field. Initially, I argued the case for a specific study in the UK on the basis that issues that are relevant in other countries may not be relevant here. However, whilst geographical location might compromise outside activities in the Northern Hemisphere, the same positive aspects of being in the sun that emerged in my study have been reflected in others', irrespective of geographical location. I have concluded that the importance of outdoor activity and the issues of attractiveness and fitting into the social scene appear to be common to young people, irrespective of the climate they live in. Hence, it is feasible that my theory that being comfortable matters could apply in other contexts and there is the potential for further research into the scope of its application. It is also feasible that my theory of comfort about sun-related behaviours is transferable to other adolescent health issues that derive from issues of self-presentation and that lead to health concerns. Eating issues are an example.

If young women feel the need to conform and to fit in to their social context where appearance matters, there are implications of this for health promotion activity. It would seem to be important for the adult community to appreciate the wider social context that influences the behaviours of young women and in which young people operate. Not accounting for it, with a health promotion agenda based upon physical risk of skin cancer and physical protection from the sun will only partially address their comfort needs. I have concluded that primary prevention of skin cancer interventions need to reflect the holistic concept of health to which young women apparently subscribe. Furthermore, interventions need to account for the psychosocial issues that may affect young people in their lives. Working in partnership with adolescents would help adults to understand the complexity of the issues that they are dealing with. However, a complicating issue is that young individuals are not all driven by the same worries about exclusion as their counterparts and some behave more independently of the appearances agenda than others do. Being

comfortable also depends on individuals being themselves, which means that they follow their own, personal agendas in the sun. Individuals' needing to be exactly that - individual, explains why the behaviours of young women in the sun are diverse and transient. It is another reason why the issues that affect young women in the sun are complex to deal with. It seems that their activities not only vary on an individual basis, but also according to the role they have adopted at any particular time relative to their adolescent status. They do not seem to have one 'adolescent' way of behaving. Instead, each individual is able to adopt a range of roles and transient 'selves' that they slip in and out of apparently in response to others' expectations and attitudes. Whether they have adopted the role of child, adolescent or adult influences the extent to which they perceive sun safety to be relevant and the extent to which they implement its advice. It has been noted before that young people behave differently in different relationship contexts but to my knowledge, no other study has recognised how this impinges upon the behaviour of young women in the sun, comprehensively. I believe this is a contribution that my study makes.

A conclusion I have reached as a result of this study is that I was mistaken to have initially assumed that skin cancer prevention strategy lacked relevance to young women universally. At the outset of this work, I had hoped to make skin cancer primary prevention strategy more relevant to adolescents. Ultimately, I anticipated that this could reduce their risk of skin cancer development in later life. However, my assumption that skin cancer prevention strategy lacked relevance was wrong, because I found that its relevance varied according to individuals concerned, their social circumstances at any one time and the roles they had adopted. Further, individuals did not fit typologies based on whether or not they exposed themselves to the sun's rays. Their behaviour varied. For example, those who were conscientious about sun protection did not necessarily demonstrate their diligence consistently. Their social circumstances could prevent them from doing so. Equally, appearance-conscious individuals protected themselves in certain circumstances. The implication is that it is important for all young women to know how to protect themselves in the sun should suitable (albeit different) occasions arise.

A conclusion I have reached overall is that although young women may have some things in common, they do not comprise a homogeneous group as adults tend to assume. The implication for skin cancer prevention practice is that different strategies may succeed with different individuals and at different times. This suggests that a raft of interventions are

necessary to cater for their diverse needs and skin cancer prevention activity needs to embrace the range of sun-related behaviours young women may engage in. I believe that a mix of secondary and primary prevention tactics is important. This is because a secondary prevention approach may be appropriate for those who believe that being in the sun has a positive influence upon their wellbeing or for those unlikely to respond to fear appeals. Primary prevention on the other hand, may be more suited to those who perceive problems associated with sun exposure and who respond to health promotion interventions based upon the fear of skin cancer.

In seeking to explain why young women do as they do in the sun, my theory of comfort sheds light on aspects of behaviour associated with the need to be physically comfortable. Young women were influenced by a need for physical comfort both generally and in the sun. This explains why girls may enhance their physical comfort by basking in the warmth of the sun's rays or avoiding elements of recommended sun protection practice and products likely to compromise their comfort. It explains why people may be unlikely to cover up with clothing in the sun or apply sun creams if these make them uncomfortable. It also explains why girls may experience sunburn (in spite of applying sun cream) if the sun cream product removes the stimulus of the discomfort of burning. Furthermore, it explains that their comfort can depend on them being at a comfortable temperature and why they like to cool down in various ways. Based on this, I have concluded that it is more likely that recommendations for sun safety will adopted if they do not compromise physical comfort. Further, sun protection information should not just include material about protection from UV rays. It should also include other elements of general physical comfort such as how to prevent overheating and dehydration.

Sunburn does not only compromise physical comfort but also psychosocial elements too. Comfort in the sun depends upon the young women managing sun exposure situations and not becoming sunburned unexpectedly. Unexpected sunburn can be caused by young women lacking knowledge about when they might burn and forgetting to protect themselves in the sun. This explains why they become sunburned despite not wishing or intending to. It may also explain the high incidence of sunburn experienced by adolescents and other groups as reported in others' work. Further, confusion over the cause of sunburn may explain perceptions that sun protection is not warranted in the UK. I have also come to the conclusion that sunburn could be an appropriate focus for a social marketing

intervention because it is a problem shared by both adolescents and the sun safety lobby. Further, interventions to help individuals to remember to protect themselves in the sun may reduce their experiences of unexpected sunburn. As well as information in relevant contexts, infrastructure such as the provision of shade could also serve as implicit reminders. Not only this, the provision of infrastructure in public places and school would be supportive since young people tend not to take protection paraphernalia with them. This, in addition to school policy that is devised with pupils could support them in pursuing sun safe activity.

Another practice implication that unexpected sunburn (and this research overall) broaches, relates to health education. The findings indicate that it may be useful to address the misconceptions that lead to unintentional sunburn. In particular, awareness could be raised about the types of electromagnetic radiation that the sun emits and clarification could be provided about which rays lead to which sensations and problems. People appear to be misled by weather conditions, believing that they are not at risk of sunburn unless it is hot outside. Based on this, there is scope for specific explanation about the risks of sunburn at home and abroad and the environmental conditions that lead to burning.

In terms of methods of education, the findings indicate that experiential methods have potential. People were more likely to renounce the appearances agenda when they had learned to accept their appearance limitations, accepted themselves for who they were, had been accepted by their social groups, and had the self-confidence to follow their own ways. This suggests that interventions to foster and develop such characteristics may increase the ability of other young women to resist the cultural norms that may harm them.

If the intention of education is to create a climate of fear of skin cancer, a direct graphic approach may be appropriate. However, for those whose agendas do not predispose to sun protection, information relevant to their worlds would be useful. In any event, the material should be accessible at the outside venues young people frequent. In terms of future research, there is scope to investigate the ways in which young people learn about sun protection and what influences them in the process. There is also scope to explore the role that age plays in learning, since controversy exists as to whether young people are more likely to protect themselves as they grow older. Another area for further research could be exploration of the effectiveness of active versus passive methods of learning about sun

exposure and protection. In addition, I propose that the theory related to comfort that I have generated in this thesis could be transferable to other scenarios. It was evident in the literature that some of the issues my findings raised were transferable to other groups, with wider age ranges, different genders, and geographical locations. The issues included the lack of concern about skin cancer, enjoyment of sunshine, becoming sunburned unintentionally and the extent of experiences of sunburn. The implication is that the work and theory could be pursued with other groups to explore the applicability of my theory.

I endeavoured to avoid making assumptions about young women in order to establish their perspectives and their sun-related agendas. What I have produced is a theory about young women behaving in ways to meet their comfort needs. The theory explains their activities in the sun and it reflects a different way of thinking about their behaviours. I believe this is because it derives from the girls themselves and their agendas. The theory that they were acting toward being comfortable, reflects the meaning underpinning the behaviours of young women in the sun. A contribution that I believe my theory makes is that it challenges assumptions that young people are necessarily risky and proposes a different way of viewing both them and their behaviours in the sun. I have produced a theory proposing that the sun-related activities of young women are driven by a motive to be comfortable and that this is linked to their wellbeing. Based on this, it would seem wise to account for comfort needs in health promoting activity.

In conclusion, my theory proposes that being comfortable matters to young women and that comfort is a goal young women strive to meet in the sun. Satisfying their comfort needs involves them dealing with of a range of concerns and is a complex endeavour. Their behaviours are directed toward realising their own unique comfort requirements and these can be psychosocial and/or physical in nature. Individuals' behaviours are contextual. Generally, activities likely to compromise physical and psychosocial comfort goals are avoided whereas those likely to maintain or enhance comfort are employed. By meeting their physical and psychosocial comfort needs the young women are addressing issues of group and individual wellbeing and based on this, their behaviours are justified and important, hence comfort matters.

In terms of the contribution this study makes, I am able to conclude that it does not just identify the factors that may affect young women in the sun as others have done. It takes

analysis a step further to a grounded theory that explains their behaviours. They were acting toward realising their own unique comfort requirements. By explaining the motives of young women as meeting their comfort needs, I hope to have contributed to existing work. This is because to my knowledge, no other has specifically explored the experiences of UK adolescent females specifically in a qualitative way and with the intention of producing a theory to explain them. Because this study increases understanding of the factors that influence young women in the sun, it also adds to the body of knowledge related to the primary prevention of skin cancer with teenage girls in the UK. The methodology has enabled me to cross disciplinary boundaries in understanding the perspective of young women and I believe that the work being of a multidisciplinary nature is a contribution in itself.

At the outset of this study, I set out to generate a grounded theory to explain the behaviour of young women in the sun. I sought to explore the sun-related experiences of young women in order to gain new insights into the influences upon them. Whilst this thesis and these final sentences might signify the end of this particular endeavour, whether they signify the ending *per se* is another matter. The work is ushering me toward future ventures and I cannot resist the lure.

REFERENCES

ABRAMS, S. M. L., BROWNING, G. A., 2001. Informed consent, medical research, and healthy volunteers. *In*: L. DOYAL, J. S. TOBIAS, eds. *Informed Consent in Medical Research*. London: BMJ Books, 240-246.

ADAMS, G. R., MARSHALL S. K., 1996. A developmental social psychology of identity: understanding the person-in-context. *Journal of Adolescence*, 19, 429-442.

AHERN, K., 1999. Ten top tips for reflexive bracketing. *Qualitative Health Research*, 9 (3), 407-411.

ALBERG, A. J., HERBST, R. M., GENKINGER, M. H. S., DUSZYNSKI, B. A., 2002. Knowledge, attitudes, and behaviours toward skin cancer in Maryland youths. *Journal of Adolescent Health*, 31, 372-377.

ALDERSON, P., 1995. *Listening to children: children, ethics and social research*, Ilford: Barnardos.

ALLMARK, P., 2002. The ethics of research with children. *Nurse Researcher*, (10) 2, 7-19.

ALMAHROOS, M., KURBAN, A. K., 2003. Sun protection for children and adolescents. *Clinics in Dermatology*, 21, 311-314.

ARMSTRONG, D. V., 1994. Heat stress interaction with shade and cooling. *Journal of Dairy Science*, 77, 2044-2050.

ARTHEY, S., CLARKE, V., 1995. Suntanning and sun protection: a review of the psychological literature. *Social Science Medicine*, 40 (2), 265-274.

AUTIER, P., BONIOL, M., DORÉ , J. F., 2007. Sunscreen use and increased duration of intentional sun exposure: Still a burning issue. *International Journal of Cancer*, 121, 1-5.

AVERILL, J. R., 1987. The role of emotion and psychological defense in self- protective behaviour. in: *In*: D. N. WEINSTEIN, ed. *Taking Care*. Cambridge: Cambridge University, 55-78.

BACKMAN, K., KYNGÄS, H. A., 1999. Challenges of the grounded theory approach to a novice researcher. *Nursing and Health Sciences*, 1, 147 – 153.

BALLENTINE, L. W., OGLE, P. J., 2005. The making and unmaking of body problems in Seventeen magazine, 1992-2003. *Family and Consumer Sciences Research Journal*, 33 (4), 281-307.

BANKS, B. A., SILVERMAN, R., SCHWARTZ, R. H., TUNNESSEN Jr., M. D., 1992. Attitudes of teenagers toward sun exposure and sunscreen use. *Pediatrics*, 89 (1), 40-42.

BBC, 2005. *40% of teens want plastic surgery* (online). BBC News. Available from: http://news.bbc.co.uk/go/pr/fr/-1/hi/health/4147961.stm (Accessed 30 March 2005).

BEAUCHAMP, T. L., CHILDRESS, J. F., 2001. *Principles of biomedical ethics*. 5th ed. Oxford: Oxford University Press.

BEAUDOIN, P., LACHANCE, M. J., ROBITAILLE, J., 2003. Fashion innovativeness, fashion diffusion and brand sensitivity among adolescents. *Journal of Fashion Marketing and Management*, 7 (1), 23-30.

BEAUDOIN, P., LACHANCE, M. J., 2006. Determinants of adolescents' brand sensitivity to clothing. *Family and Consumer Research Journal*, 34 (4), 312-331.

BEAUMEISTER, R. F., LEARY, M., 1995. The need to belong: desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin*, 117 (3), 497-529.

BELL, J. H., BROMNICK, R. D., 2003. The social reality of the imaginary audience: A grounded theory approach. *Adolescence*, 38 (150), 205-219.

BERGENMAR, M., BRANDBERG, Y., 2001. Sunbathing and sun-protection behaviours and attitudes of young Swedish adults with hereditary risk for malignant melanoma. *Cancer Nursing*, 24 (5), 341-350.

BILTON, T., BONNET, K., JONES, P., LAWSON, T., SKINNER, D., STANWORTH, M., WEBSTER, A., 2002. *Introduction to sociology*. 4th ed. Basingstoke: Palgrave Macmillan.

BLUMER, H., 1969. *Symbolic Interactionism: perspective and method*. New Jersey: Prentice Hall.

BOE, K., TILLOTSON, E. A., 2006. Encouraging sun safety for children and adolescents. *The Journal of School Nursing*, 22 (3), 136-141.

BOLDEMAN, M., JANSSON, J., NILSSON, B., ULLEN. H., 1997. Sunbed use in Swedish urban adolescents related to behavioural characteristics. *Preventive Medicine*. 26, 114 -119.

BOURNEMOUTH UNIVERSITY, 2003. *Research ethics policy and procedures* (online). Bournemouth University. Available from: http://www.bournemouth.ac.uk/research/graduate_school/Documents_and_resources.html (Accessed 11 July 2008).

BOWLBY, J., 1969a. *Attachment and loss: Volume 1. Attachment*. London: Penguin books.

BOWLBY, J., 1969b. *Attachment and loss: Volume 3. Loss*. London: Penguin books.

BRANDBERG, Y., ULLÉN, H., SJÖBERG, L., HOLM, L-E., 1998. Sunbathing and sunbed use related to self-image in a randomized sample of Swedish adolescents, *European Journal of Cancer Prevention*, 7 (4), 321-9.

BRITISH ASSOCIATION OF DERMATOLOGISTS, 2004. *About the UK Skin Cancer working party* (online). British Association of Dermatologists. Available from: http://www.bad.org.uk/patients/cancer (Accessed 15 July 2005).

BRITISH SOCIOLOGICAL ASSOCIATION, 2002. *Statement of Ethical Practice* (online). British Sociological Association. Available from: http://britsoc.org.uk/about/ethic.htm (Accessed 23 May 2003).

BROADSTOCK, M., BORLAND, R., GASON, R., 1992. Effects of suntan on judgements of healthiness and attractiveness by adolescents. *Journal of Applied Psychology*, 22 (2), 157-172.

BRODY, B. A., 2001. A historical introduction to the requirement of obtaining informed consent from research participants. *In*: L. DOYAL, J. S. TOBIAS, eds. *Informed Consent in Medical Research*, London: BMJ Books, 7-14.

BURGESS, L., 1998. Sun awareness for children: be cool - know the rules. *British Journal of Community Nursing*, 3 (7), 337 - 44.

CAFRI, G., THOMPSON, K., ROEHRIG, M., VAN den BERG, P., JACOBSEN, P., STARK, S., 2006. An investigation of appearance motives for tanning: The development and evaluation of The Physical Appearance Reasons for Tanning Scale (PARTS) and its relation to sunbathing and indoor tanning intentions. *Body Image*, 3, 100-209.

CANCER RESEARCH UK, 2004. *Celebrities say be sunsmart this winter* (online). Cancer Research UK. Available from: http://info.cancerresearchuk.org/news/archive/pressreleases/2004/october/222289 (Accessed 19 February 2008).

CANCER RESEARCH UK, 2005, *Young people and skin cancer* (online). Available from: http://www.sunsmart.org.uk (Accessed 9 May 2007).

CANCER RESEARCH UK, 2006a.
Press release archive: adopting industry marketing tactics improves health, say experts (online). Available from: http://info.cancerresearchuk.org/news/pressreleases/2006/may159411 (Accessed 9 May 2007).

CANCER RESEARCH UK, 2006b. *Stay safe* (online). Available from: http://info.cancerresearchuk.org/healthyliving/sunsmart/staysafe/ (Accessed 4 March 2008).

CANCER RESEARCH UK, 2007a. *About sunsmart. Past campaigns* (online). Cancer Research UK. Available from: http://info.cancerresearchuk.org/healthyliving/sunsmart/pastcampaigns/ (Accessed 9 May 2007).

CANCER RESEARCH UK, 2007b.
News and resources: SunSmart campaign strategy (online). Available from: http://info.cancerresearchuk.org/healthyliving/sunsmart/forprofessionals/campaignstrategy (Accessed 9 May 2007).

CANCER RESEARCH UK, 2007c. *Skin cancer – melanoma* (online). Available from: http://info.cancerresearchuk.org/cancerstats/types/melanoma/incidence/ (Accessed 3 March 2007).

CARTER, O., DONOVAN, R., 2007. Public (Mis)understanding of the UV index. *Journal of Health Communication*, 12, 41-52.

CHARMAZ, K., 2006. *Constructing a grounded theory. A practical guide through qualitative analysis*. London: SAGE Publications.

CHOLACHATPINYO, A., FLETCHER, B., PADGETT, I., CROCKER, M., 2002. A conceptual model of the fashion process. Part 1. The fashion transformation process model. *Journal of Fashion Marketing and Management*. 6 (1), 11-23.

CHOW, J., 2004. Adolescents' perceptions of popular teen magazines. *Journal of Advanced Nursing*, 48 (2), 132-139.

CHRISTENSEN, P., JAMES, A., eds. 2000. *Research with children: perspectives and practice*, London: Falmer Press.

CLARK, R. P., EDHOLM, O. G., 1985. *Man and his thermal environment*. London: Edward Arnold.

COCKBURN, J., HENNIKUS, D., SCOTT, R., SANSON - FISHER, R., 1989. Adolescent use of sun protection measures. *Medical Journal of Australia*, (151), 136- 40.

COKKINIDES,V.E., JOHNSTON-DAVIS, K.,WEINSTOCK, M., O'CONNELL, M.C., KALSBEEK, W., THUN, M. J., WINGO, P. A., 2001. Sun exposure and sun-protection behaviours and attitudes among US youth, 11 to 18 years of age. *Preventive Medicine*, 33, 141-151.

COLEMAN, J., 2007. Emotional health and wellbeing. *In*: J. COLEMAN, L. B. HENDRY, M. KLOEP eds. *Adolescence and health*. Chichester: John Wiley and Sons Ltd., 41-60.

COLEMAN, J., HENDRY, L. B., KLOEP, M., eds. 2007. *Adolescence and health*. Chichester : John Wiley and Sons Ltd.

COOLEY, C. H., 1967. Looking Glass Self. *In*: J. G. MAVIS, B.N. MELTZER. *Symbolic interactionism: a reader in social psychology*. Boston: Allyn and Bacon inc. 231-233.

COSTELLO, J., 2003. Social exclusion and public health. *In*: J. COSTELLO and M. HAGGART, eds. *Public health and society*. Basingstoke: Palgrave Macmillan.

CRESSWELL, J., 1998. A cover-up operation to target sunseekers. *Community Nurse*, 4 (5), 25 - 28.

CROSSLEY, M. L., 2001. Rethinking psychological approaches towards health promotion. *Psychology and Health*, 16, 161-177.

DAVIS, K., COKKINIDES, V., WEINSTOCK, M., O'CONNELL, M. C., WINGO, P. A., 2002. Summer sunburn and sun exposure among US youths ages 11-18: national prevalence and associated factors. *Pediatrics*, 110 (1), 27-35.

De GRUIJL, F. R., 1999. Skin cancer and solar radiation. *European Journal of Skin Cancer*, 35 (14), 2003-2009.

De VRIES, H., MESTERS, I., van't RIET, J., WILLEMS, K., REUBSAET, A., 2006. Motives of Belgian adolescents for using sunscreen: The role of action plans. *Cancer Epidemiology, Biomarkers and Prevention*, 15 (7), 1360-1366.

DECI, E. L., FLASTE, L. R., 1995. *Why we do what we do. Understanding self-motivation*. London: Penguin Books.

DEPARTMENT FOR EDUCATION AND SKILLS, DEPARTMENT OF HEALTH, 2004. *The national service framework for children, young people and maternity services* (online). London: Department of Health. Available from: http://www.gov.uk/PublicationsAnd Statistics/Publications/ (Accessed on 28th June 2006).

DEPARTMENT OF HEALTH, 1989. *The children act 1989*. London: The Stationary Office.

DEPARTMENT OF HEALTH, 1992. The *health of the nation. A strategy for health in England*. London: HMSO.

DEPARTMENT OF HEALTH, 1993. *The health of the nation, key area handbook, cancers*. London: HMSO.

DEPARTMENT OF HEALTH, 1999. *Saving lives: our healthier nation* (online), London: The Stationary Office. Available from: http://official-documents.co.uk/document/doh/ohnation/ohnch4.htm (Accessed 14 October 1999).

DEPARTMENT of HEALTH, 2000a. *Sun know how* (online). Department of Health. Available from: http://www.doh.gov.uk/sunknowhow/sunmain.htm (Accessed 26 November 2001).

DEPARTMENT OF HEALTH, 2000b. *The NHS cancer plan. A plan for investment. A plan for reform* (online). Department of Health. Available from: http://www.dh.gov.uk/en/Publicationsandstatistics (Accessed 9 May 2007).

DEPARTMENT OF HEALTH, 2001 a. *Governance arrangements for NHS research ethics committees* (online). Department of Health. Available from: http://www.doh.gov.uk/research/documents/gafrec.pdf (Accessed 17 April 2003).

DEPARTMENT OF HEALTH, 2001b. *Seeking consent: working with children*. London: Department of Health.

DEPARTMENT OF HEALTH, 2001c. *Research governance framework for health and social care*. London: Department of Health.

DEPARTMENT OF HEALTH, 2004. *The NHS cancer plan and the new NHS. Providing a patient-centred service* (online). Department of Health. Available from: http://www.dh.gov.uk (Accessed 9 May 2007).

DEPARTMENT OF HEALTH, 2006. *Fact sheet on social marketing* (online). Department of Health. Available from: http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndguidance/DH_4139513 (Accessed 31 May 2007).

DEPARTMENT OF HEALTH, 2007. *Cancer reform strategy. NHS* (online). Available from:

http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_081006
(Accessed 31 January 2007).

DEPARTMENT OF HEALTH AND NATIONAL CONSUMER COUNCIL 2005. *Realising the potential of effective social marketing. Developing the national social marketing strategy for health* (online). National Consumer Council. Available from: http://www.ncc.org.uk/health/publications.htm (Accessed 31 May 2007).

DEPOY, E., GITLIN, L. N., 2005. *Introduction to research. Understanding and applying multiple strategies*. 3rd ed. Missouri: Elsevier Mosby.

DEVOS, S. A., BAEYENS, K., VAN HECKE, L., 2003. Sunscreen use and skin protection on a Belgian beach. *International Journal of Dermatology*, 42, 352-356.

DIFFEY, B. L., GIBSON, C. J., HAYLOCK, R., McKINLAY, A. F., 1996. Outdoor ultraviolet exposure of children and adolescents. *British Journal of Dermatology*, 134, 1030-1034

DIFFEY, B., 2001. Sunscreen isn't enough. *Journal of Photochemistry and Biology*, 64, 105-108.

DIXON, H., BORLAND, R., HILL, D., 1999. Sun protection and sunburn in primary school children: the influence of age, gender and coloring. *Preventive Medicine*, 28, 119 - 130.

DORSET COUNTY COUNCIL AND THE NHS, 2004. *Health in Dorset* (online). Available from: http://www.dorset-pct.nhs.uk/publications/index.asp (Accessed 3 October 2007).

DORSET HEALTH AUTHORITY (DHA), 1999a. *A Strategic framework for improving health services in Dorset 2000-2005*. Dorset Health Authority.

DORSET HEALTH AUTHORITY (DHA), 1999b. *Better health and health care for Dorset. The Dorset health improvement programme 1999-2002*. Dorset Health Authority.

DORSET HEALTH AUTHORITY (DHA), 2000. *The Dorset health improvement plan 2001-2004*. Dorset Health Authority.

DOYAL, L., and TOBIAS, J. S., eds. 2001. *Informed consent in medical research*, London: BMJ Books.

EADIE, D., MacASKILL, S., 2003. *Qualitative research to investigate attitudes to the sun, sun protection and skin cancer among children and young people. Main findings. (2003-2004)*. Glasgow: Centre for Social Marketing. (Access and permission to cite gained via personal communication to Cancer Research UK).

EADIE, D., MacASKILL, S., 2006. Results from an exploratory study of sun protection practice. Implications for the design of health promotion messages. *Health Education*, 107 (3), 250-260.

EISER, J., EISER, C., SANI, F., SELL, L., CASAS, M., 1995. Skin cancer attitudes: a cross-national comparison. *British Journal of Social Psychology*, 34, 23-30.

EL SAYED, F., AMMOURY,A ., NAKHLE,F., DHAYBI,R., MARGUERY, M., 2006. Photoprotection in teenagers. *Photodermatology, Photoimmunology and Photomedicine*, 22, 18-21.

EUROPEAN COMMISSION, 2000. *Report on the state of young people's health in the European Union*. Luxembourg: European Commission.

EZZEDINE, K., GUINOT, C., MAUGER, E., PISTONE, T., RECEVEUR, M., GALAN, P., HERCBERG, S., MALVY, D., 2007. Travellers to high UV-index countries: sun exposure behaviour in 7822 French adults. *Travel Medicine and Infectious Disease*, 5, 176-182.

FARMER, K. L., GOLLER, M., LIPPMAN, S. A., 1997. Prevention of non melanoma skin cancer. Standard and investigative approaches. *Clinics in Plastic Surgery*, 24 (4), 663-673.

FIELDER, H., LO, S. V., SHORNEY, S., ROBERTS, D. L., 1996. Skin, sun and sense: an evaluation of a skin cancer prevention campaign. *Health Education Journal*, 55 (4), 431-438.

FILIZ, T., CINAR, N., TOPSEVER, P., UCAR, F., 2006. Tanning youth: knowledge, behaviours and attitudes toward sun protection of high school students in Sakarya, Turkey. *Journal of Adolescent Health*, 38, 469-471.

FORSNER, M., JANSSON, L., SØRLIE, V., 2005. Being ill as narrated by children aged 11-18 years. *Journal of Child Health Care*, 9, 314-323.

GAGGE, A. P., STOLWIJK, J. A. J., HARDY, J. D., 1967. Comfort and thermal sensations and associated physiological responses at various ambient temperatures. *Environmental Research*, 1, 1-20.

GALLAGHER, R. P., HILL, G. B., BADJIK, C. D., FINCHAM, S., COLDMAN, A. J., McLEAN, D. I., THRELFALL, W. J., 1995. Sunlight exposure, pigmentary factors, and risk of nonmelanocytic skin cancer. *Archives of Dermatology*. 131, 157-163.

GEFELLER, O., PFAHLBERG, A., 2002. Sunscreen use and melanoma: a case of evidence-based prevention? *Photodermatology, Photoimmunology and Photomedicine*. 18, 153-156.

GELLER, A. C., SHAMBAN, J., O'RIORDAN, D. L., SLYGH, C., KINNEY, J. P., ROSENBERG, S., 2005. Raising sun protection and early detection awareness among Florida high schoolers. *Pediatric Dermatology*, 22 (20), 112-118.

GIACOMONI, P., 2001. *Sun Protection in Man*. Elsevier: London.

GINSBERG, K. R., 2003. Developing our future: seeing and expecting the best in youth. *Journal of Midwifery and Women's Health*, 48 (3), 167-169.

Glamour, 2006. April. London: Condé Nast Publications.

GLASER, B. G., 1978. *Advances in the methodology of grounded theory. Theoretical sensitivity*. California: University of California.

GLASER, B. G., 1992. *Emergence vs forcing. Basics of grounded theory analysis.* California Mill Valley: Sociology Press.

GLASER, B. G., 1998. *Doing grounded theory: issues and discussions*. California: Sociology Press.

GLASER, B. G., 2001. *The grounded theory perspective: conceptualisation contrasted with description*. California: Sociology Press.

GLASER, B. G., 2003. *The grounded theory perspective II: description's remodeling of grounded theory methodology*. California: Sociology Press.

GLASER, B. G., STRAUSS, A. L., 1967. *The discovery of grounded theory: strategies for qualitative research*. New York: Aldine de Gruyter.

GOFFMAN, E., 1967. The presentation of self to others *In*: J. G. MAVIS, B. N. MELTZER, eds. *Symbolic interactionism: a reader in social psychology*. Boston: Allyn and Bacon inc. 243 – 237.

GRAFFUNDER, C. M., WYATT, S. W., BEWERSE, B., HALL, I., REILLEY, B., LEE PETHER, R., 1999. Skin cancer prevention: the problem and lessons learned. *Health Education and Behaviour*, 26 (3), 308 - 317.

GRANT, I. J., STEPHEN, G. R., 2005. Buying behaviour of 'tweenage' girls and key societal communicating factors influencing their purchasing of fashion clothing. *Journal of Fashion Marketing and Management*, 9 (4), 450-467.

GREEN, J., HART, L., 1999. The impact of context on data. *In*: R. S. BARBOUR, J. KITZINGER, eds. 1999. *Developing focus group research: politics, theory and practice.* London: SAGE Publications, 21-35.

GRIEG, A., TAYLOR, J., 1999. *Doing research with children*. London: SAGE Publications.

GRIFFIN, C. 2004. Representations of the young. *In*: J. ROCHE, S. TUCKER, R. THOMSON, R. FLYNN, eds. *Youth in society, contemporary theory, policy and practice.* 2nd Edition. London: Sage Publications in association with The Open University Press, 10-18.

GROB, J. J., GUGLIELMINA, C., GONVERNET, J., ZAROUR, H., NOE, C., BONERANDI, J. J., 1993. Study of sunbathing habits in children and adolescents: application to the prevention of melanoma. *Dermatology*, 186, 94-98.

GROPPER, E. J., 1992. Promoting health by promoting comfort. *Nursing Forum*, 27 (2), 5-7.

GROSS, R., 2005. *Psychology. The science of mind and behaviour*. 5th ed. London: Hodder and Stoughton.

GRUNFELD, E. A., 2004. What influences university students' intentions to practice safe sun exposure behaviours? *Journal of Adolescent Health*, 35, 486-492.

HARPER, S., REHFUESS, E., JONES, J., 2002. *Sun protection: an essential element of health-promoting schools. World Health Organisation series on school health document 7* (online). (WHO copyright). Available from: http://www.who/int/school_youth_health/media/en/456.pdf (Accessed 8 April 2008).

HARTER, S., BRESNICK, S., BOUCHEY, H. A., WHITESELL, N. R., 1997. The development of multiple role-related selves during adolescence. *Development and Psychopathology*, 9, 835-853.

HARTER, S., 2003. The development of self-representations during childhood and adolescence. *In*: M. LEARY, J. P. TANGNEY, eds. *Handbook of self and identity.* London: The Guildford Press, 610-642.

HARVARD MEDICAL SCHOOL, 2004. Ouch: sunburn and what to do about it. *Harvard Women's Health Watch*, June, 6-7.

HARVEY, I., 1995. *Prevention of skin cancer: A review of available strategies, Bristol, health care evaluation unit*, University of Bristol: Department of Social Medicine.

HEALTH DEVELOPMENT AGENCY, 2002. *Cancer prevention. A resource to support local action in delivering the NHS cancer plan* (online). Health Development Agency. Available from: http://nice.org.uk/page.aspX?o=502315 (Accessed 9 May 2007).

Heat, 2006. May 6-12. London: Emap.

HEFFERNAN, A. E., O'SULLIVAN, A., 1998. Pediatric sun exposure. *The Nurse Practitioner*, 23 (7), 67 – 86.

Hello!, 2006. Mar 21. London: Hello! Ltd.

HICKS, J. J., 2002. The truth. *In*: P., KOTLER, N., ROBERTO, N., LEE, 2002. *Social marketing. Improving the quality of life*, 2nd ed. London: SAGE publications, 47-66.

HILL, M., 1999. What's the problem? Who can help? The perspectives of children and young people on their wellbeing and on helping professionals. *Journal of Social work Practice*, 13 (2), 135 – 145.

HILLHOUSE, J., TURRISI, R., 2002. Examination of an appearance-focused intervention to reduce UV exposure. *Journal of Behavioral Medicine*, 25 (4), 395-409.

HOANG, M. T., EICHENFIELD, L. F., 2000. The rising incidence of melanoma in children and adolescents. *Dermatology Nursing*, 12 (3), 188-9, 192-3.

HOLICK, M. F., 2001. A perspective on the beneficial effects of moderate sun exposure to sunlight: bone health, cancer prevention, mental health and wellbeing. *In*: P. GIACOMONI, *Sun protection in man*. London: Elsevier, 11-38.

HOLME, S. A., MALINOVSKY, K., ROBERTS, D. L., 2000. Changing trends in non-melanoma skin cancer in South Wales, 1988-98. *British Journal of Dermatology*, 143 (6), 1224-1229.

HOLLOWAY, I., ed. 2005. *Qualitative research in healthcare*. Maidenhead: Open University Press.

HOLLOWAY, I., WHEELER, S., 2002. *Qualitative research in nursing*. 2nd ed. Oxford: Blackwell Science.

Hot Stars, 2006. Mar 18-24. London: Express Newspapers.

HOWARD, W., 1997. *Attitudes to sunbathing and the risks of skin cancer*. London: Health Education Authority.

HUBER, J., CLANDININ, D. J., 2002. Ethical dilemmas in relational narrative enquiry with children. *Qualitative Inquiry*, 8 (6), 785-803.

HUGHES, B. R., ALTMAN, D. G., NEWTON, J. A., 1993. Melanoma and skin cancer: evaluation of a health education programme for secondary schools. *British Journal of Dermatology*, 128, 412-417.

INSTITUTE FOR SOCIAL MARKETING, 2007. *Welcome to the institute for social marketing* (online). University of Strathclyde. Available from: http://ism.stir.ac.uk/index.htm (Accessed 9 May 2007).

JACKSON, K. M., AIKEN, L. S., 2006. Evaluation of a multicomponent appearances-based sunprotective intervention for young women: uncovering the mechanisms of program efficacy. *Health Psychology*, 25 (1), 34-46.

JONES, F., HARRIS, P., CHRISPIN, C., 2000. Catching the sun: an investigation of sun exposure and skin protective behaviour. *Psychology, Health and Medicine*, 5 (2), 131-140.

JONES, L., DOUGLAS, J., 2000. The rise of health promotion *In*: J.KATZ, A. PEBERDY, J. DOUGLAS, eds. *Promoting health, knowledge and practice*. Basingstoke: The Open University in association with Palgrave, 58-80.

KAMIN, C., O'NEILL, P., AHEARN, M., 1993. Developing and evaluating a cancer prevention teaching module for secondary education: project safety (sun awareness for educating today's youth). *Journal of Cancer Education*, 8 (4), 313-318.

KATZ, M., 1997. Non melanoma skin cancer. *Maryland Medical Journal*, 46 (5), 239-242.

KEESLING, B., FRIEDMAN, H.S., 1987. Psychosocial factors in sunbathing and sunscreen use. *Health Psychology*, 6 (5), 477-493.

KENNEDY, I., GRUBB, A., 2000. *Medical law*. London: Butterworth Press.

KIGER, A., M., 2004. *Teaching for health*. London: Churchill Livingstone.

KITZINGER, J., 1994. The methodology of focus groups: the importance of interaction between research participants. *Sociology of Health and Illness*, 16 (1), 103-121.

KITZINGER, J., BARBOUR, R. S., 1999. Introduction: the challenge and promise of focus groups. *In*: R. S. BARBOUR, J. KITZINGER, eds. *Developing focus group research: politics, theory and practice*. London: SAGE Publications, 1-20.

KOBLENZER, C. S., 1998. The psychology of sun exposure and tanning. *Clinical Dermatology*, 16 (4), 421-428.

KOH, H. K., GELLER, A. C., MILLER, D. R., GROSSBART, T. A., LEW, R. A., 1996. Prevention and early detection strategies for melanoma and skin cancers. *Archives of Dermatology*, 132 (4), 436 - 443.

KORTESLUOMA, R., HENTINEN, M., NIKKONEN, M., 2003. Conducting a qualitative child interview: methodological considerations. *Journal of Advanced Nursing*, 42 (5), 434-441.

KOTLER, P., ROBERTO, N., LEE, N., 2002. *Social marketing. Improving the quality of life.* 2nd ed. SAGE publications: London.

KURZBAN, R., LEARY, M. R., 2001. Evolutionary origins of stigmatization: The functions of social exclusion. *Psychological Bulletin*, 127 (2), 187-208.

KVALE, S., 1996. *InterViews. An introduction to qualitative research interviewing.* London: SAGE Publications.

LAURANCE, J., 2004. Advice to avoid the sun should be lifted, say cancer experts. *The Independent,* 31 January p.15.

LEARY, M. R., JONES, J., L. 1993. The social psychology of tanning and sunscreen use: self-presentational motives as a predictor of health risk. *Journal of Applied Social Psychology*, 23 (17), 1390-1406.

LEARY, M, R., TCHIVIDJIAN, L. R., KRAXBERGER, B. E. 1994. Self-presentation can be hazardous to your health: impression management and health risk. *Health Psychology*, 13 (6), 461-470.

LEARY, M., R. 1995. Self-presentation. *Impression management and interpersonal behaviour*. Colorado: Westview Press.

LI, Y., 2005. Perceptions of temperature, moisture and comfort in clothing during environmental transients. *Ergonomics*, 48 (3), 234-248.

LING, T. C., FAULKNER, C., RHODES, L. E., 2003. A questionnaire survey of attitudes to and usage of sunscreens in northwest England. *Photodermatology, Photoimmunology and Photomedicine*, 19, 98-101.

LIVINGSTON, P. M., WHITE, V., UGONI, A. M., BORLAND, R., 2001. Knowledge, attitudes and self-care practices related to sun protection among secondary students in Australia. *Health Education Research*, 16 (3), 269-278.

LIVINGSTON, P. M., WHITE, V., HAYMAN, J., DOBBINSON, S., 2003. Sun exposure and sun protection behaviours among Australian adolescents: trends over time. *Preventive Medicine* 37, 577-584.

LIVINGSTON, P. M., WHITE, V., HAYMAN, J., DOBBINSON, S., 2007. Australian adolescents sun protection behavior: who are we kidding? *Preventive Medicine*, 44, 502-512.

LOVATO, C. Y., SHOVELLER, J. A., PETERS, L., RIVERS, J. K., 1998. Canadian national survey on sun exposure and protective behaviours: youth at leisure. *Cancer Prevention and Control*, 2 (3), 117-122.

LOWE, J. B., BALANDA, K. P., STANTON, W. R., GILLESPIE, A. M., 1999. Evaluation of a three year school-based intervention to increase adolescent sun protection. *Health Education and Behavior*, 26 (3), 396-409.

LOWE, L., CUTCLIFFE, J. R., 2005. A concept analysis of comfort. *In*: J. R. CUTCLIFFE, H. P. McKENNA, *The essential concepts of nursing. Building blocks for practice*. London: Elsevier Churchill Livingstone, 51-62.

LOWER, T., GIRGIS, A., SANSON-FISHER, R., 1998. The prevalence and predictors of solar protection among adolescents. *Preventive Medicine*, 27, 391-399.

LUPTON, D., GAFFNEY, D., 1996. Discourses and practices related to suntanning and solar protection among young Australians. *Health Education Research*, 11 (2), 147-159.

MACFARLANE, A., McPHERSON, A., 2007. Getting it right in health services for young people. *In*: J. COLEMAN, L. B. HENDRY, M. KLOEP, eds. *Adolescence and health*. Chichester: John Wiley and Sons Ltd., 123-142.

MACGREGOR, D. M., WHITE, M. I., 2001. Sunburn in children - The Aberdeen experience. *Clinical and Experimental Dermatology*, 26, 137-140.

MacKINNON, D., 2007. Health promotion and health education. *In*: J. COLEMAN, L. B. HENDRY, M. KLOEP, eds. *Adolescence and health*. Chichester: John Wiley and Sons Ltd., 41-60.

MARCOUX, D., 2000. Appearance, cosmetics and body art in adolescence. *Dermatology Clinics*, 18 (4), 667-673.

MARIEB, E. N., 2004. *Human anatomy and physiology*. London: Pearson/ Benjamin Cummings.

MARKET RESEARCH SOCIETY, 2000. *Guidelines for research among children and young people. Market Research Society* (online). Available from: http://www.mrs.org.uk/standards/downloads/children.pdf (Accessed 23 May 2003).

MARKS, R., 1994. Primary prevention of skin cancer. *British Medical Journal*, 309, 285-286.

MARKS, R., 1999. Two decades of the public health approach to skin cancer control in Australia: why, how and where are we now? *Australasian Journal of Dermatology*, 40, 1-5.

MARTIN, S.C., JACOBSEN, P.B., LUCAS, D.J., BRANCH, K.A., FERRON, J.M., 1999. Predicting children's sunscreen use: application of the theories of reasoned action and planned behaviour. *Preventive Medicine*, 29, 37-44.

MARTIN, K. A., LEARY, M., O'BRIEN, J., 2001. Role of self-presentation in the health practices of a sample of Irish adolescents. *Journal of Adolescent Health*, 28, 259-262.

MASLOW, A. H., 1987. *Motivation and personality*. 3rd ed. New York: Harper Collins Publishers.

MASSON, J., 2000. Researching children's perspectives: legal issues. *In*: A. LEWIS, G. LINDSAY, eds. *Researching children's perspectives*. Buckingham: Open University Press, 34-45.

McGEE, R., WILLIAMS, S., 1992. Adolescence and sun protection. *New Zealand Medical Journal*, 105 (943), 401-403.

MEAD, G. H., 1934. *Mind, self and society from the standpoint of a social behaviourist.* London: The University of Chicago Press.

MELIA, K. M., 1996. Rediscovering Glaser. *Qualitative Health Research*, 6 (3), 368-378.

MELIA, J., PENDRY, L., EISER, J. R., HARLAND, C., MOSS, S., 2000. Evaluation of primary prevention initiatives for skin cancer: a review from a UK perspective. *British Journal of Dermatology*, 143, 701-708.

MERMELSTEIN, R. J., REISENBERG, L. A., 1992. Changing knowledge and attitudes about skin cancer risk factors in adolescents, *Health Psychology*, 11 (6), 371-376.

MICHAUD, P. J., 2006. Adolescents and risks: Why not change our paradigm? *Journal of Adolescent Health*, 38, 481-483.

MICHEL, L., 1999. Combining focus groups and interviews: telling how it is; telling how it feels. *In*: R. S. BARBOUR, J. KITZINGER, eds. 1999. *Developing focus group research: politics, theory and practice.* London: SAGE Publications, 36-46.

MILES, A., WALLER, J., HIOM, S., SWANSTON, D., 2005. SunSmart? Skin cancer knowledge and preventive behaviour in a British population representative sample. *Health Education Research*, 20 (5), 579-585.

MOON, G., GOULD, M. AND COLLEAGUES, 2000. *Epidemiology: An introduction.* Buckingham: Open University Press.

MONTAGUE, M., BORLAND, R., SINCLAIR, C., 2001. Slip! slop! slap! and sunsmart, 1980 – 2000: skin cancer control and 20 years of population-based campaigning. *Health and Education Behavior*, 28 (3), 290-305.

MONTGOMERY, J., 2001. Informed consent and clinical research with children. *In*: L. DOYAL, J. S. TOBIAS, eds. *Informed consent in medical research*. London: BMJ Books, 173-182.

MORGAN, D. L. 1988. *Focus groups in qualitative research*. Newbury Park California: Sage.

MORGAN, D. L., 1998. *The focus group guide book. Focus group kit 1*. London: Sage publications.

MORSE, J. M., BARRETT, M., MAYAN, M., OLSON, K., SPIERS, J., 2002. Verification strategies for establishing reliability and validity in qualitative research. *International Journal of Qualitative Methods*, 1 (2), 1-6.

NAIDOO, J., WILLS, J., eds. 2001. *Health studies. An introduction*. Basingstoke: Palgrave.

NATIONAL CHILDREN'S BUREAU (NCB), 2002. *Guidelines for Research. National Children's Bureau* (online). Available from: http://www.ncb.org.uk/research/research_guidelines.pdf. (Accessed 23 May 2003).

NATIONAL INSTITUTE FOR HEALTH AND CLINICAL EXCELLENCE (NICE), 2007. *Behaviour change at population, community and individual levels. NICE public health guidance 6*. London: NICE.

NURSING AND MIDWIFERY COUNCIL (NMC), 2002. *Code of professional conduct.* London: NMC.

NUTBEAM, D., 2006. Using theory to guide individual behaviour change. *In*: M. DAVIES, W. MACDOWALL, eds. *Health promotion theory*. Maidenhead: Open University Press, 24-36.

OFFICE FOR NATIONAL STATISTICS (ONS) 2006. *Cancer statistics, registrations. Registrations of cancer diagnosed in 2004, England* (online). London: Office for National Statistics. Available from: http://www,statistics.gov.uk/downloads/theme_health/MBI_No%2035_2004.pdf#page=36 (Accessed 5 February 2007).

OK!, 2006. Mar 21. London: Express Newspapers.

PAILTHORPE, M., 1998. Apparel textiles and sun protection: a marketing opportunity or a quality control nightmare? *Mutation Research*, 422, 175-183.

P!NK, 2006. Stupid girls. *In*: P!NK. *I'm not dead* (CD). Atlanta, Ga: LaFace Records.

PIPHER, M., 1994. *Reviving Ophelia. Saving the selves of adolescent girls*. New York: Riverhead Books.

PRICE, J., NESS, A., LEARY, S., KENNEDY, C., 2006. Sun-safety behaviors of skiers and snowboarders on the South Island of New Zealand. *Journal of Cosmetic Dermatology*, 5, 39-47.

PRUIM, B., WRIGHT, L., GREEN, A., 1999. Do people who apply sunscreens, re-apply them? *Australasian Journal of Dermatology*. 40, 79-82.

PURVES, W. K., ORIANS, G. H., HELLER, H. G., SADAVA, D., 1998. *Life. The science of biology*. Massachusetts: Sinauer Associates, Inc. Freeman and Company.

QUINN, A. G., 1997. Ultraviolet radiation and skin carcinogenesis. *British Journal of Hospital Medicine*, 56 (6), 261-4.

RAMSTACK, J. L., WHITE, S. LE., HAZELKORN, K. S., MEYSKENS, F. L., 1986. Sunshine and skin cancer: a school-based skin cancer prevention project. *Journal of Cancer Education*, 1 (3), 169-176.

REYNOLDS, K. D., BLAUM, J. M., JESTER, P. M., WEISS, H., SOONG, S. J., DICLEMENTE, R. J., 1996. Predictors of sun exposure in adolescents in a South East US population. *Journal of Adolescent Health*, 19 (6), 409-415.

Reveal, 2006. London: National Magazine Company.

RICH, M., GINSBURG, K. R. 1999. The reason and rhyme of qualitative research : why, when and how to use qualitative methods in the study of adolescents. *Journal of Adolescent Health*, 25, 371-378.

RICHARDS, R., 2001. Sunburn and sun protection among New Zealand adolescents over a summer weekend. *Journal of Public Health (Australian and New Zealand Journal of Public Health*, 25 (4), 352-4.

RICHARDS, R., McGEE, R., KNIGHT, R. G. 2001. Sun protection practices, knowledge and attitudes to tans among New Zealand Adolescents 1991-1997. *New Zealand Medical Journal*, 114 (1132), 229-31.

RIPPEY, J. J., RIPPEY, E., 1997. Characteristics of incompletely excised basal cell carcinoma of the skin. *Medical Journal of Australia*, 166 (11), 581-3.

ROBERTS, H., 2000. Listening to children: and hearing them. *In*: P. CHRISTENSEN, A. JAMES, eds. *Research with children: perspectives and practice*. London: Falmer Press, 225-239.

ROBINSON, J. K., RIGEL, D. S., AMONETTE, R. A., 1997a. Trends in sun exposure knowledge, attitudes and behaviours. *Journal of the American Academy of Dermatology*, 37 (2 part 1), 179-86.

ROBINSON, J. K., RADEMAKER, A. W., SYLVESTER, J. A., COOKE, B., 1997b. Summer sun exposure: knowledge, attitudes and behaviours of Midwest adolescents. *Preventive Medicine*, 26 (3), 364-72.

ROCHE, J., 2004, Children's Rights: participation and dialogue. *In*: J. ROCHE, S. TUCKER, R. THOMSON, R. FLYNN, eds. 2004. *Youth in society, contemporary theory, policy and practice*, 2nd ed. London: Sage Publications in Association with The Open University Press, 42-51.

ROGERS, E., 2003. *Diffusion of innovations*. 5th ed. New York: Free Press.

ROSENBERG, M., 1986. Self-concept from middle childhood through adolescence. *Psychological Perspectives on the Self*, 3, 182-205.

ROYAL COLLEGE OF PAEDIATRICS AND CHILD HEALTH, (Ethics Advisory Committee), 2000. Guidelines for the ethical conduct of medical research involving children. *Archives of Diseases in Childhood*, 82, 177-82.

RUXTON, S., 1996. *Children in Europe*. London: NCH Action for Children.

RYAN, R. M., DECI, E. L., 2001. On happiness and human potentials: a review of research on hedonic and eudaimonic wellbeing. *Annual Review Psychology*, 52, 141-166.

SARGEANT, A., 2001. Social and cause-related marketing: the growth of a discipline? *In*: M. T. EWING, ed. *Social Marketing*. New York: Best Business Books, xi.

SARAIYA, M., GLANZ, K., BRISS, P., NICHOLS, P., WHITE, C., DAS, D., JAY SMITH, S., TANNOR, B., HUTHINSON, A., WILSON, K., GHANDI, N., LEE, N., RIMER, B., COATES, R., KERNER, J., HIATT, R., BUFFLER, P., ROCHESTER, P., 2004. Interventions to prevent skin cancer by reducing exposure to ultraviolet radiation. *American Journal of Preventive Medicine*, 27 (5), 422-466.

SAVONA, M. R., JACOBSEN, M. D., JAMES, R., OWEN, M., 2005. Ultraviolet radiation and the risks of cutaneous malignant melanoma and non-melanoma skin cancer: perceptions of Danish and American adolescents. *European Journal of Cancer Prevention*, 14 (1), 57-62.

SCHEMPP, C. M., BLÜMKE, C., SCHÖPF, E., SIMON, J. C., 1997. Skin sensitivity to UV-B radiation is differentially increased by exposure to water and different salt solutions. *Archive of Dermatology*, 113 (12), 1610.

SHAPIRO, R., SIEGEL, A.W., SCOVILL, L.C., HAYS, J., 1998. Risk-taking patterns of female adolescents: what they do and why. *Journal of Adolescence*, 21, 143-159.

SHEPHERD, J., GARCIA, J., OLIVER, S, HARDEN, A., REES, R., OAKLEY, A., 2002. *Barriers to, and facilitators of the health of young people: a systematic review of evidence on young people's views and on interventions in mental health, physical activity and healthy eating. Volume 2: complete report*. London: EPPI-Centre, Social Science Research Unit, Institute of Education, University of London.

SHOVELLER, J. A., LOVATO, C.Y., YOUNG, R. A., MOFFAT, B., 2003. Exploring the development of sun-tanning behaviour: a grounded theory study of adolescents' decision-making experiences with becoming a sun tanner. *International Journal of Behavioral Medicine*, 10 (4), 299-314.

SHUCKSMITH, J., SPRATT, J., 2002. *Young people's self-identified health needs*. University of Aberdeen: The Rowan group.

SINATS. P., SCOTT, D. G., McFERRAN, S., HITTOS, M., CRAGG, C., LEBLANC, T., BROOKS, D., 2005. Writing ourselves into being: writing as spiritual self-care for adolescent girls. Part two.
International Journal of Children's Spirituality, 10 (3), 263-276.

SJÖBERG, L., HOLM, L. E., ULLÉN H., BRANDBERG, Y., 2004. Tanning and risk perception in adolescents. *Health, Risk and Society*, 6 (1), 81-94.

SOUTHWEST CANCER INTELLIGENCE SERVICE, 2007. *Factsheet number two: malignant melanoma in the South West. ICD-10: C43* (online). Southwest Cancer Intelligence Service. Available from: http://www.swpho.nhs.uk/resource/item.aspx?RID=9083 (Accessed 31October 2007).

STANTON, W. R., JANDA, M., BAADE, P., ANDERSON, P., 2004. Primary prevention of skin cancer: a review of sun protection in Australia and internationally. *Health Promotion International*, 19 (3), 369- 375.

STANTON, W. R., MOFFATT, J., CLAVARINO, A., 2005. Community perceptions of adequate levels and reasons for skin protection. *Behavioral Medicine*, 31, 5-15.

STERN, P. N., COVAN, E. K., 2001. Early grounded theory: its processes and products. *In*: R. S. SCHREIBER, P. N. STERN, eds. *Using grounded theory in nursing*. New York: Springer Publishing Company, 17-34.

STEVENS, R., 1996. *Understanding the self.* London: SAGE publications.

STRAUSS, A., CORBIN, J., 1990. *Basics of qualitative research. Grounded theory procedures and techniques*. London: SAGE publications.

STROM, S. S., YAMAMURA, Y., 1997. Epidemiology of nonmelanoma skin cancer. *Clinical Plastic Surgery*, 24, (4), 627-636.

TASK FORCE ON COMMUNITY PREVENTIVE SERVICES, 2004. Recommendations to prevent skin cancer by reducing exposure to ultraviolet radiation. *American Journal of Preventive Medicine*, 27 (5), 467-470.

TERMORSHUIZEN, F., WIJGA, A., GARSSEN, J., DEN OUTER, P. N., SLAPER, H., VAN LOVEREN, H., 2002. Exposure to solar ultraviolet radiation in young Dutch children: assessment by means of a 6-week retrospective questionnaire. *Journal of Exposure Analysis and Environmental Epidemiology*, 12, 204-213.

THE ROYAL COLLEGE OF PHYSICIANS, 2007. *Concise guidance to good practice. Number seven. The prevention, diagnosis, referral and management of melanoma of the skin*. London: Royal College of Physicians.

THIEDEN, E., PHILIPSEN, P. A., SANDBY-MØLLER, J., WULF, H. C., 2005. Sunscreen use related to UV exposure, age, sex, and occupation based on personal dosimeter readings and sun exposure behavior diaries. *Archives of Dermatology*, 141, 967-973.

THOMSON, R., FLYNN, R., ROCHE, J., TUCKER, S., 2004: Introduction. *In*: J. ROCHE, S. TUCKER, R. THOMSON, R. FLYNN, eds. 2004. *Youth in society, contemporary theory, policy and practice*, 2nd ed. London: Sage Publications in Association with The Open University Press, xiii- xix.

TUCKER, S. 2004. Youth working: professional identities given, received or contested. *In*: J. ROCHE, S. TUCKER, R. THOMSON, R. FLYNN, eds. 2004. *Youth in society, contemporary theory, policy and practice*, 2nd ed. London: Sage Publications in Association with The Open University Press, 81-89.

UNITED NATIONS OFFICE OF THE HIGH COMMISSIONER FOR HUMAN RIGHTS, 1989. *Convention on the rights of the child*. Geneva, Switzerland. Available from: http://www.unhchr.ch/html/menu3/b/k2crc.htm (Accessed 17 September 2008).

UNITED NATIONS, 2004. *Documents. Agenda 21. United Nations division for sustainable development* (online). Available from: http://www.un.org.esa/sustdev/documents/qgenda21/index.htm Accessed 31 May 2007.

UNIVERSITY OF YORK, 2000. *Evidence from systematic reviews of research relevant to implementing the 'wider public health' agenda*. York: University of York NHS Centre for Reviews and Dissemination.

WATERMAN, A. S., 1993. Two conceptions of happiness: contrasts of personal expressiveness (eudaimonia) and hedonic enjoyment. *Journal of Personality and Social Psychology*, 64 (4), 678-691.

WHARTON, J. R., COCKERELL, C. J., 1998. The sun: A friend and enemy. *Clinics in Dermatology,* 16, 415-419.

WHITEMAN, D. C., WHITEMAN, C., GREEN, A., 2001. Childhood sun exposure as a risk factor for melanoma: a systematic review of epidemiologic studies. *Cancer Causes and Control*, 12, 68-82.

WICHSTRØM, L., 1994. Predictors of Norwegian adolescents' sunbathing and use of sunscreen. *Health Psychology*, 13 (5), 412-420.

WILKINSON, S., 1999. How useful are focus groups in feminist research? *In*: R. S. BARBOUR, J. KITZINGER, eds. *Developing focus group research: politics, theory and practice*. London: SAGE Publications, 64-78.

WIRED FOR HEALTH, 2007. *The national healthy schools programme* (online). Wired for Health. Available from: www.wiredforhealth.gov.uk/cat.php?catid=842 (Accessed 9 May 2007).

WONG, C. S. M., STRANGE, R. C., LEAR, J. T., 2003. Basal cell carcinoma. *British Medical Journal*, 327, 794-8.

WORLD HEALTH ORGANISATION (WHO), 2006. *Sunshine and health. How to enjoy the sun safely* (online). Geneva: WHO. Available from: http://www.who.int.uv/intersunprogramme/en (Accessed 9 May 2007).

WORLD HEALTH ORGANISATION (WHO), 2007a. *Incidence of melanoma in people aged under 55 years* (online). Copenhagen: WHO. Available from: http://www.euro.who.int/Document/EHI/ENHIS_factsheet_4_2.pdf (Accessed 31 January 2007).

WORLD HEALTH ORGANISATION (WHO), 2007b. *INTERSUN programme* (online). Available from: http://www.who.int.uv/intersunprogramme/en (Accessed 9 May 2007).

WORLD MEDICAL ASSOCIATION (WMA), 2002. *The World Medical Association, 2002 recommend guiding physicians in biomedical research involving human subjects* (online). The WMA. Available from: http://www.wma.net/e/policy/17-c_e.html (Accessed 29 April 2003).

ZACHARIAS, J., STATHOPOULOS, T., WU, H., 2001. Microclimate and downtown open space activity. *Environment and Behavior*, 33, 296-315.

APPENDICES

APPENDIX ONE

Details of the literature search strategy and history related to the influence of education and/ or knowledge upon adolescents' behaviours in the sun (page one of three).

Details of the literature search strategy and history related to the influence of education and/ or knowledge upon adolescents' behaviours in the sun.

A literature search was carried out to identify previous studies related to the use of primary prevention of skin cancer strategies with adolescent groups. From the results of that search studies were sought that had explored or identified behaviour and education and/or knowledge influences. In order to identify relevant research articles a priori criteria were set specific to the type of literature required, its focus, the sample involved and its language of publication. Details are as follows:

Inclusion criteria:

- primary research articles and research - based reviews from peer reviewed publication.
- literature to include the effect of education and/or knowledge upon sun protective behaviours upon young people between the ages of 11 and 19.
- literature written in the English language.
- A UK focus (initially but later modified to include any country).

Exclusion criteria

- Literature based upon adult samples was excluded.

The electronic databases were searched as follows: Medline 1966-April, 2001, PsycINFO 1998-July 2001 and Cumulative Index to Nursing and Allied Health (CINAHL) 1982-April 2001.

Medline Search

A subject search was carried out using database thesaurus terms. They were exploded and combined as follows: adolescent behaviour or adolescent medicine or adolescent psychology, AND health behaviour or attitude to health or health education or health promotion or preventive medicine, AND skin neoplasms or melanoma. There were results that applied to Australia (4), New Zealand (1) and the United States of America (3). There were no results pertaining to the UK. Browsing the literature and others' referrals to relevant articles had demonstrated that at least two UK based reports existed that had not emerged from the search described. The Medline search was made less specific (to

broaden it) and re-run. The revised search involved the use, explosion and combination of the following thesaurus terms: skin neoplasms or melanoma AND attitude to health or health behaviour or health education or health promotion or preventive medicine. Limits of language and age (adolescence) were applied. This resulted in 188 'hits'. Abstracts were appraised in terms of the inclusion and exclusion criteria. Whilst this search encompassed the UK literature previously omitted it also included material about secondary prevention strategies that were irrelevant. The revised search resulted in the initial international studies already gained but also two relevant UK papers that met the inclusion and exclusion criteria. On examination, the papers were reporting on the same study.

PsycINFO Search

In order to access health psychology material The PsycINFO databases (covering psychology literature related to care and behaviour) 1998-July 2001 were searched using the following combination of exploded thesaurus terms:
adolescent attitudes or adolescent psychology and health attitudes or health behaviour or health education or health knowledge or health or health care psychology or preventive medicine or health education or well being. This resulted in an Australian study that met the inclusion and exclusion criteria.

Cumulative Index to Nursing and Allied Health (CINAHL) Search

The Nursing - oriented CINAHL databases 1982-April 2001 were searched. The terms skin neoplasms, education, prevention and control and adolescence were used in combination. This search resulted in four 'hits' but these did not satisfy the inclusion and exclusion criteria.

APPENDIX TWO

Details of the literature searching strategy and history related to the publication of qualitative studies about adolescent sun-related behaviour

(page one of two).

Details of the literature searching strategy and history related to the publication of qualitative studies about adolescent sun-related behaviour.

A literature search was undertaken, incorporating combination of the keywords of adolescent or teenage or youth or young or child and sun and exploratory or qualitative. The search accounted for variations in the terms by use of truncation, for example, adolesc*, teen*, sun*, explor* and qualitative. The same search was also re-run to search for grounded theories in particular. The ASSIA, CINAHL, PsycINFO, International Bibliography of the Social Sciences, Medline and The British Nursing Index databases were searched for the terms from the date of the database inception until the end of 2007. No search restrictions were applied. In the first instance, the search was in the text domain. This was to encompass relevant literature in which search terms might not be combined in the title. All of the above searches were also run in the Web of Science. Because of the search options available on this site and given the searchable fields, the keyword search was within the title, then the topic. Results in these domains were as follows: ASSIA 11 results, CINAHL 35 results, PsycINFO 202 results, International Bibliography of the Social Sciences 503 results, Medline eight results and The British Nursing Index two results. The results were scrutinised for relevance to this study and the following inclusion criteria applied:

- an exploratory qualitative method to have been used
- studies to be about adolescent behaviours in the sun
- studies to have included people in the age group used in this study
- studies to have been peer reviewed, empirical studies.

Two results met the inclusion criteria:

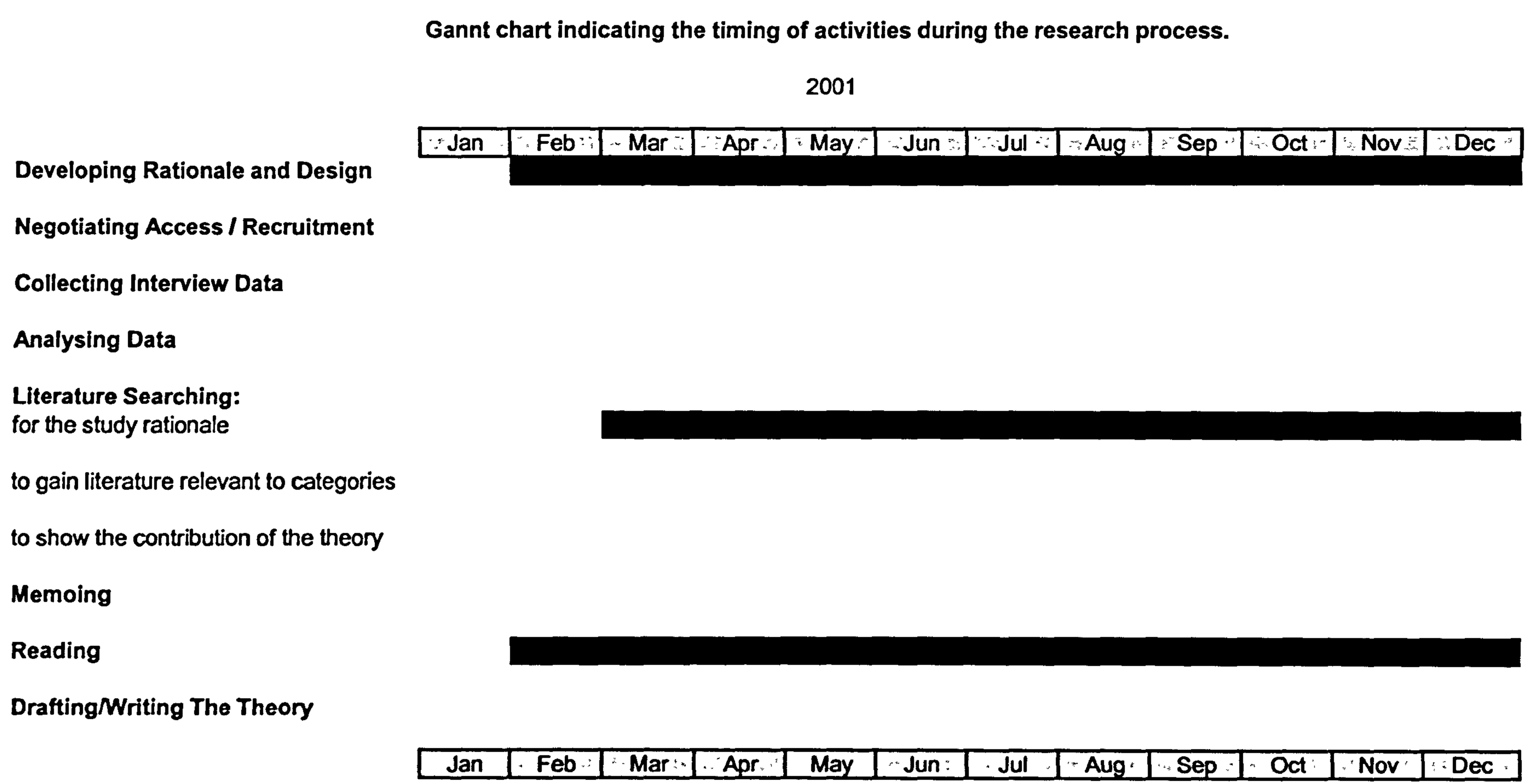
Lupton and Gaffney (1996).

Shoveller et al. (2003).

APPENDIX THREE

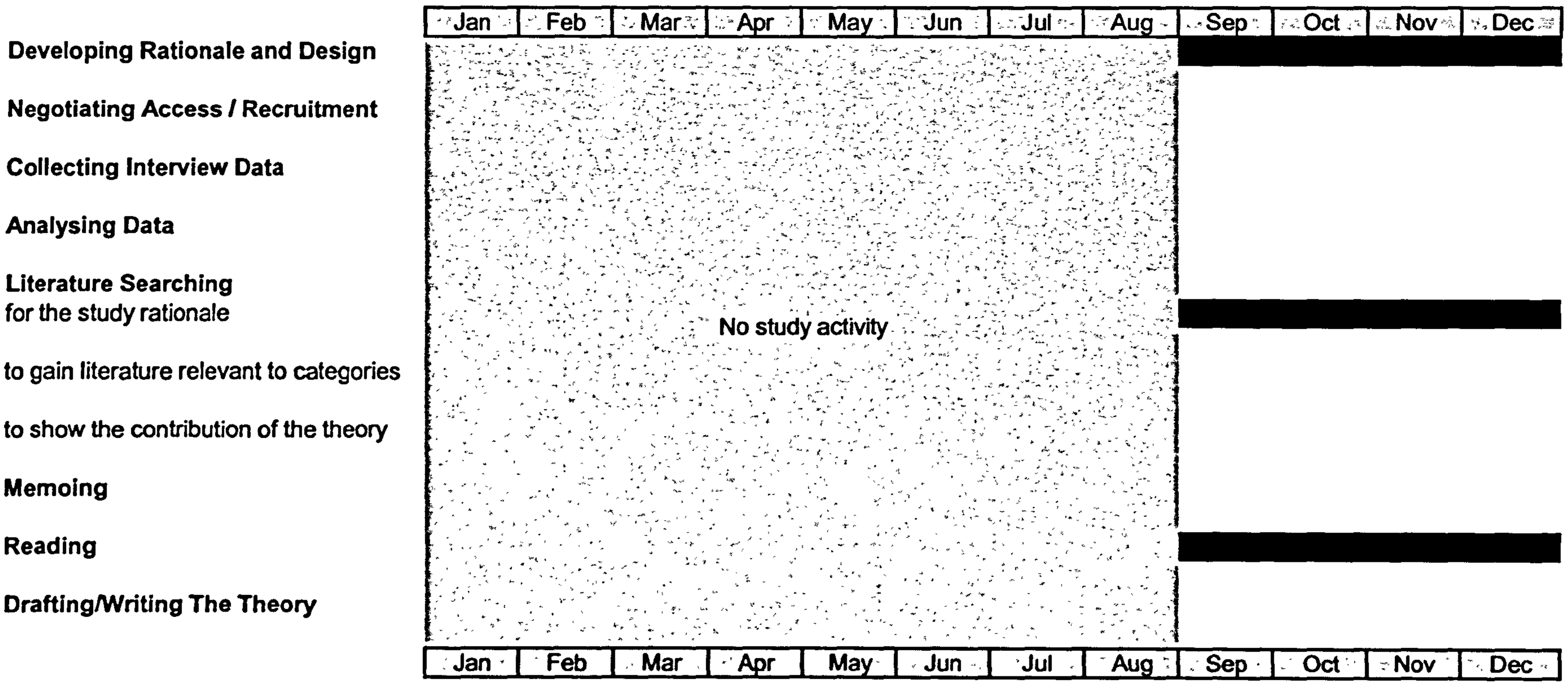
Gannt chart indicating the timing of activities during the research process (page one of nine).

Gannt chart indicating the timing of activities during the research process.



Gannt chart indicating the timing of activities during the research process.

2002



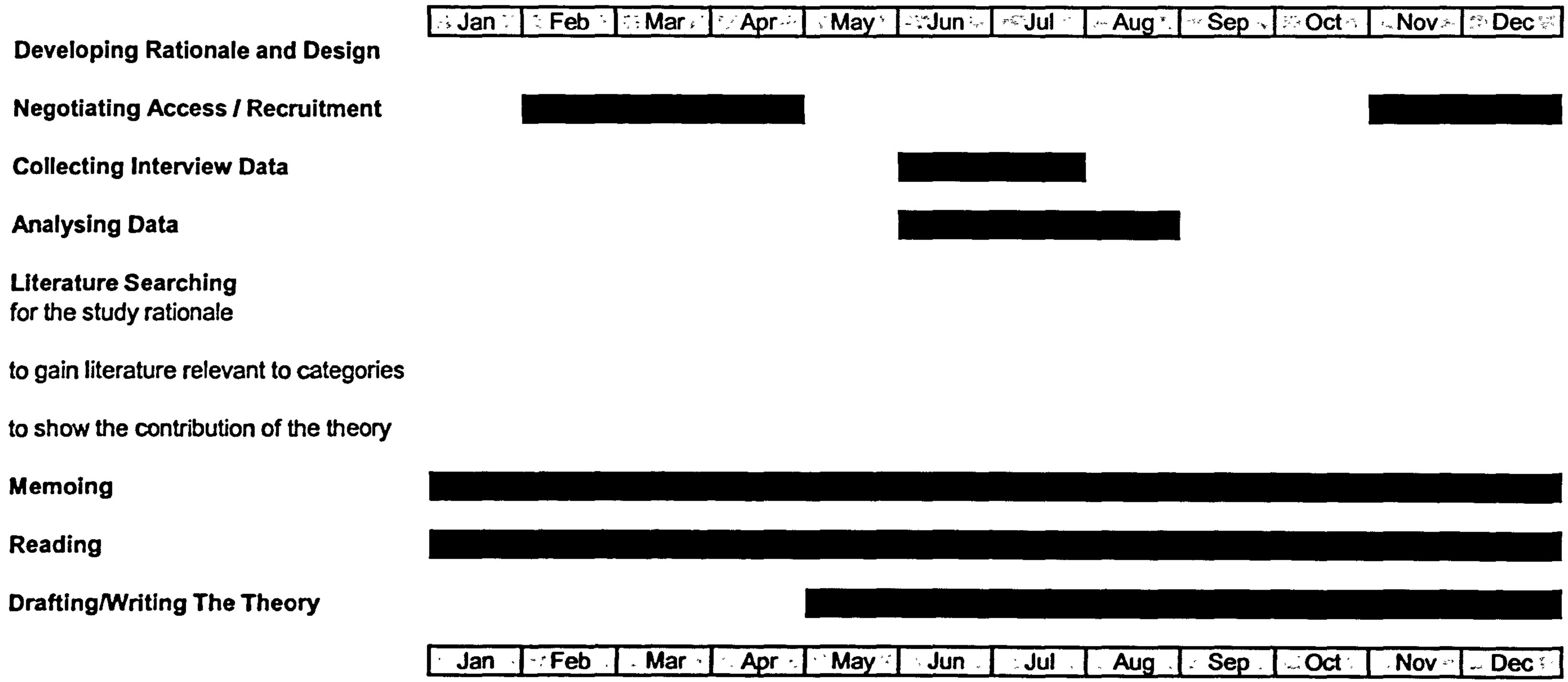
Gannt chart indicating the timing of activities during the research process.

2003

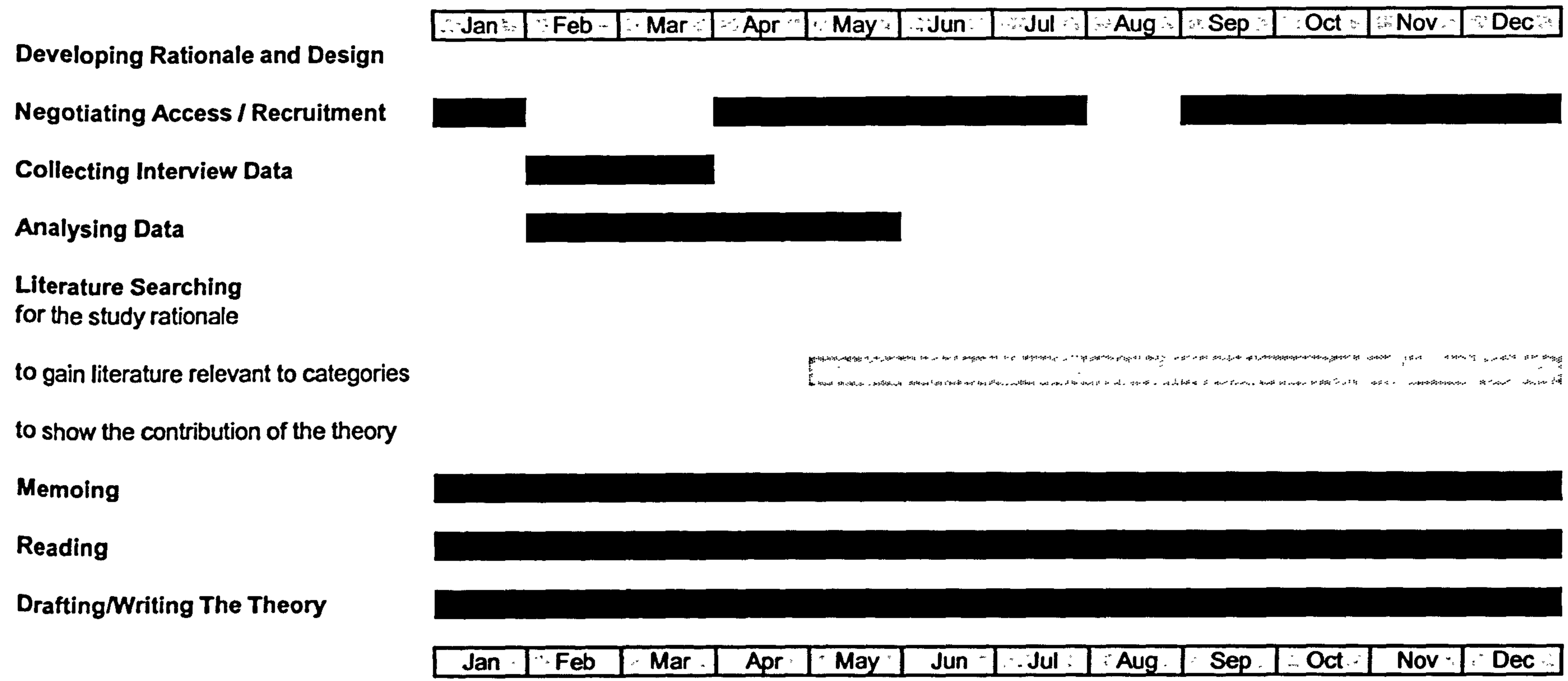
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Developing Rationale and Design												
Negotiating Access / Recruitment				[redacted]				[redacted]				
Collecting Interview Data												
Analysing Data												
Literature Searching for the study rationale												
to gain literature relevant to categories												
to show the contribution of the theory												
Memoing	[redacted]											
Reading	[redacted]											
Drafting/Writing The Theory												

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

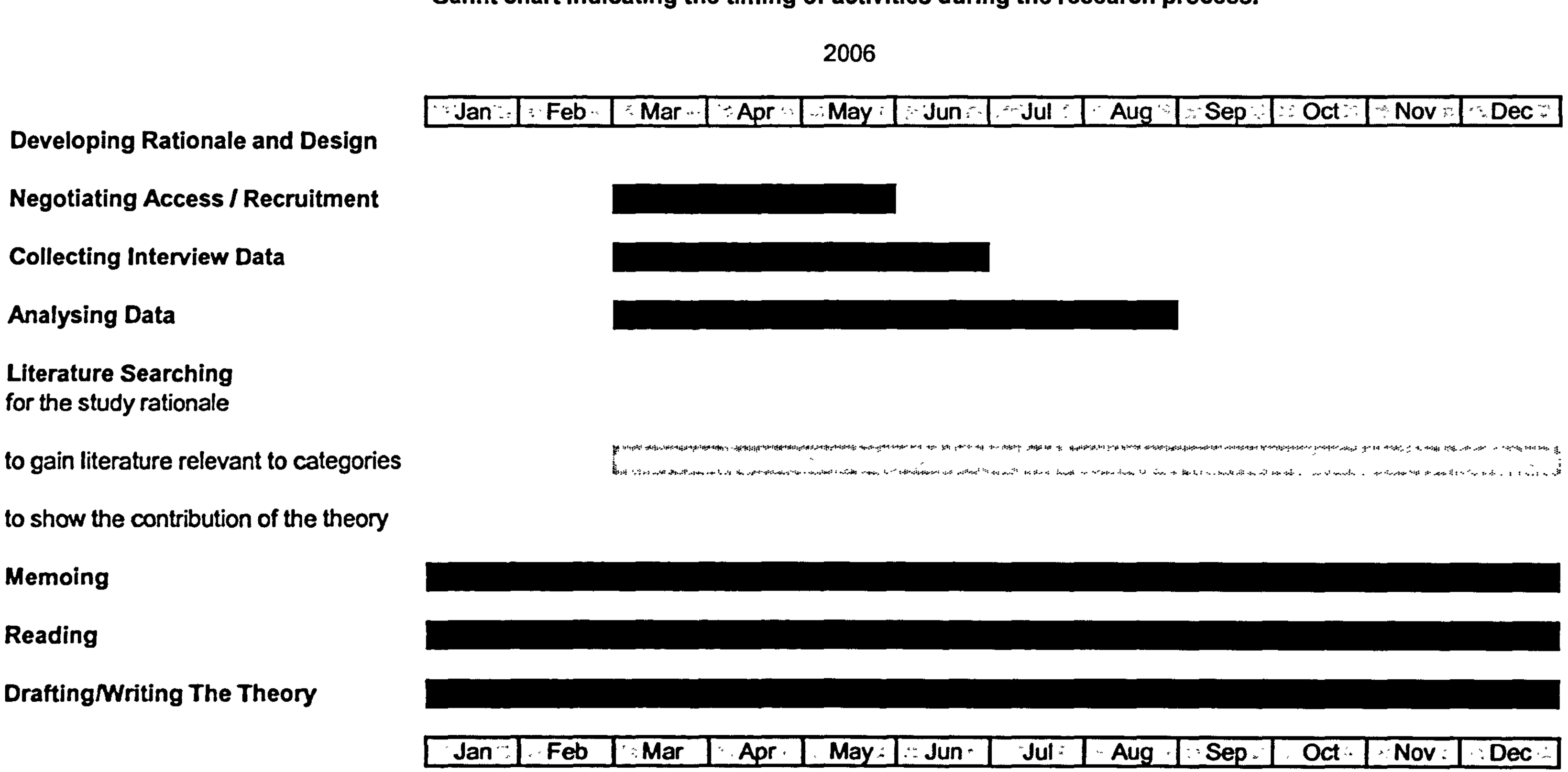
Gannt chart indicating the timing of activities during the research process.



Gannt chart indicating the timing of activities during the research process.



Gannt chart indicating the timing of activities during the research process.



Gannt chart indicating the timing of activities during the research process.

2007

Developing Rationale and Design

Negotiating Access / Recruitment

Collecting Interview Data

Analysing Data

Literature Searching
for the study rationale

to gain literature relevant to categories

to show the contribution of the theory

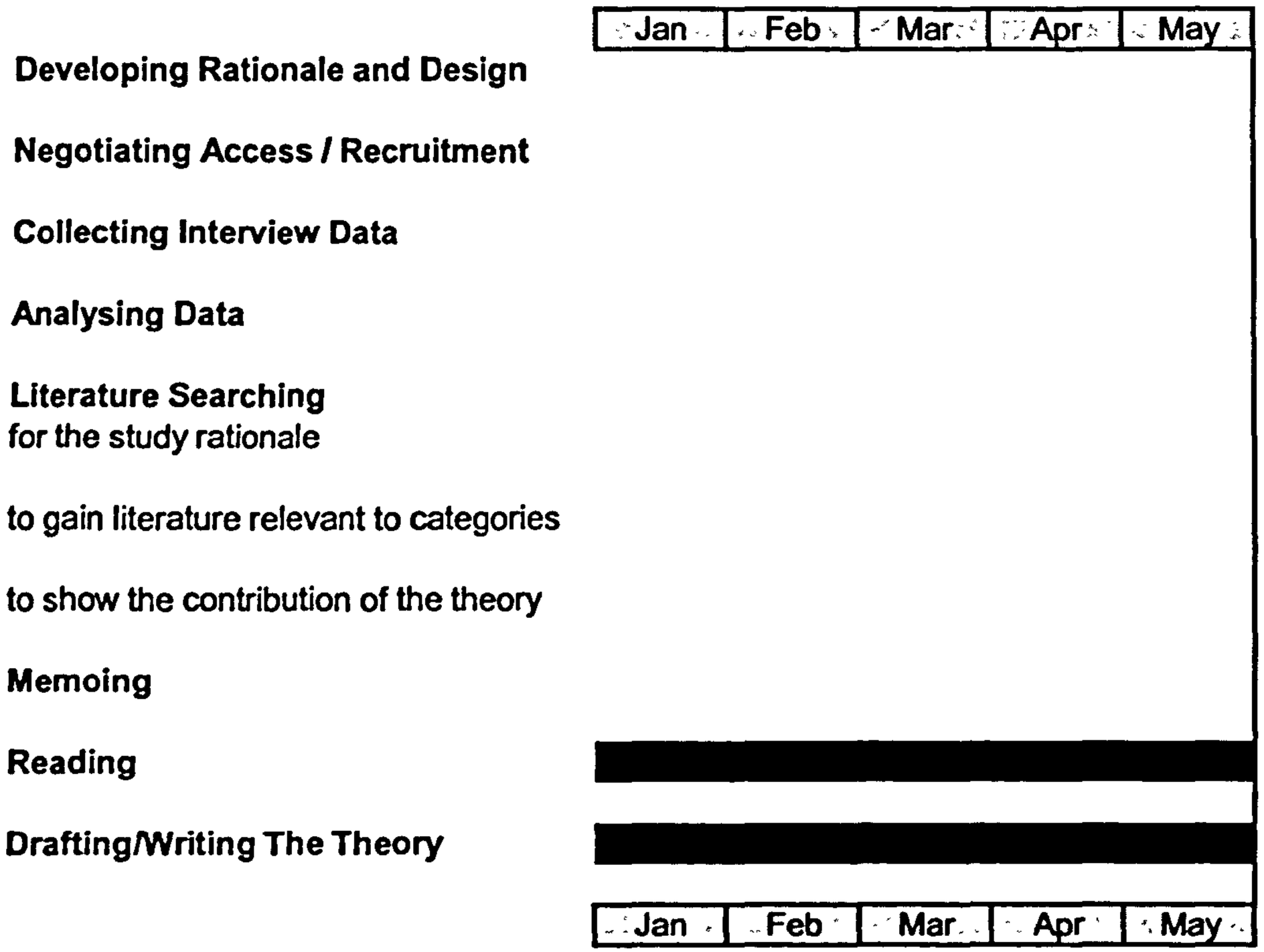
Memoing

Reading

Drafting/Writing The Theory

Gannt chart indicating the timing of activities during the research process.

2008



APPENDIX FOUR

Timeline indicating detail of recruitment and ethical approval processes

(page one of five).

Timeline indicating detail of the recruitment and ethical approval processes.

2003

Jan

Met Head of Schools and negotiated access to schools in principle. Gained names of head teachers to contact. Researched data protection requirements. Researched legal and consent issues related to the recruitment of children as research participants. Developed documentation and protocol for recruitment. Preparation of NHS Local Research Ethics Committee (LREC) submission ongoing. University Data Protection Officer confirmed that the planned study protocol met University requirements.

Feb

Mar

Apr

May

Informed local Directors of Public Health of the planned study.

Jun

Jul

Made contact with Head teacher of school one. Head teacher agreed in principle to school being a setting for the study. Head teacher gave contact details of member of staff to contact in September.

Aug

Contacted named member of staff from school one and arranged to meet to discuss consent and access issues in principle.

Sep

Oct

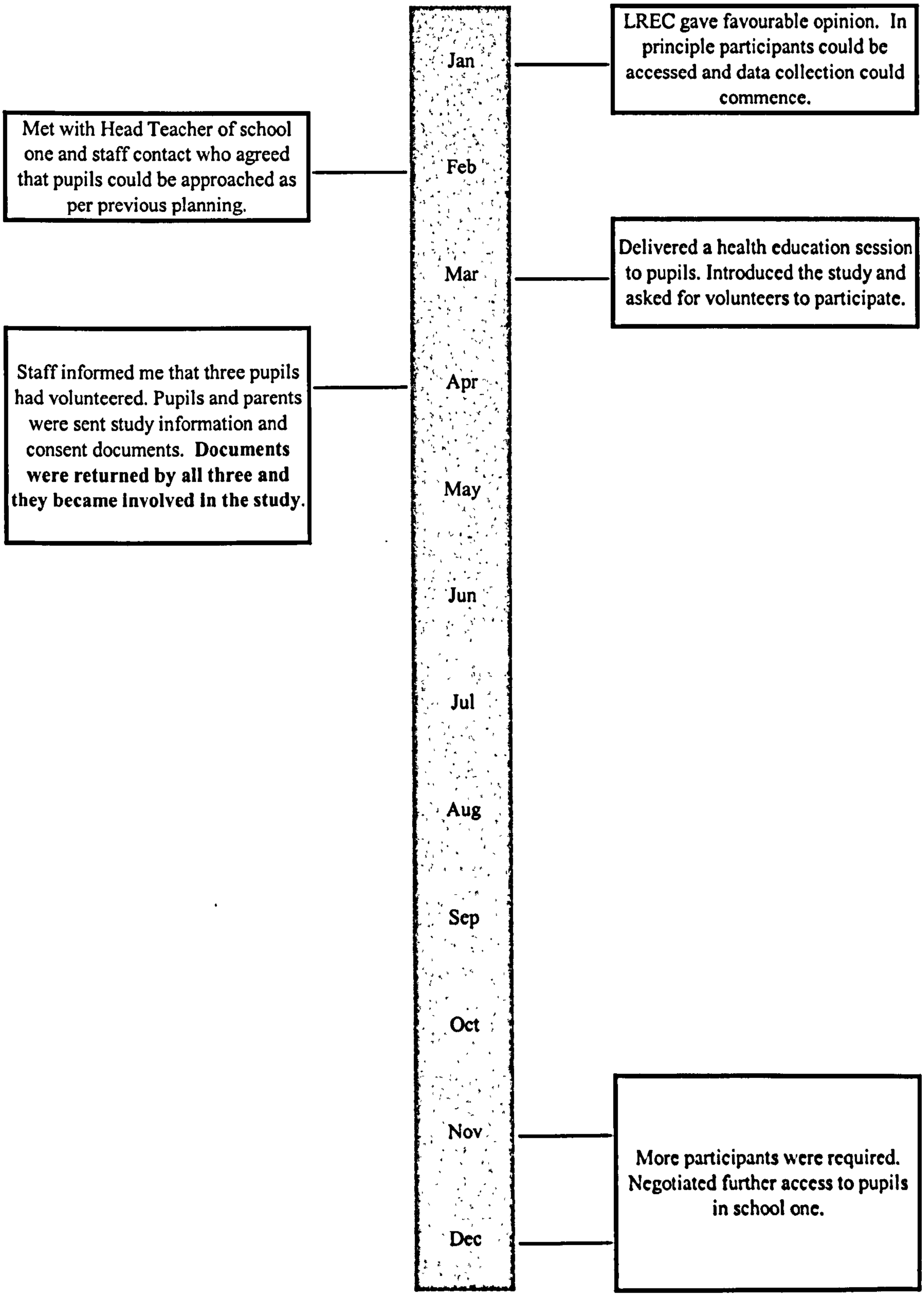
LREC application submitted. Met with Head teacher and staff member. Agreed and finalised detail of consent and access in the event of favourable LREC opinion and interview data collection beginning.

Nov

Attended LREC meeting to discuss submission.

Dec

Timeline indicating detail of the recruitment and ethical approval processes.



Timeline indicating detail of the recruitment and ethical approval processes.

2005

Met pupils in class. Introduced the study and asked for volunteers to participate. School staff informed me that there had been four volunteers. They and their parents were sent study information and consent documents. **Documents were returned by all four and they became involved in the study.**

Jan

Feb

Mar

Apr

More participants were required. Planned to access a sports environment. Negotiated this in principle with relevant gatekeepers who provided staff contact details. Required LREC opinion given the new setting. Submitted an amendment for LREC opinion.

LREC opinion favourable. In principle participants could be accessed and data collection could commence in sports setting. Contacted relevant staff and planned to recruit/interview potential volunteers pre-sports matches. Unable to make contact with potential volunteers; matches rained off and fixture issues. Arranged to make contact post-season during training sessions.

May

Jun

Jul

Aug

Introduced the study to potential volunteers in the sports setting. Met the group but staff informed that there had been **no volunteers.** More participants were required. Contacted Head Teachers of schools two and three. No response from school three. Began negotiations for access with Head Teacher and contact staff from school two. Requested volunteers in a school assembly. **Staff informed of six volunteers.** Volunteers and parents were sent study information and consent documents. **Documents were returned by all six who became involved in the study.**

Sep

Oct

Nov

Contacted Head of Youth Services to gain access to youth work settings in principle. Contacted Heads of a Higher Education setting to gain access in principle there. Required LREC opinion given these new settings. Submitted an amendment for LREC opinion.

Dec

Timeline indicating detail of the recruitment and ethical approval processes.

2006

Jan

LREC opinion was favourable. In principle participants could be accessed and data collection could commence. Contacted and negotiated with relevant staff to recruit potential volunteers in the new settings.

Feb

Mar

I was permitted to post a request for volunteers on a course website in the higher education setting . There was one response and further information about the study was forwarded. Despite follow up, there was no further engagement from the person who enquired. **No volunteers were gained from this setting.** Negotiated access to youth work settings one, two and three. Five volunteers were gained from youth work setting one. Two volunteers were gained from setting two. Two volunteers were gained from setting three. All volunteers and their respective parents were sent study information and consent documents. Documents were returned by all of those in settings one and two; **seven more participants** were involved in the study. **No volunteers from youth work setting three joined the study.** Although interviews had been pre-planned with volunteers on two occasions these were subsequently cancelled because completed consent documentation was not provided. Recruitment to the study concluded with **20 participants in total.**

Apr

May

APPENDIX FIVE

Outline of interview settings, groups and participants (identified by pseudonym) (page one of three).

Outline of interview settings, groups and participants (identified by pseudonym).

Summary:

- Two school settings and two youth work settings
- 20 participants in six groups.
- 19 interviews comprising 13 small group interviews and six one- to-ones were held.
- Group interviews varied in size between five and two participants.

Interviews

Interview One **(School setting one, Group one)**

Participants: Ann (aged 15), Bella (aged 14/15) and Carly (aged 15)

Interview Two (School setting one, Group one)

Participants: Ann and Carly

Interview Three (School setting one, Group one)

Participants: Ann and Carly

Interview Four (**School setting one, Group two)**

Participants: Daisy (aged 14), Emily (aged 14), Freya and Gill (both aged 14)

Interview Five (School setting one, Group two)

Participants: Emily, Freya and Gill

Interview Six (School setting one, Group two)

Participants: Daisy, Emily and Freya

Interview Seven (School setting one, Group two)

Participant: Gill

Interview 8 (School setting one, Group one)

Participant: Carly

Interview 9 (School setting one, Group two)

Participant: Emily

Interview 10 (School setting one, Group two)

Participant: Freya

Interview 11 (School setting one, Group two)

Participant: Daisy

Interview 12 (School setting one, Group two)

Participant: Gill

Interview 13 **(Youth work setting one, group one)**

Participants: Helen (aged 17), Isabel (aged 16), Jo (aged 17), Katie (aged 16) and Linda (aged 17).

Interview 14 **(School setting two, group one)**

Participants: Molly (aged 16), Nancy (aged 16), Olivia (aged 16) and Polly (aged 15)

Interview 15 **(School setting two, group two)**

Participants: Queenie (aged 15) and Ruth (aged 15)

Interview 16 (School setting two, group one)

Participants: Molly, Nancy, Olivia

Interview 17 (School setting two, group two)

Participants: Queenie and Ruth

Interview 18 (Youth work setting one, group one)

Participants: Helen, Isabel and Jo.

Interview 19 **(Youth work setting two, group one)**

Participants: Sally (aged 17) and Yvette (aged 14).

APPENDIX SIX

Interview guide (page one of two).

The interview guide.

The purpose of exploratory, qualitative research is that the researcher should not pre-empt participants' perspectives of the topic being studied. Group discussions about participants' behaviours in the sun needed to be triggered so that whatever emerged could be explored further. In this study, I gave participants copies of current SunSafety advice. This was in the form of a colourful postcard published by Cancer research UK. The front of the card comprised pictures and text indicating to:

- Stay in the shade
- Take care not to burn
- Cover up
- Protect kids from the sun
- Use factor 15+

The reverse of the card gave more detail about the points above and added the importance of reporting changes to moles or skin growths to a doctor.

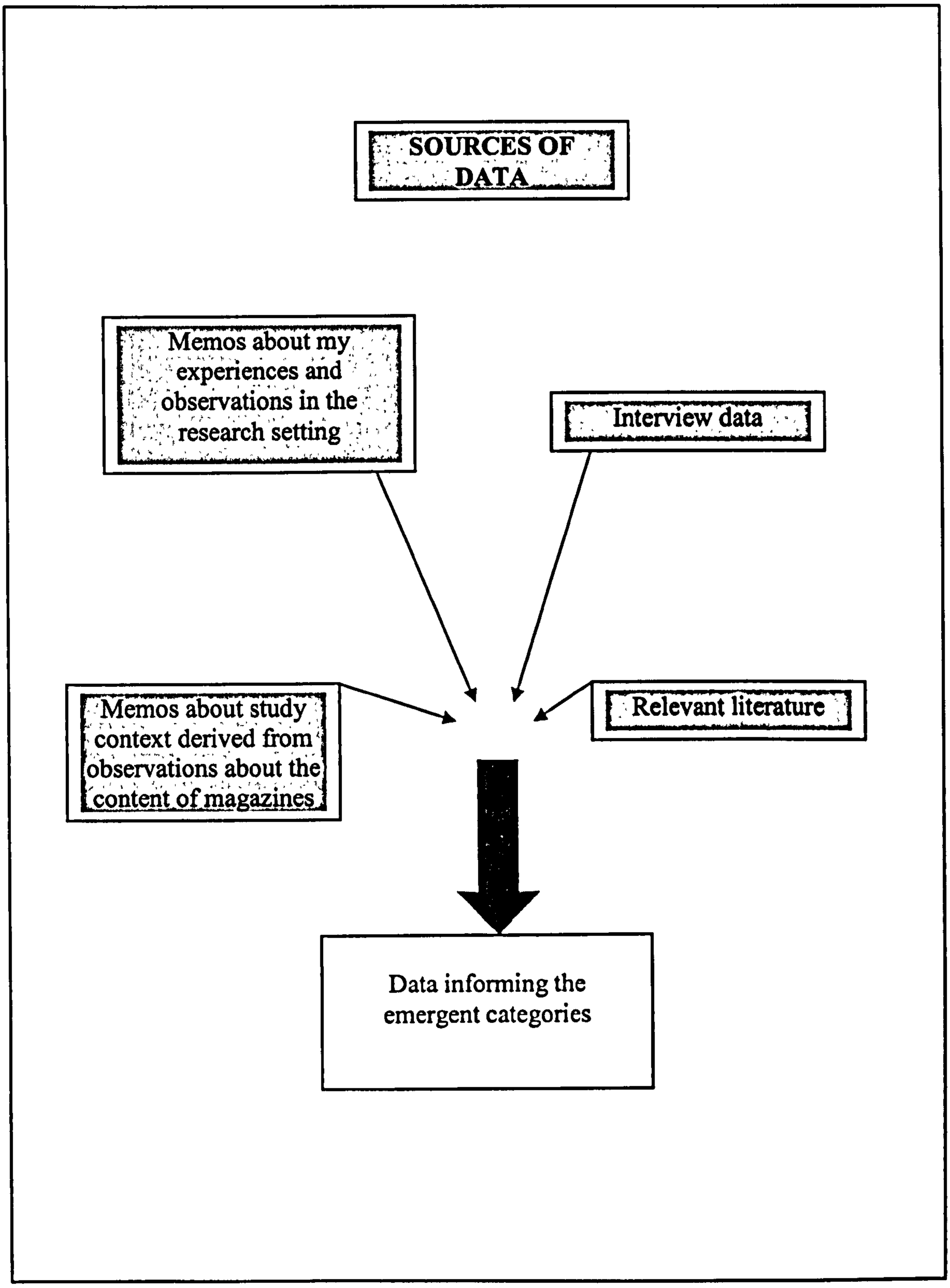
I used the points on the front of the card to trigger initial discussions. For example I would ask if anyone did any of the things on the card. When people responded I could explore with participants what influenced their experiences.

APPENDIX SEVEN

Diagram to illustrate the range of sources of data or interchangeable indices used in the study

(page one of two).

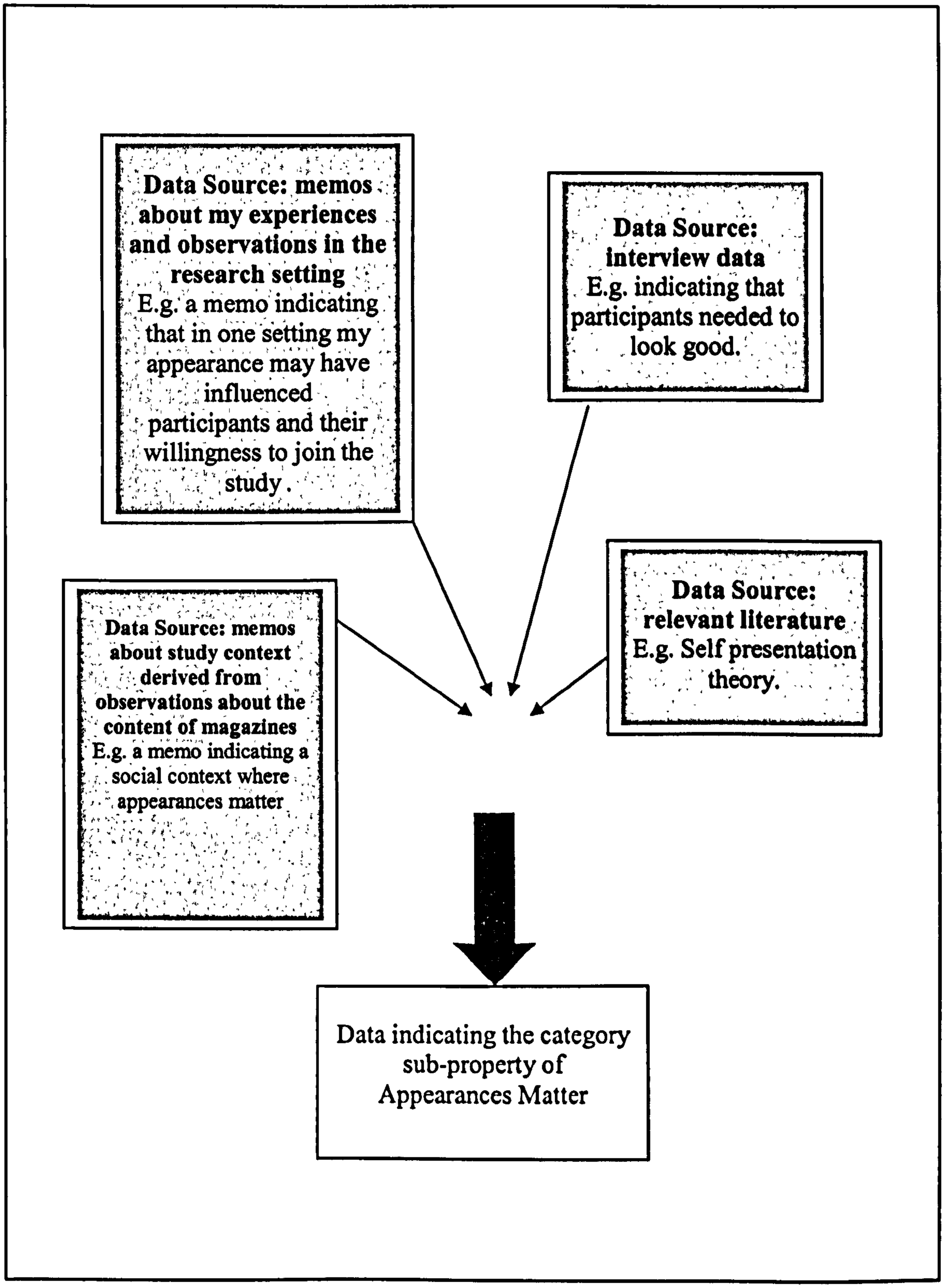
Diagram to illustrate the range of the sources of data or interchangeable indices used in the study.



APPENDIX EIGHT

An example of how data from different sources were interchangeable indices for the same category sub-property (in this case, the category sub-property Appearances Matter) (page one of two).

An example of how data from different sources were interchangeable indices for the same category sub-property (in this case, the category sub-property Appearances Matter).



APPENDIX NINE

Details of the literature searching strategy related to the emergent issues of the study (page one of three).

Details of the literature searching strategy related to the emergent issues of the study.

A key feature of the use of the literature in grounded theory method is that the literature should be relevant to the issues that have emerged from the participants' perspectives (Glaser 1998). Hence, this element of the study's search strategy was influenced by Glaser's notion that literature, like the theory, should be discovered by exploration. As data was analysed and the study categories became established, I explored the issues they reflected in the literature. This was in keeping with grounded theory method, specifically the inductive approach to theory generation and the view that literature acts as more data to compare with the developing theory. In the inductive process of generating a theory that crosses academic disciplines (as in this study), the aim is not to include all existing literature about every category, rather to use the extant literature as data to compare. Because a grounded theory should be modifiable in the light of new data, literature that has not been considered but that may be relevant becomes additional data to compare during the potentially never-ending process of grounded theory generation (Glaser 1998).

As Glaser (1998) has identified a strength of grounded theories is that they tend to transcend individual academic disciplinary issues. It means that the researcher's search for literature may take them to unfamiliar academic fields and material that is multidisciplinary in nature. This was my experience and in order to be true to the findings and the participants' perspectives I needed to tackle the issue of how to access relevant literature. The approach I took comprised three elements:

- discussion of the issues that were emerging in the study with academics in relevant fields in order to gain insight into existing theory that may relate to the work. When theories had been identified, I accessed seminal works that applied.

- discussion of the emergent issues with library staff and identification of suitable databases for searches (see appendix D for databases identified and keywords searched).

- exploration of emergent issues by browsing the literature. This was to familiarise myself with theoretical areas that were new to me. I also used the Advanced

Google Scholar search engine. In comparison with specific databases that assume a disciplinary context the Google search engine has a multidisciplinary focus. This was an advantage when familiarising myself with theory from disciplines that were new to me.

The overall result of this strategy was that I accessed relevant literature from a range of sources. The literature was multidisciplinary in nature and the process I had followed in order to access it reflected the requirements of grounded theory method that the literature should be 'discovered' and relevant.

APPENDIX TEN

Details of database searches to access peer reviewed, empirical studies related to the issues emerging in the study (page one of six).

Details of database searches to access peer reviewed, empirical studies related to the issues emerging in the study.

Relevant databases were identified as follows:

Medline
Science Direct
CINAHL
ASSIA
Design and Applied Arts
PsycINFO
International Bibliography of the Social Sciences

The databases were searched in different combinations according to the issues being investigated (see below and overleaf). Unless otherwise stated, the search terms were sought in the domain of being anywhere in the text in the first instance. No date limitations were applied. Titles gleaned were examined for relevance to this study and the study abstracts were scrutinised according to the following inclusion and exclusion criteria.

Inclusion criteria

Articles were required to:

- be peer reviewed
- be empirical studies or research-based reviews
- reflect issues that had emerged from the participants' perspectives in my study; challenging or confirming the issues involved.

Exclusion criteria

Articles written in languages other than English were excluded.

In selecting studies to include in this study, primacy was given to the most recent research that related most closely to my sample group i.e. British female adolescents aged 14-17. However, I also selected studies that related to my findings and had involved different

sample groups; I included work relating to adolescents of both genders and in countries other than the UK. I was able to use these studies for comparison and to illustrate the transferability and scope of my findings.

Combinations of databases and search terms used (unless otherwise stated, the search terms were sought in the domain of being anywhere in the text).

Medline

CINAHL

ASSIA

Design and Applied Arts

PsycINFO

Combination of search terms: sun and protection and adolescent or teen or young or youth and appearance or fashion. The search accounted for variations in the terms by use of truncation, for example, adolesc*, teen*, sun* protect*.

ASSIA

CINAHL

International Bibliography of the Social Sciences

PsycINFO

Combination of search terms: adolescent or teen or young or youth and appearance and sun. The search was carried out for keywords anywhere in the text for all databases except CINAHL where the search was limited by searching for keywords appearing in the title. The search accounted for variations in the terms by use of truncation, for example, adolesc*, teen*.

ASSIA

Combination of search terms: adolescent or teen or young or youth and fashion. The search was carried out for keywords anywhere in the text. The search accounted for variations in the terms by use of truncation, for example, adolesc*, teen*.

Medline

CINAHL

ASSIA

Science Direct

PsycINFO

Combination of search terms: sun and cream or sunscreen or SPF or sun protection factor and sticky or messy or unpleasant or uncomfortable or discomfort or comfort and avoidance and adolescent or teen or young or youth and appearance or fashion. The search accounted for variations in the terms by use of truncation, for example, adolesc*, teen*, avoid* comf*.

ASSIA

CINAHL

PsycINFO

Combination of search terms: fake or sunless and tan and unpleasant or smell or uncomfortable or discomfort or comfort and avoidance and adolescent or teen or young or youth. The search accounted for variations in the terms by use of truncation, for example, adolesc*, teen*, avoid*, comf*.

Medline

Science Direct

Combination of the keywords of sun and unpleasant or uncomfortable or discomfort or comfort or hot or burning or stimulation and adolescent or teen or young or youth. The search accounted for variations in the terms by use of truncation, for example, adolesc*, teen*, burn* stimul*.

Combination of the keywords of sun and adolescent or teen or young or youth and cooling. The search accounted for variations in the terms by use of truncation, for example, adolesc*, teen*, cool*.

Combination of search terms: sun cream or sunscreen or SPF or sun protection factor and abroad or overseas or holiday and adolescent or teen or young or youth. The search accounted for variations in the terms by use of truncation, for example, adolesc*, teen*, holiday*.

Design and Applied Arts

ASSIA

Combination of search terms: fabric or material or textiles and sunscreen or SPF or sun protection factor or unpleasant or uncomfortable or discomfort or comfort. The search accounted for variations in the terms by use of truncation, for example, fabric* or material* comf*.

PsycINFO

ASSIA

CINAHL

Medline

Combination of search terms: adolescent or teen or young or youth and forgetting. The search was limited to keywords in the title and accounted for variations in the terms by use of truncation, for example, adolesc*, teen*, forget*.

Combination of search terms: adolescent or teen or young or youth and sunburn. The search was limited to keywords in the title and accounted for variations in the terms by use of truncation, for example, adolesc*, teen*, sun*.

Combination of search terms: adolescent or teen or young or youth and dehydration. The search was limited to keywords in the title and accounted for variations in the terms by use of truncation, for example, adolesc*, teen*.

Combination of search terms: adolescent or teen or young or youth and pain and sunburn. The search was limited to keywords in the title and accounted for variations in the terms by use of truncation, for example, adolesc*, teen* sun*.

Combination of search terms: adolescent or teen or young or youth and UV or ultraviolet and exposure. The search was carried out for keywords anywhere in any search field. The exception was the Medline search which was limited to search by titles. The searches accounted for variations in the terms by use of truncation, for example, adolesc*, teen*.

Medline

Combination of search terms: adolescent or teen or young or youth and UV or ultraviolet and cloud or water. The search was carried out for keywords anywhere in the text. It accounted for variations in the terms by use of truncation, for example, adolesc*, teen*.

Combination of search terms: adolescent or teen or young or youth and sunscreen and use or application. The search was carried out for keywords anywhere in the text. It accounted for variations in the terms by use of truncation, for example, adolesc*, teen*.

APPENDIX ELEVEN

The steps of the participant recruitment process in principle (page one of two).

The steps of the participant recruitment process in principle.

1. Contacted heads of organisations (E.g. in education and youth work) for permission to contact relevant settings. Gained contact details of specific staff in the settings.

2. Contacted specific staff and negotiated access to potential volunteers in the relevant settings.

3. Met potential participants in the settings, described the study in brief and requested volunteers.

4. Volunteers informed organisation staff if they wished to participate.

5. Staff informed me of the volunteers. I checked with staff about the appropriateness of sending documentation in standard format to potential participants and their parent/s (checked the need for translation of materials into another language or any other modification).

6. The study information and consent documentation was sent to volunteers and their parent/s. I provided stamped addressed envelopes for replies. Awaited replies.

7. Volunteers and their parents signed the consent forms and returned them to me. They kept copies of the information I had supplied for their reference.

8. When consent forms had been returned I liaised with staff and volunteers and organised interview sessions. Interviews were held in the settings of the organisations concerned.

9. Interviews were carried out and data collected.

APPENDIX TWELVE

Study information and consent forms for the volunteers and those with parental responsibility (page one of three).

Information for *volunteers.*

Hello ……
…… (teacher's name) has told me that you have offered to join in some chats at school with me about my project to do with teenagers and the sun. I have written to your parent/guardian to see that it's OK with them too. If it is, it would be great if you would read on to check that you understand what's involved.

What's it all about?
I work at ……(name of institution) in the Nursing Department and I am also a student like you. I am planning a project (research) to find out about how teenagers behave in the sun and why. This will help me to learn about how health workers can work well with young people. I've chosen to talk to people like you, in your age group because your points of view are very important.

What would you be doing?
If you chose to get involved, this term we'd talk in a small group of people from your year (no more than 5 in a group) and maybe on our own if you didn't mind. We'd be talking about being in the sun. The chats (3 at the most) would be at lunchtime so you could bring your lunch. If it's ok with you, I'd tape record our talks or write notes about what we said so that I remember! If I did tape record the talks I would destroy the tapes when I had finished with them at the end.

I would keep the information from our chats safe. I wouldn't give it to anyone else and your name would be kept secret. If I thought I couldn't keep what you'd told me just between you and me, I would tell you but I don't think that would happen anyway.

When I've finished the work I will write about it and I expect that different people will see it. My teachers will have to mark it and it might get put in a magazine or book. I might also have to talk about it at meetings with other people like me. No-one hearing about the project will know who helped, or who said what.

What happens if you change your mind and don't want to do it?

No problem! It's up to you and there's no comeback. If you did join in and changed your mind you could stop at any time by letting me or …… (teacher's name) know (my contact details are at the bottom of the page).

You've read this, what next?
Thank you very much for thinking about this. If you'd still like to help, then please fill in the form that came with this sheet and send it back to me. If you'd like to ask me anything else, feel free. My contact details are:

Liz Norton

(postal and email addresses, and telephone number supplied).

Letter for those with parental responsibility.

Dear Parent/Guardian

..... (Head teacher's name) has given me permission to write to you. ..... (volunteer's name) has offered to join in discussions at school, related to some work I am planning and I would like to check that you are also happy with this.

I have been a qualified nurse for 19 years and now work at ..... (name of institution) as a Senior Lecturer in the Nursing Department. I am planning a project (research) to find out about how teenagers behave in the sun and why in order to improve the way we work young people. I am doing the study for a PhD that will be supervised by Bournemouth University. The proposed work has been approved by the NHS Local Research Ethics Committee.

I would like to have some talks with small groups and/or individual young people in year 10 about being in the sun. If involved, I anticipate that .....(volunteers' name) would join in a maximum of 3 discussions during lunchtimes. She would be able to bring her lunch. If ..... (volunteers' name) agreed, I would like to tape record the discussions. If not, then I would like to write notes about what is being said. If I do tape record the conversations, the tapes will be destroyed at the end of the work.

Any information from the discussions will be kept securely and safely and treated confidentially.....(volunteers' name) would not be given in the project write up. If I thought I might not be able to keep information confidential, I would talk to her about this first.

There is absolutely no problem if either you or .....(volunteer's name) decide that she will not be joining in and there will be no comeback. If she does start and then changes her mind, she can stop at any time by letting me or ..... (teacher's name) know.

I expect that various people will see the finished work as eventually I will write up the results in a research dissertation and pieces that may be published. I might also talk about the work at conferences. I will give school a copy of the final study so that it will be there for you and ..... (volunteer's name) to see if you would like to.

If you are happy for ..... (volunteer's name) to join in, please ask her to read the enclosed information sheet. If appropriate, then please both sign the permission form enclosed and send it back to me in the envelope provided.

Thank you very much for taking the time to read this letter. If you would like any more information now, or in the future then please feel free to contact me (details above) or my supervisors: ..... (their names and contact details given).

Yours sincerely

Liz Norton

Joint consent form.

If you are both happy for ..... (pupil's name) to join in, please complete the form below and return it to me in the envelope provided (Don't forget to keep your copies of this and the info sheet).

Section for the *person with parental responsibility* to fill in:

I have understood the information that Liz Norton has provided and I am happy for ..... (pupil's name) to join in the study about sun behaviour.

Name (Please print)

Signature

Date

Section for ..... *(pupil)* to fill in :

I understand what's going to happen and I am happy to join in Liz Norton's study about sun behaviour. I know that there is no problem with me pulling out at anytime if I change my mind.

Is it OK for Liz to record the chats? **yes** **No**
(please circle your answer)

Name (PLEASE PRINT)

Signature date

Liz Norton
(e mail, postal address and telephone number included)

many thanks for thinking about this!!

APPENDIX THIRTEEN

General format of an interview

(page one of two).

General format of an interview.

Immediately prior to the interview commencing:

Introductions

Explanation what I am doing and why.

Check participants' understanding of their involvement in the study, confidentiality issues, establish/ reiterate ground rules, re-iterate that volunteers may leave/withdraw from the study at any time.

Establish/ re-iterate ground rules

Explain about the use of the tape-recorder or note-taking (as appropriate)

Re-iterate that I would like to learn from participants.

Carry out interview

End interview and debrief:

Check that there are no further comments participants wish to make

Check that all is well with participants and they have not been affected adversely by what has been discussed.

Thank for contributions and giving up lunchtime. Confirm/request further contact.

APPENDIX FOURTEEN

The categories, their properties and sub-properties, and the links between them.

The category fitting in (page one of five).

The categories, their properties and sub-properties, and the links between them.

The category Fitting In.

Emergent Category or Concept
FITTING IN

Property
- Conforming*, +
  Sub properties
  - Appearances Matter x
  - The Leaders and The Sheep **

Property
- The Worry xx

Property
- Standing Out *
  Sub properties
  - Positive and Negative Standing Out *
  - Avoiding Negative Standing Out ++
  - Enhancing Appearance ++

Property
- Being Different +++

KEY:

*****
A *condition* of Fitting In

+
A *strategy* for Fitting In

++
A *strategy* for Conforming and Fitting In

******
A *process* of Conforming and Fitting In

x
The *context* determining the Conforming/Fitting In agenda

xx
The *driver* of Conforming, Avoiding Negative Standing Out and Fitting In

+++
Limits to Conforming and Fitting In

The categories, their properties and sub-properties, and the links between them.

The category Being Myself.

Emergent Category or Concept
BEING MYSELF

Property
- My Agenda *
  Sub property
  - Consequences of My Agenda ***

Property
- Acting the Part *
  Sub properties
  - Being The Child *
  - Being The Adolescent *
  - Being The Adult *

KEY:

*
A *condition* of Being Myself

***
The *consequence* of following My Agenda and Being Myself

The categories, their properties and sub-properties, and the links between them.

The category Being Physically Comfortable.

Emergent Category or Concept
BEING PHYSICALLY COMFORTABLE

Property
- Planned Protection Strategies +

Property
- Avoiding Discomfort +

KEY:

+
A *strategy* for Being Physically Comfortable

The categories, their properties and sub-properties, and the links between them.

The category Slipping Up.

Emergent Category or Concept
SLIPPING UP

Property
- Misjudging By Not Knowing ****

Property
- Forgetting ****

KEY:

****
The *cause* of Slipping Up

APPENDIX FIFTEEN

Descriptions of the categories, their properties and sub-properties (the descriptors) (page one of four).

Descriptions of the categories, their properties and sub-properties (the descriptors).

Category: Fitting In. It emerged from the analysis of the interchangeable indices that a significant influence on the girls' behaviours in the sun was their need to be socially acceptable based on expectations of the wider social context and their peer group and an appearances culture. Incidents related to this need were grouped in the category of 'Fitting In'.

Property: Conforming. Conforming is characterised by the young women adopting the behaviours (and appearance) expected of them by peers and indirectly, the broader social context influenced by media and celebrity.

Sub-property: Appearances Matter.

Accounts and other data e.g. from magazines (interchangeable indices) portrayed a social context where personal appearances matter.

Sub-property: The Leaders and The Sheep.

In their accounts the young women described the influence others in their social world had on the agenda to fit in. 'Others' emerged as 'The Leaders' (the participants' words) and their followers – 'The Sheep' (the participants' words). The Leaders were categorised as the people who lead the agenda (perceived to fit in, to look good and be tanned) and are role models to others. I categorised incidents related to those who follow as 'The Sheep'.

Property: The Worry. When explored with the young women, their conforming behaviours with peers derived from 'worry' about being left out and not fitting in, thus I categorised incidents related to this concern as 'The Worry'.

Property: Standing Out. Interchangeable indices reflected that the girls' sun-related behaviours were significantly influenced by the attention they might attract particularly from peers based on their appearance. I grouped incidents related to this within the category of 'Standing Out'.

Sub- property: Positive Standing Out.

I categorised accounts of attracting positive attention through appearance as Positive Standing Out. For the purpose of categorising, I defined positive attention as attention that was acceptable to the girls. This was likely to enable them to 'fit in' with others and the agenda to look good or fashionable.

Sub-property: Negative Standing Out.

I categorised accounts of attracting negative attention through appearance as 'Negative Standing Out'. For the purpose of categorising I defined negative attention as attention that was unacceptable to the girls; likely not to enable them 'fit in' with others or the agenda to look good or fashionable. Negative attention was characterised by leading to perceptions of being derided or embarrassment.

Sub-property: Avoiding Negative Standing Out.

Accounts that described ways to avoid attracting negative attention/ creating a bad impression through appearance were categorised in this sub-property.

Sub-property: Enhancing Appearance.

The Enhancing Appearance sub-property of 'Fitting In' is characterised by strategies to increase attractiveness and the potential to fit in.

Property: Being Different. Conformity was not the case for all, there were limits to 'Fitting In' and some girls gave accounts of how they behaved independently of others and the agenda for being tanned and caring about their appearance or what others thought of them. I categorised such accounts within the property 'Being Different' because they reflected going against peer group norms of wanting to fit in.

Category: Being Myself. It emerged from the analysis of the interchangeable indices, that the girls were individuals with diverse agendas and preferences in the sun. It also emerged that participants adopted different social roles and 'selves' according to their social context and the people around them. Incidents related to these varied agendas and 'selves', were grouped in the category of 'Being Myself'.

Property: My Agenda.

The participants gave accounts of their activities and priorities in the sun. I categorised these within this property of 'My Agenda'.

Sub-property: Consequences of My Agenda

When discussing the girls' agendas and activities in the sun, I explored the relevance (if any) of sun safety to the girls' agendas. I categorised incidents related to their agendas and sunsafety as 'Consequences of My Agenda'.

Property: Acting the Part. It emerged that participants' sun protection behaviours and responsibilities varied. This was according to different social roles and 'selves' they adopted, according to their social context and the people around them. I categorised the different social roles and 'selves' as 'Acting the Part'.

Sub-property: Being the Child.

The incidents categorised in this sub-property reflected participants' dependence on adults for protection measures in the sunshine.

Sub-property: Being the Adolescent.

The incidents categorised in this sub-property reflected participants' being with peers in the sun, independently of adults and taking responsibility for themselves.

Sub-property: Being the Adult.

This sub-property is characterised by participants being with younger children and taking responsibility for the childrens' sun-protection.

Category: Being Physically Comfortable.

The findings indicated that it was important for participants to be physically comfortable when they were in the sun. I categorised accounts related to the physical effects of sun exposure in the category of 'Being Physically Comfortable'.

Property: Planned Protection Strategies. It emerged that measures were taken to maintain physical comfort in anticipation of adverse physical effects of sun exposure and activities were planned to prevent them. I categorised accounts that reflected this in the category property of 'Planned Protective Strategies'.

Property: Avoiding Discomfort. It emerged that measures to maintain physical comfort that were unplanned and reactive. They dealt with the discomfort of being in the sun. I categorised accounts of such activities within the property of 'Avoiding Discomfort'.

Category: Slipping Up. It emerged that participants unexpectedly experienced discomfort from the effects of ultraviolet radiation exposure on cloudy and sunny days. This led to unintended physical and psychosocial consequences of sunburn. I categorised accounts that reflected exposure to ultraviolet radiation and unexpected discomfort as 'Slipping Up'.

Property: Misjudging By Not knowing. The young women gave accounts reflecting that they had not known when they were at risk of burning. This stemmed from lack of knowledge of the nature of ultraviolet radiation and not knowing the conditions that could lead to them being exposed to it. They made judgments about physical protection based upon thermal comfort; whether or not they were too hot and when thermal cues were not present, they did not protect themselves from burning. I grouped incidents related to misjudgments through lack of knowledge about ultraviolet radiation in the sub-property 'Misjudging By Not Knowing'.

Property: Forgetting. This property reflects 'Slipping Up' as a result of forgetting about sun safety. In these incidents, the young women forgot about sun safety, as they were absorbed in their own agendas.

APPENDIX SIXTEEN

Consolidated theoretical codes and hypotheses. The basis of the grounded theory (page one of three).

Consolidated theoretical codes and hypotheses. The basis of the grounded theory.

Emergent Theoretical Code	Corresponding Hypothesis
CONDITIONS for *BEING COMFORTABLE* (*Being Comfortable* is a need).	
***Being Myself* is a condition of *Being Comfortable* in the sun.**	*Being Comfortable* depends upon individuals being themselves and following their own agendas in the sun.
***Fitting in* is a psychosocial condition of *Being Comfortable* in the sun.**	For some, *Being Comfortable* psychosocially, depends upon *Fitting In* (conforming) with the social agenda that appearances matter; to look good and have a tan.
***Being Different* is a psychosocial condition of *Being Comfortable* generally.**	For some, *Being Comfortable* psychosocially, depends upon *Being Different* and not conforming with the social agenda that appearances matter; to look good and have a tan.
***The Worry* is a psychosocial condition of *Being Comfortable* generally and in the sun.**	For some, *Being Comfortable* psychosocially, depends upon *The Worry* about being left out and not Fitting In.
***Being Physically Comfortable* is a condition of *Being Comfortable* in the sun.**	*Being Comfortable* physically, depends on being warm but not too hot and not burning.
***Slipping Up* is a physical and/or psychosocial condition of *Being Comfortable* in the sun.**	*Being Comfortable* physically and/or psychosocially, depends on not *Slipping Up* and burning.

Consolidated theoretical codes and hypotheses. The basis of the grounded theory (contd.).

Emergent Theoretical Code	Corresponding Hypothesis
STRATEGIES FOR *BEING COMFORTABLE* **(*Being Comfortable* is a need).**	
***Fitting In* can be a strategy for meeting the need for *Being Comfortable*.**	*Being Comfortable* can be achieved by behaving in ways to fit in; by conforming with the social agenda that appearances matter; to look good and have a tan, by avoiding negative standing out and enhancing appearance.
***Being Physically Comfortable* is a strategy for meeting the need for *Being Comfortable* in the sun.**	*Being Comfortable* can be achieved by behaving in ways to maintain physical comfort in the sun.
CONTEXT FOR BEING COMFORTABLE	
***Being Myself* provides the context for *Being Comfortable* in the sun.**	Individuals and the particular 'self' they assume at the time determine comfort needs in the sun.
CONSEQUENCE OF BEING COMFORTABLE	
***Being Different* can be a consequence of *Being Comfortable*.**	*Being Comfortable* may lead to *Being Different* and not needing to conform with the social agenda that appearances matter. For these girls, *Being Comfortable* does not depend upon *The Worry* about being left out and not *Fitting In*.

APPENDIX SEVENTEEN

Maslow's hierarchy of needs (cited Gross 2005) (page one of two).

Maslow's hierarchy of needs (cited Gross 2005).

Self-actualisation
Realising one's full
potential
'becoming everything
one is capable of becoming'.

Aesthetic needs
Beauty – in art and nature-
Symmetry, balance, order, form.

Cognitive needs
Knowledge and understanding.
Curiosity, exploration, need for meaning
and predictability.

Esteem needs
The esteem and respect of others self esteem
and self respect. A sense of competence.

Love and belongingness needs
Receiving and giving love, affection, trust and acceptance.
Affiliating, being part of a group (family, friends, work).

Safety needs
Protection from potentially dangerous objects or situations
(e.g.the elements, physical illness). The threat is both physical and psychological (e.g.
'fear of the unknown'). Importance of routine and familiarity.

Physiological needs
Food, drink, oxygen, temperature regulation, elimination, rest, activity, sex.

APPENDIX EIGHTEEN

Literature searching strategy to investigate the publication of studies that explain the behaviours of young women in the sun in terms of their comfort (page one of three).

Literature searching strategy to investigate the publication of studies that explain the behaviours of young women in the sun in terms of their comfort.

A literature search was undertaken, incorporating combination of the keywords of adolescent or teenage or youth or young, grounded and theory and sun and comfort. The search accounted for variations in the terms by use of truncation, for example, adolesc*, teen*, sun* and comf*. The ASSIA, CINHAL, PsychInfo, International Bibliography of the Social Sciences, Medline and The British Nursing Index databases were searched for the terms from the date of database inception until the end of 2007. No search restrictions were applied. In the first instance, the search was in the text domain in order to encompass relevant literature where the terms might not be combined in the title. When there were results in this domain, the results were scrutinised for application to this study. Initially, scrutiny was based upon whether the piece was a grounded theory that explained the behaviours of young women in the sun in terms of their comfort. There were no results based on this. The search was repeated with the same databases, this time using the keyword of 'qualitative' rather than 'grounded and theory' to identify other types of exploratory study that may exist. When the titles of resulting texts were scrutinised, none were relevant. The searches were re-run with addition of the term child*. No relevant articles were identified. All of the above searches were also run to search The Web of Science. Because of the search options and searchable fields available on this site, terms were sought within titles and topic. There were no results.

Having established that there were no comparable qualitative or grounded theory studies, the searches above were run without specification of method or methodology. The literature search incorporated combination of the keywords of adolescent or teenage or youth or young, or child and sun and comfort. The search accounted for variations in the terms by use of truncation, for example, adolesc*, teen*, child*, sun* and comf*. The following databases were searched from the date of the database inception until the end of 2007: ASSIA, CINHAL, PsychInfo, International Bibliography of the Social Sciences, Medline and The British Nursing Index. No search restrictions were applied. Keywords (with truncation to pick up variants of those words (Eg adolesc*)) were searched for within texts. This was to encompass relevant literature with the terms included but not combined in the title. In the case of The Web of Science, the keyword search was run within the title, then the topic. When there were results in these domains, they were scrutinised for

application to this study. There were two results that warranted scrutiny. These were by Sjöberg *et al.* 2004 and Brandberg *et al.* 1998. Both are quantitative studies of Swedish adolescents involving males and females between the ages of 13 and 17 years old.
The authors allude to issues of comfort (and I have recognised this in relevant parts of this study). However, the findings have not been incorporated or presented in an explanatory theory. They are observations. Hence, to my knowledge, no one has previously explained adolescent girls' sun-related activities in a theory about meeting their comfort needs.